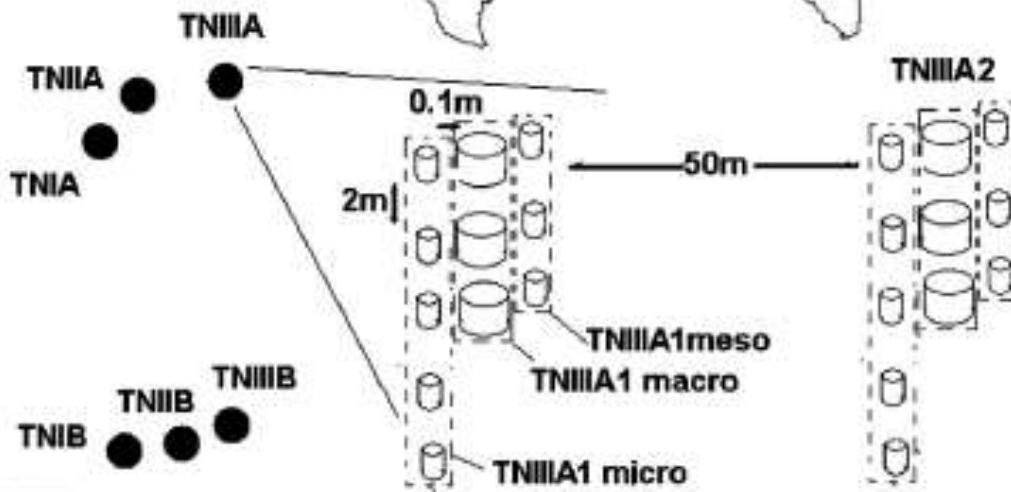


Vliv klimatu, vegetace a rekultivačních zásahů na vývoj půd po těžbě uhlí .

Jan Frouz

Universita Karlova Praha





In each area two parallel chronosequences

each consists of 3 sites:

2-5 year old reclaimed sites (I)

15-20 year old reclaimed sites (II)

local climax (III)

soil chemistry microflora, microfauna, macrofauna were studied

TNI



TNII



TNIII



INI



INII



INIII



ILI



ILII



ILIII



WYI



WYII

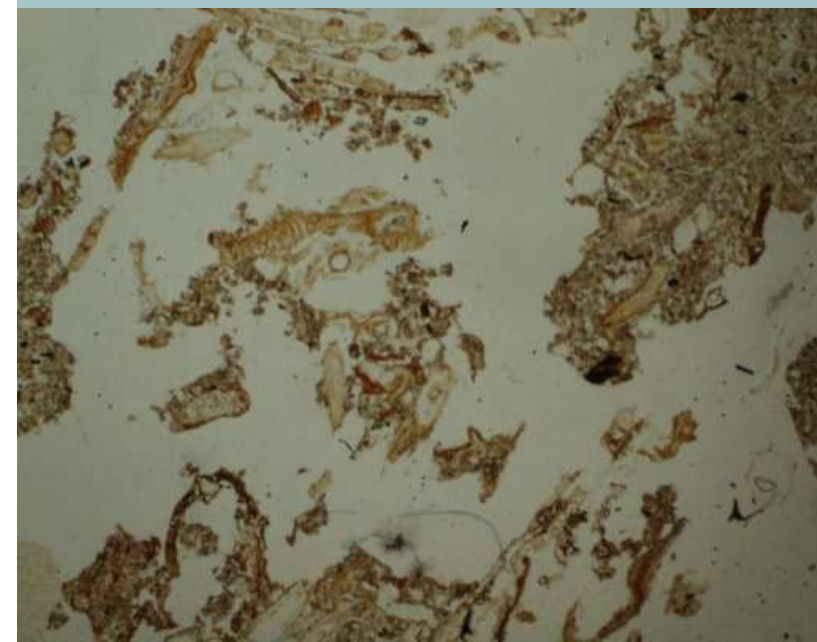
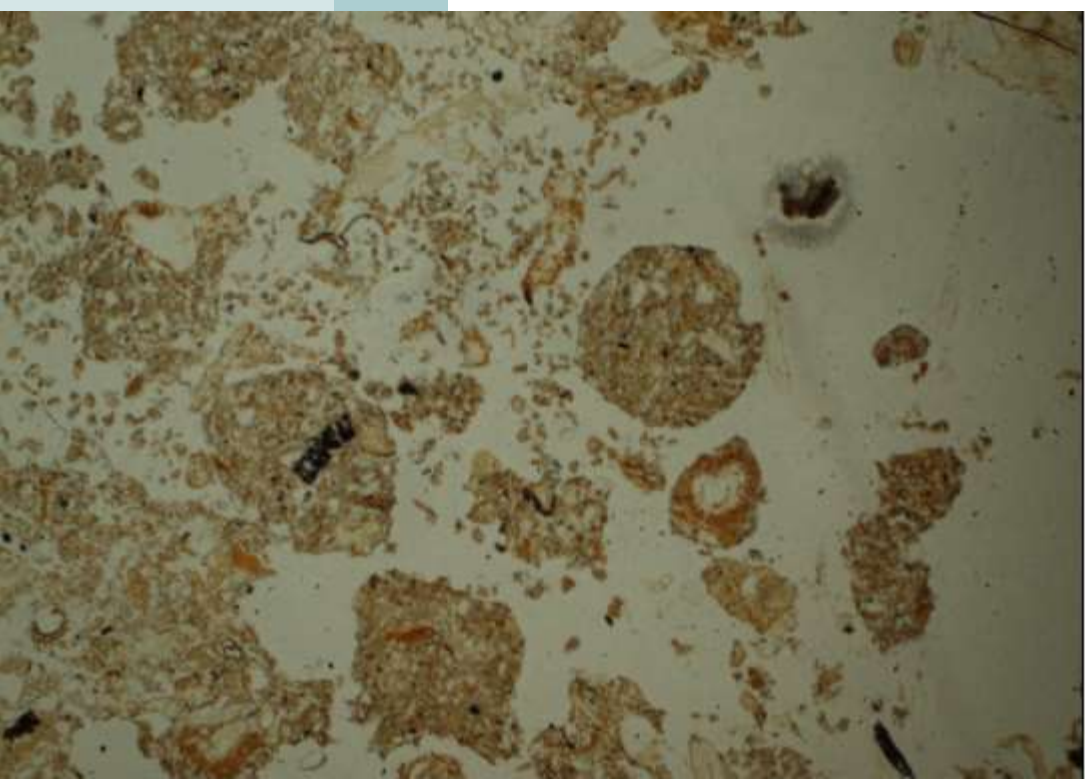
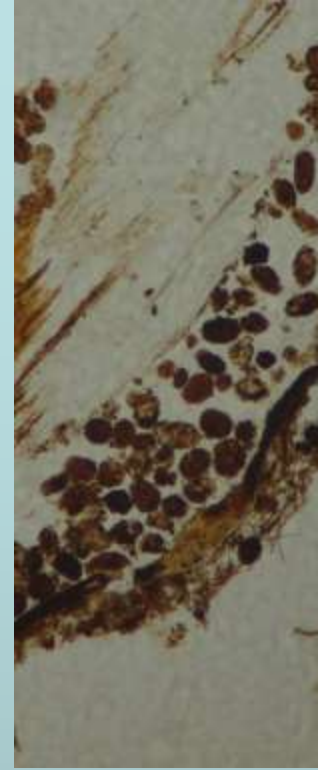
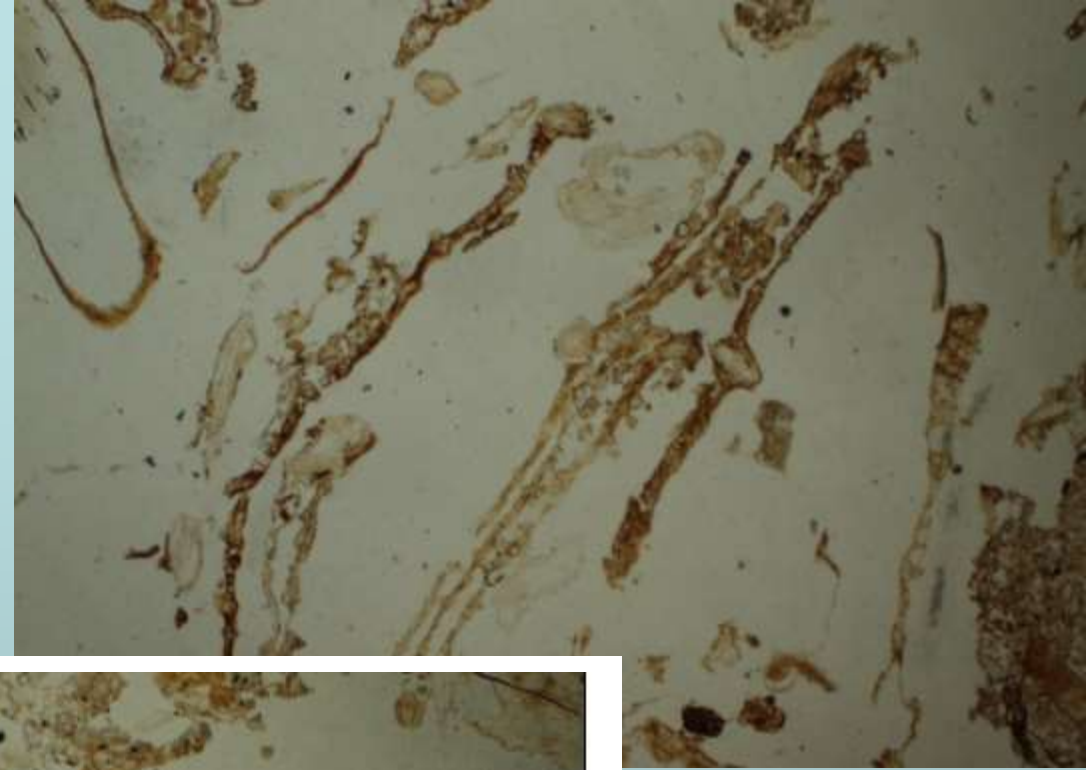


WYIII





**TN IL
(climax)**



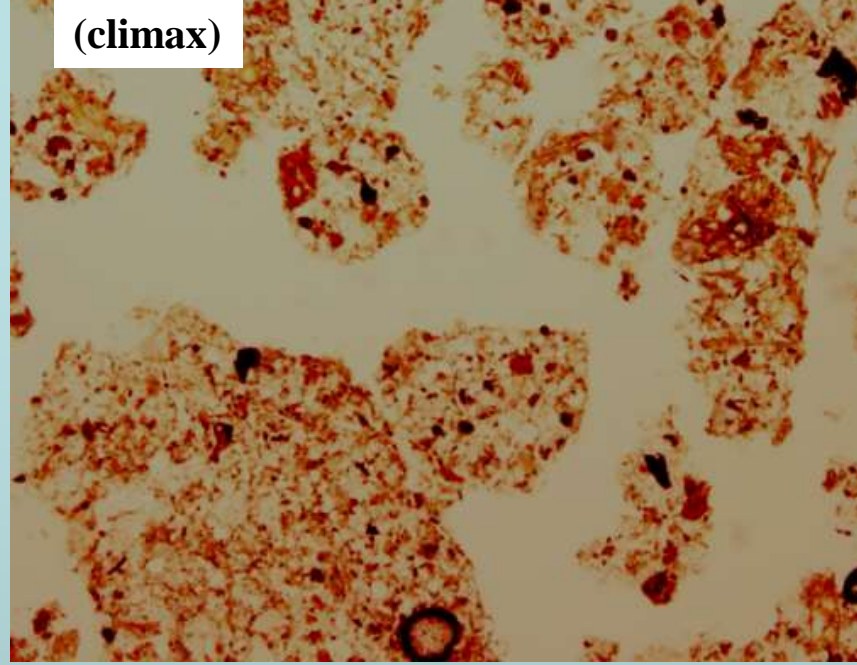
ILTN (restoration)



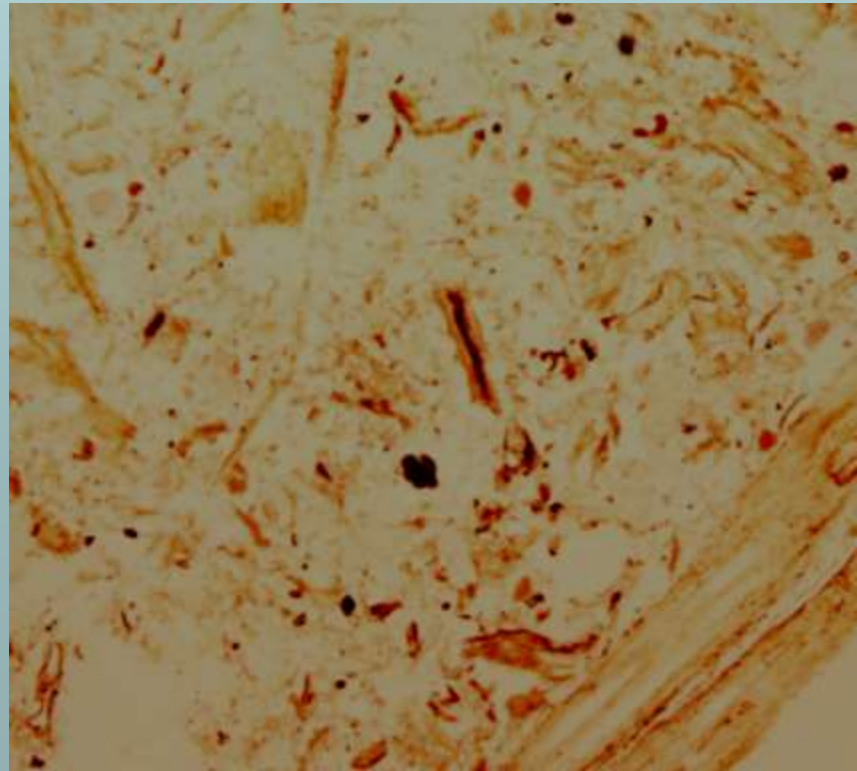
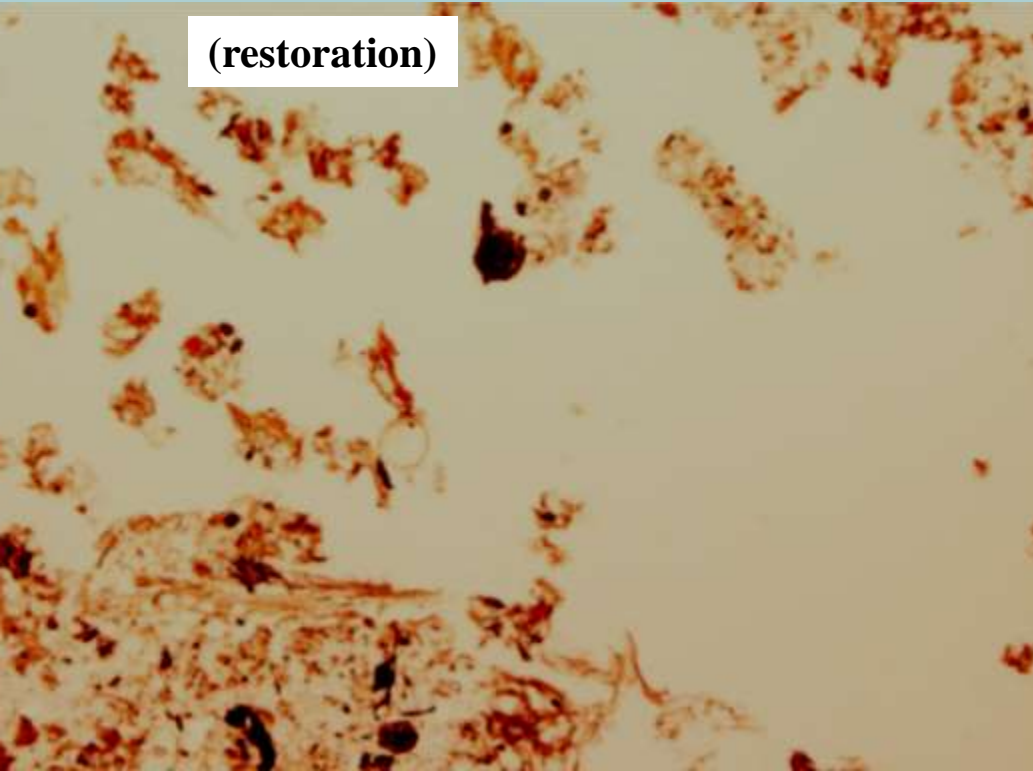
PIL

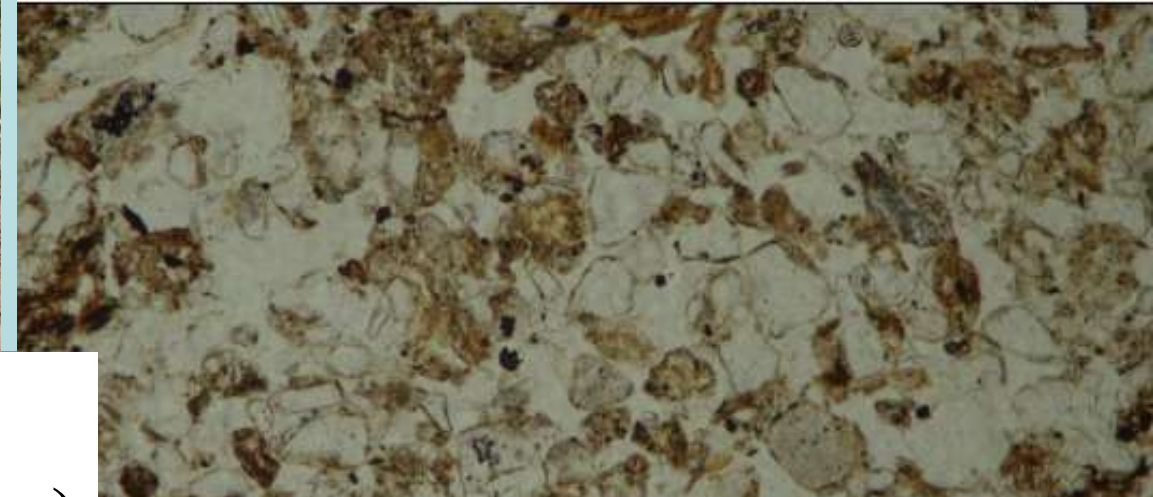


(climax)

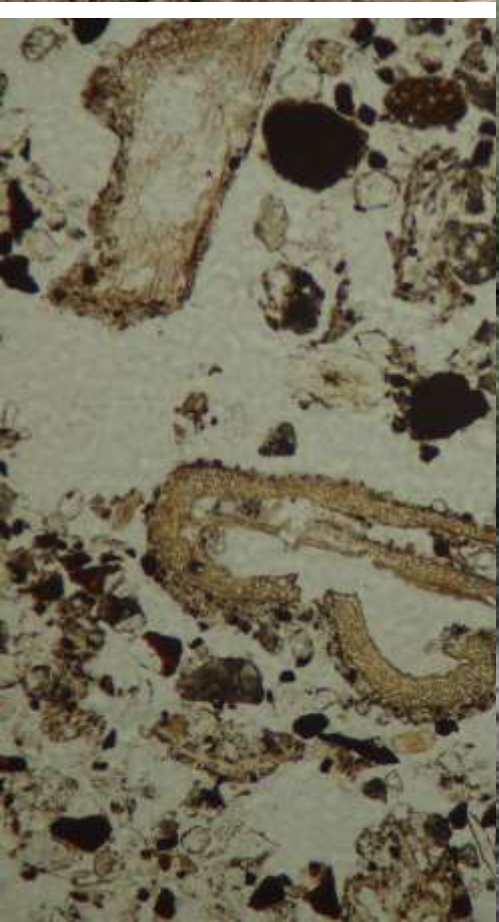


(restoration)





WY
(1)



WY (restoration)



Reclaimed 15-year-old & Not reclaimed & Climax



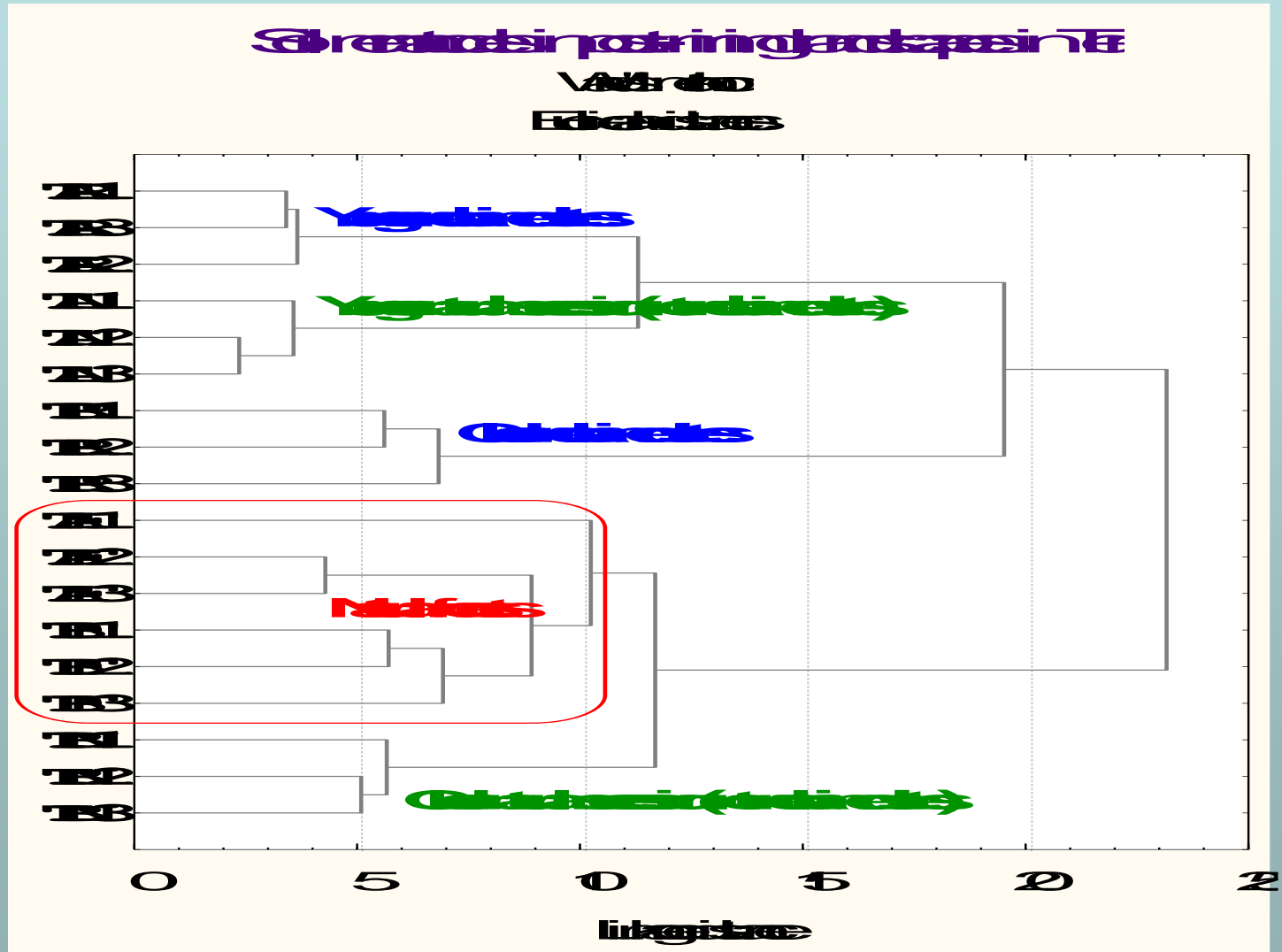


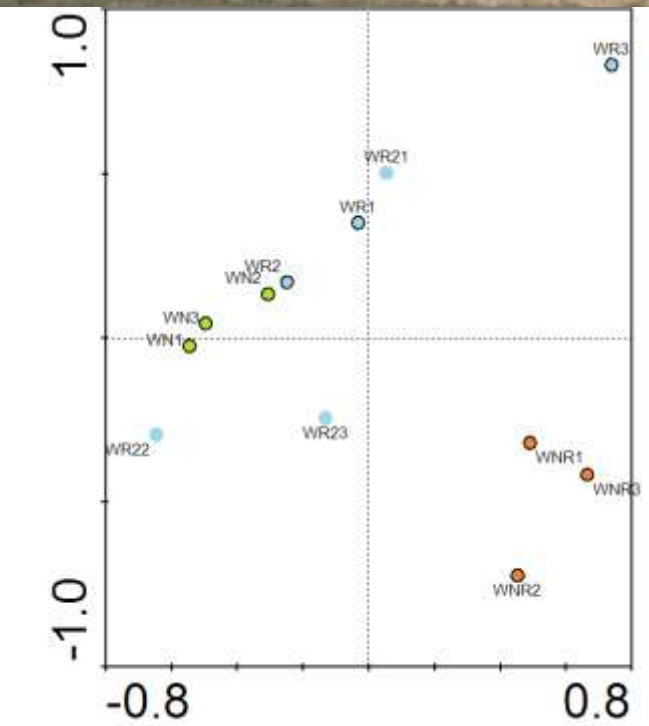
Reclaimed 30-year-old

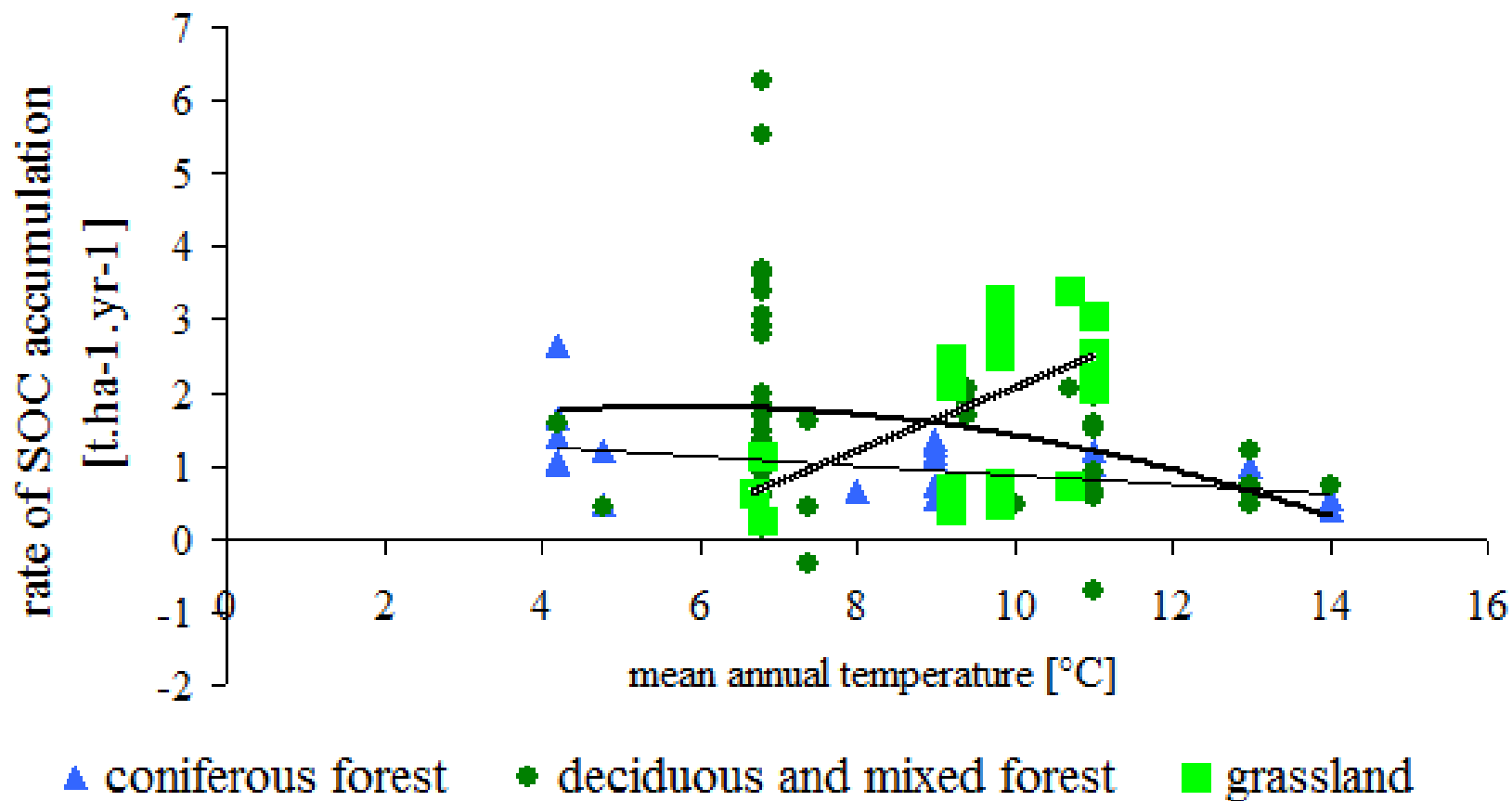
Not reclaimed 40-year-old



Fig. 2. Cluster analysis of soil nematodes in coal post-mining sites subjected to assisted reclamation (TAR, TBR), left to natural succession (TAN, TBN) and in climax forests FAF, TBF) in Tennessee.

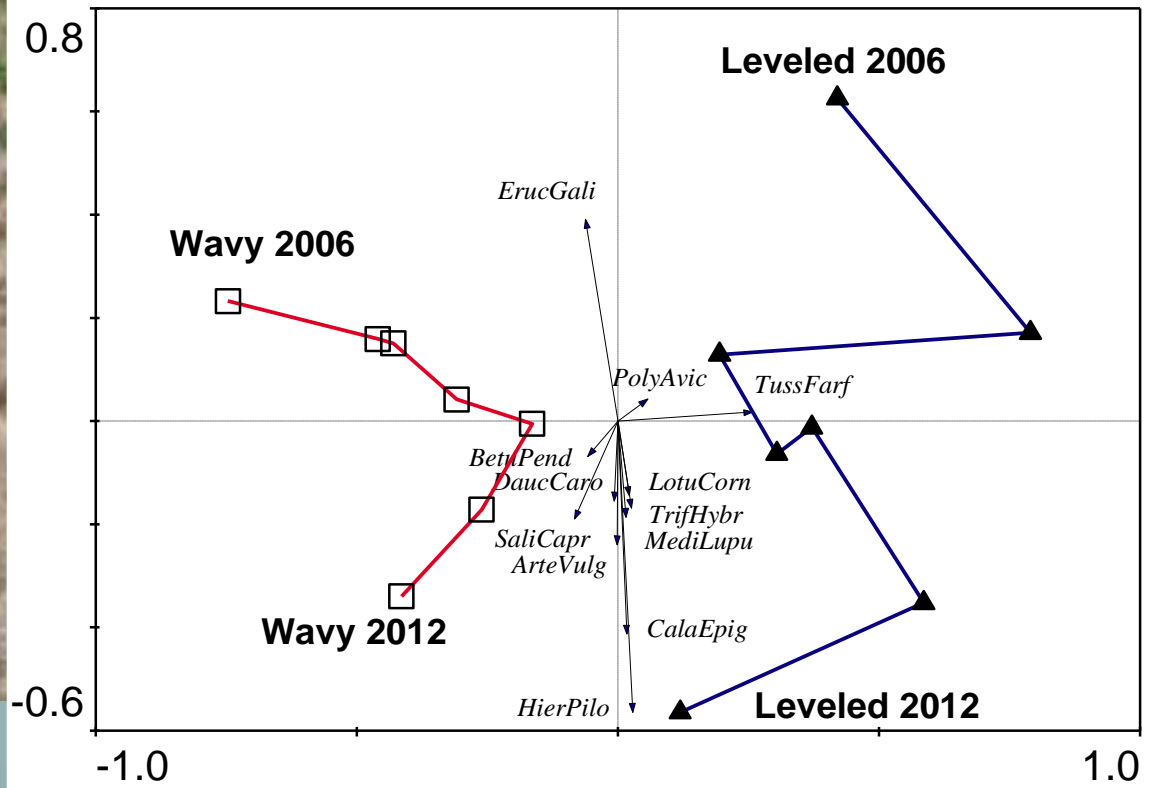
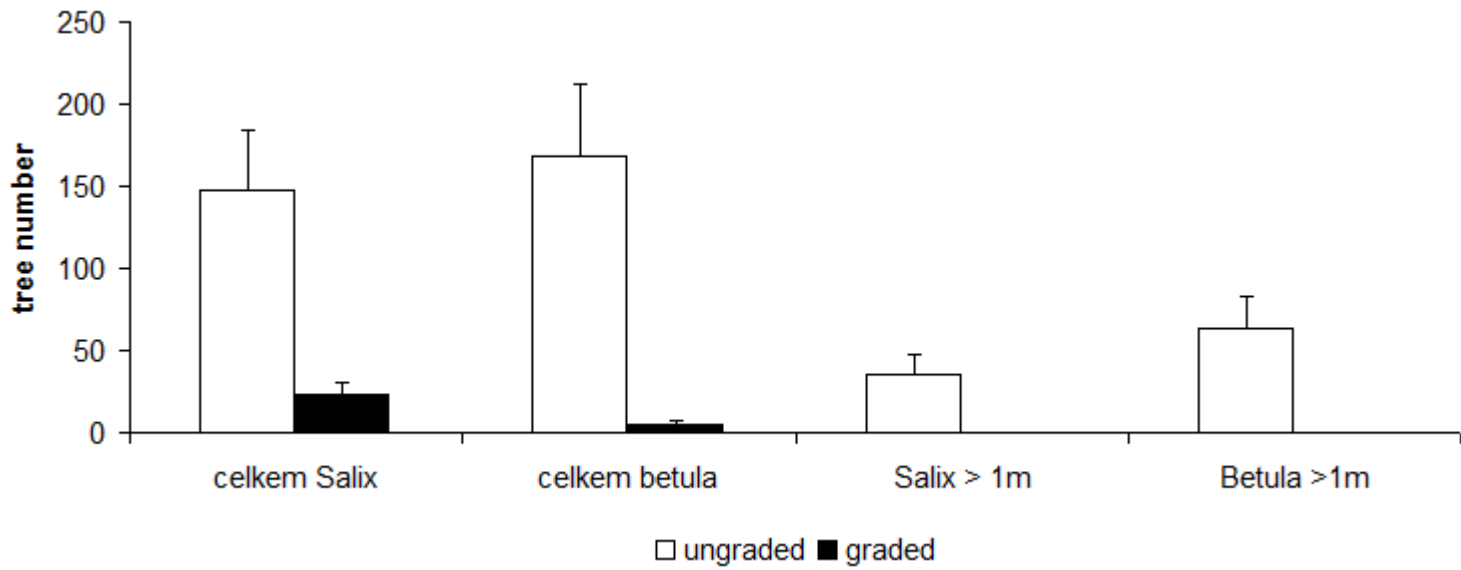


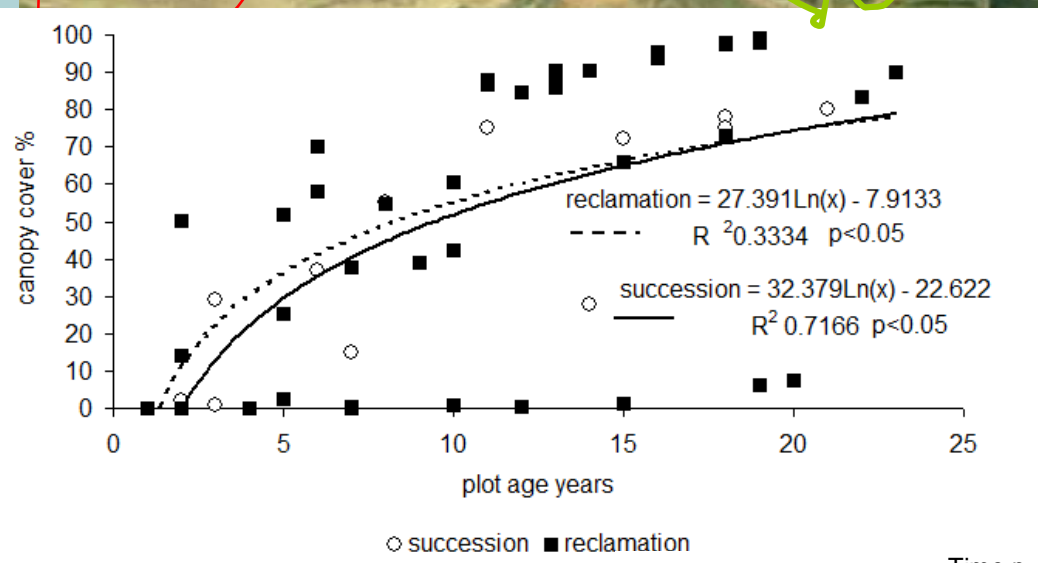
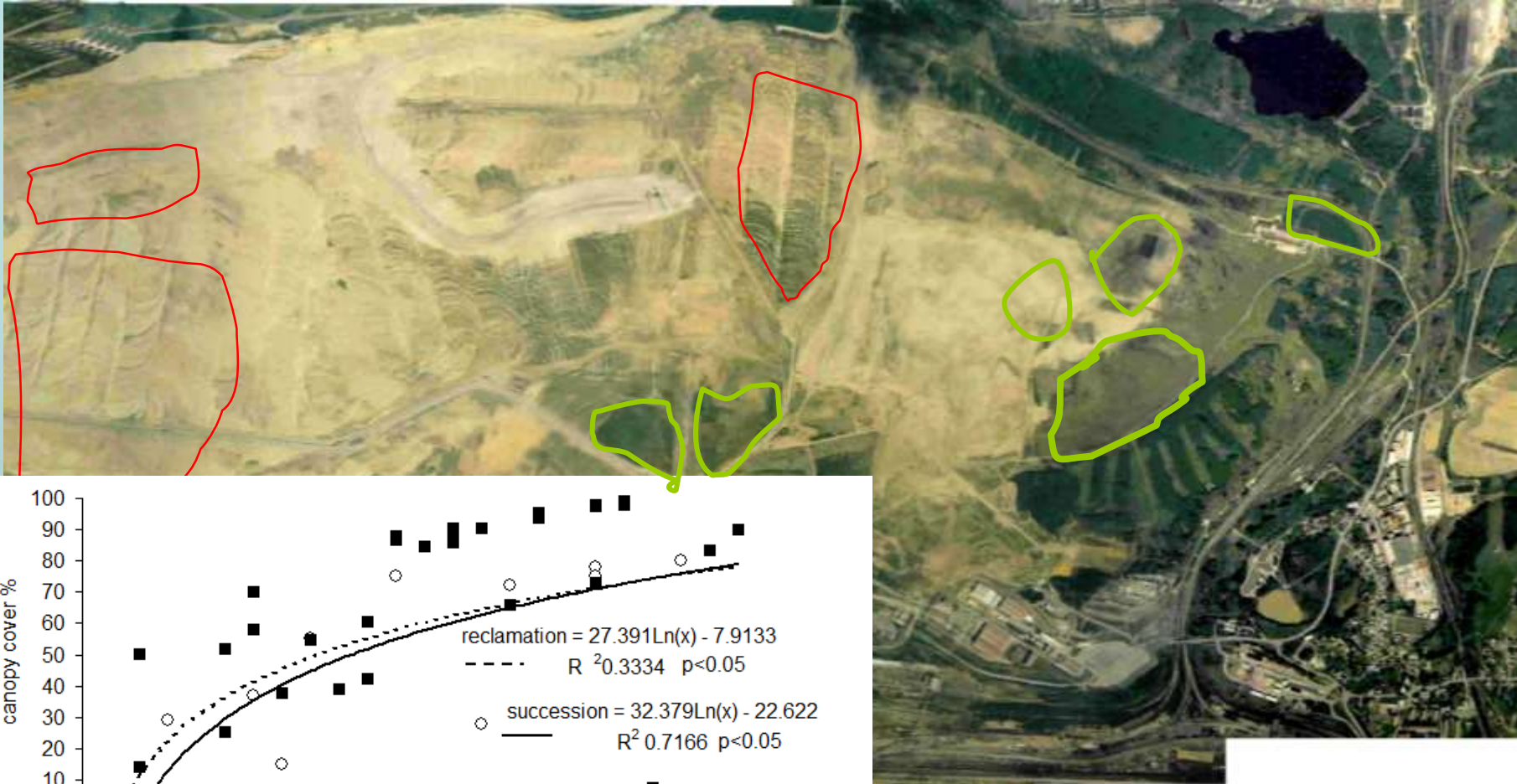








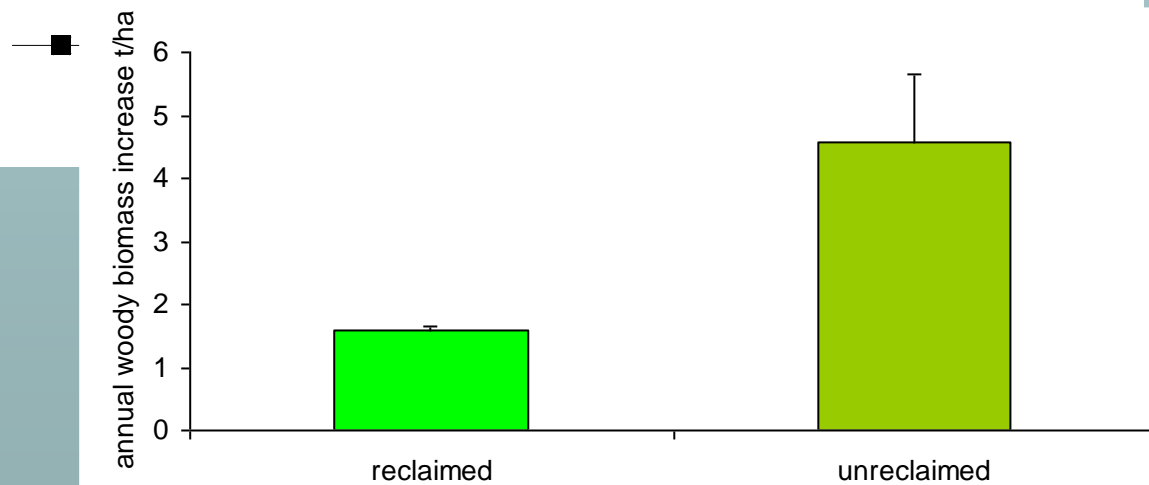
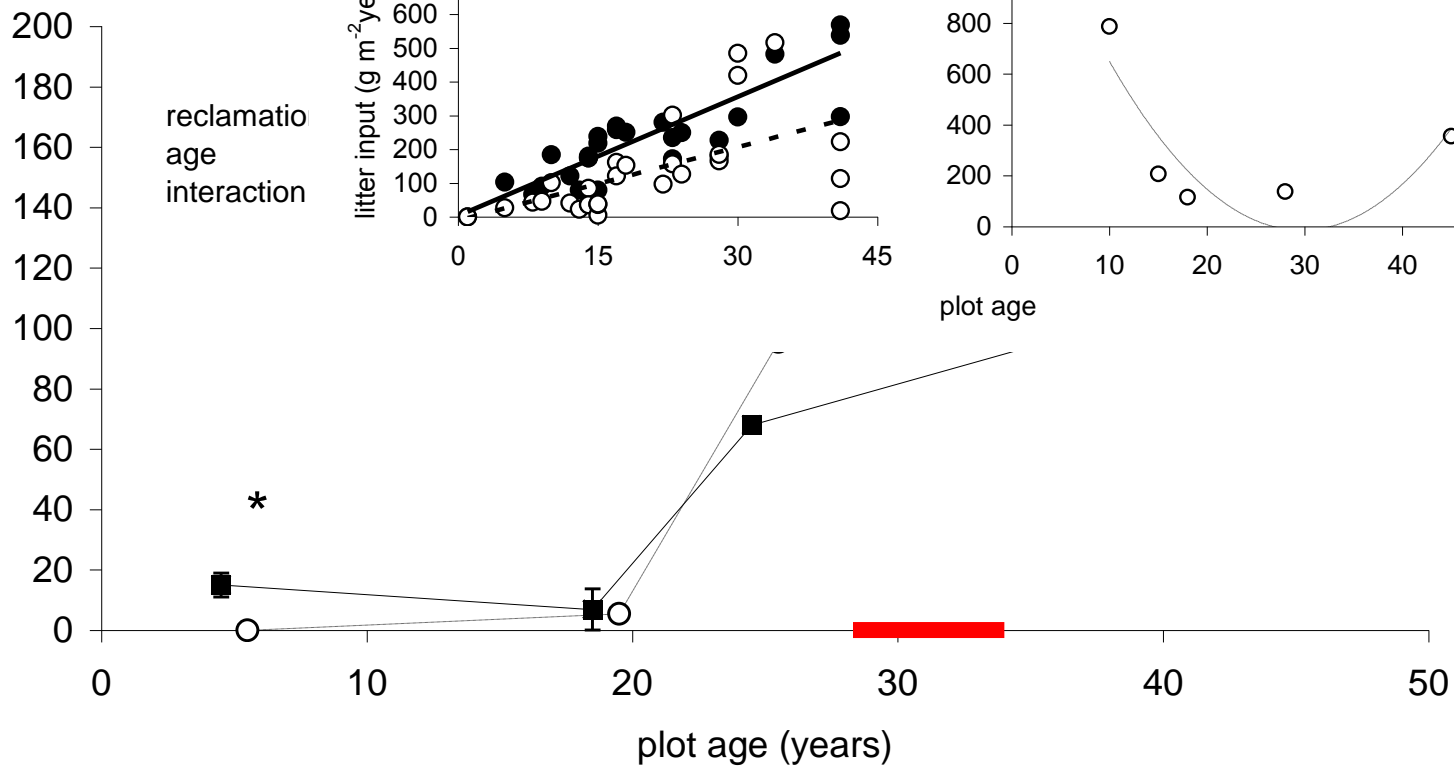




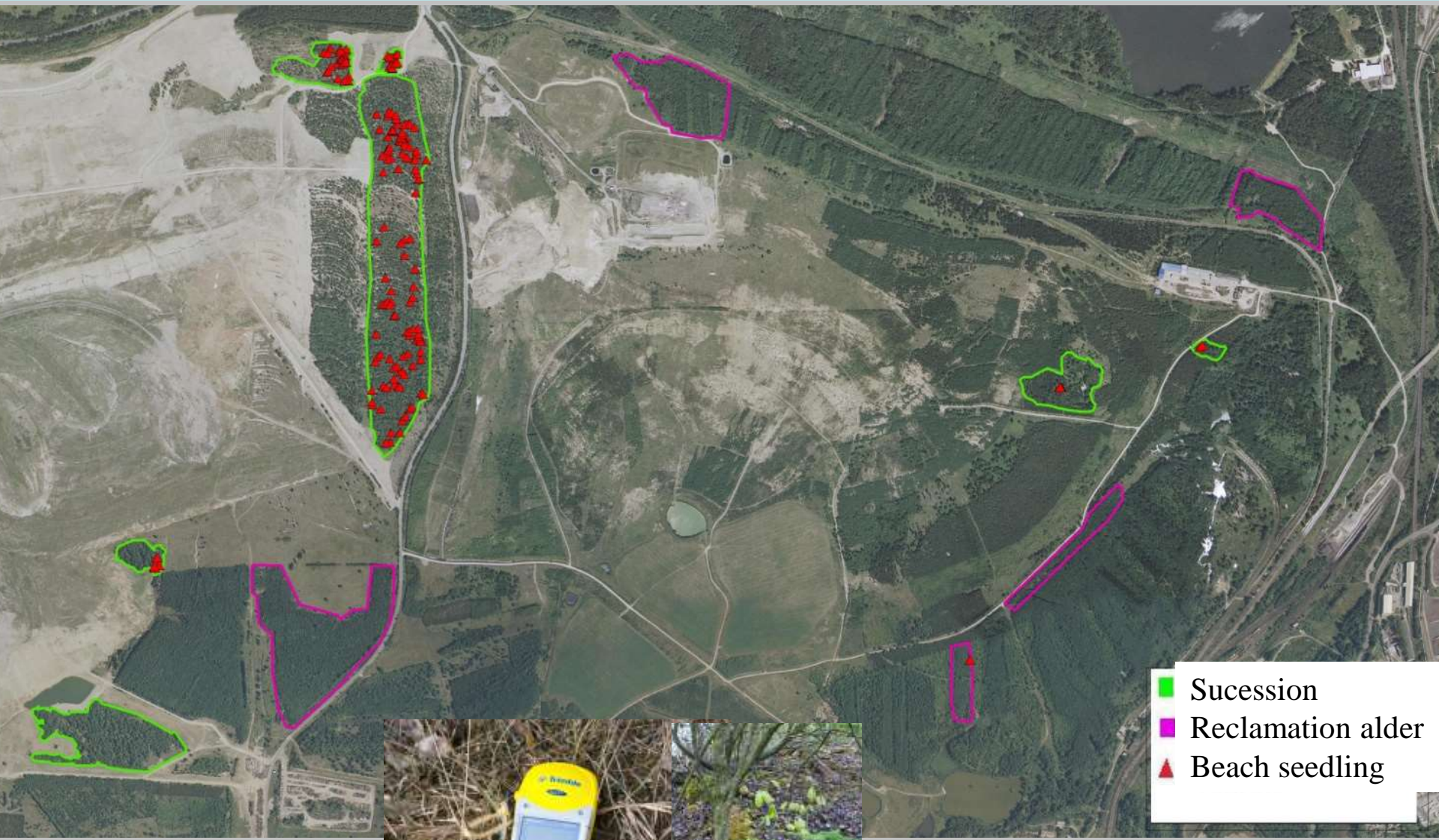
	Time p	Reclamation p	Succession cover	Reclamation covet
unweighted all data	>0.0001	0.7001	45.58 ±8.49 (12)	51.76 ±4.59 (41)
weighted all data	>0.0001	>0.0001	28.18 ±1.47 (372)	60.35 ±2.76 (187)
weighted 0-15 years	>0.0001	>0.0001	23.15 ±1.30 (297)	50.55 ±3.07 (142)
weighted > 20 years	0.2962	0.4642	75.09 ±0.40 (58)	80.19 ±4.04 (63)

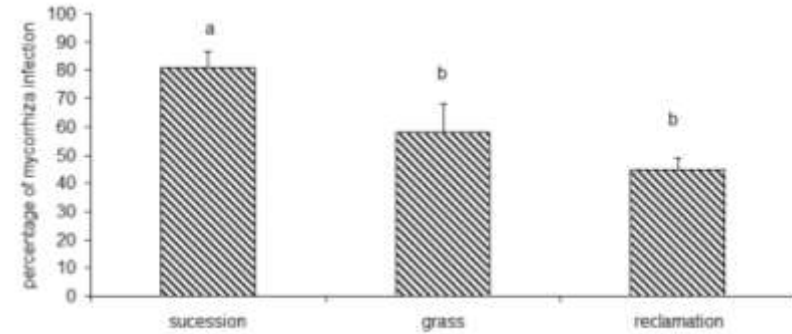
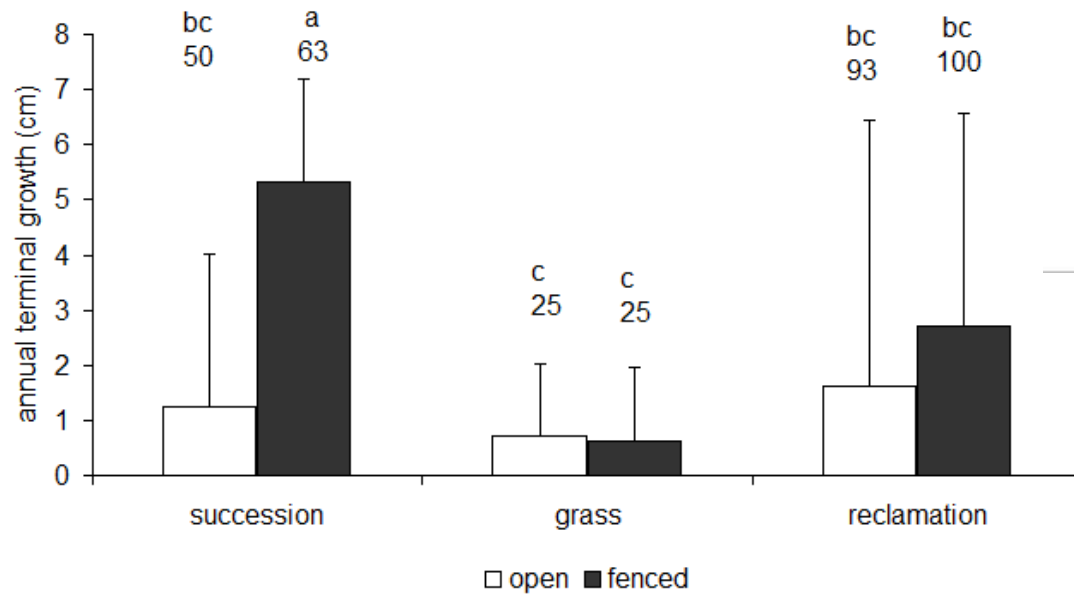
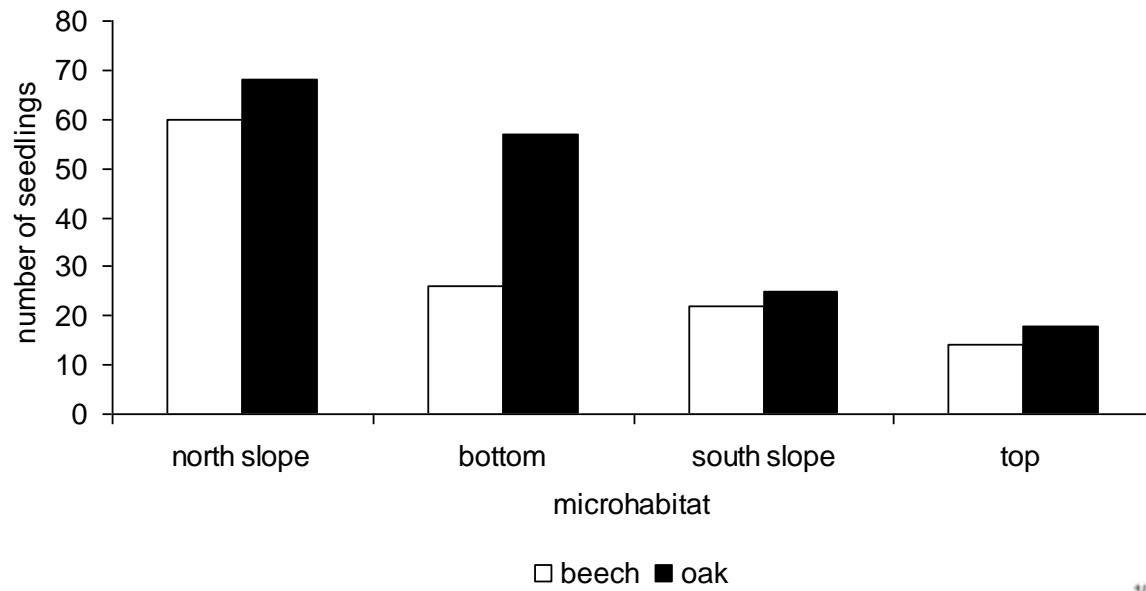


woody biomass .
(t ha⁻¹)

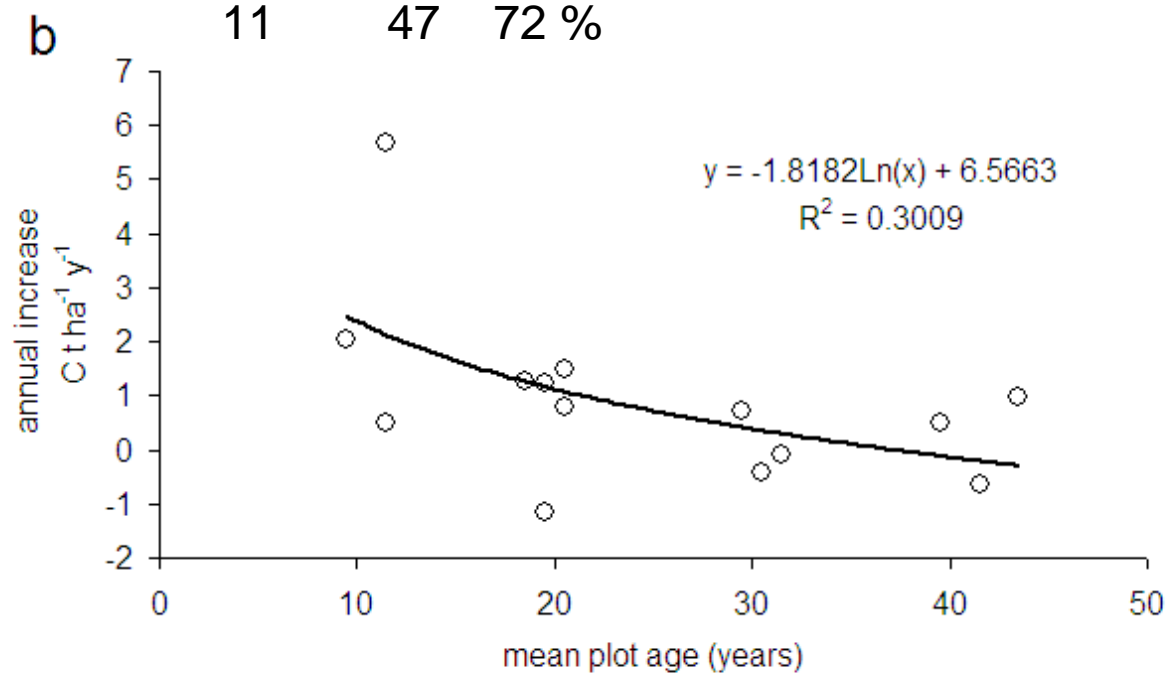
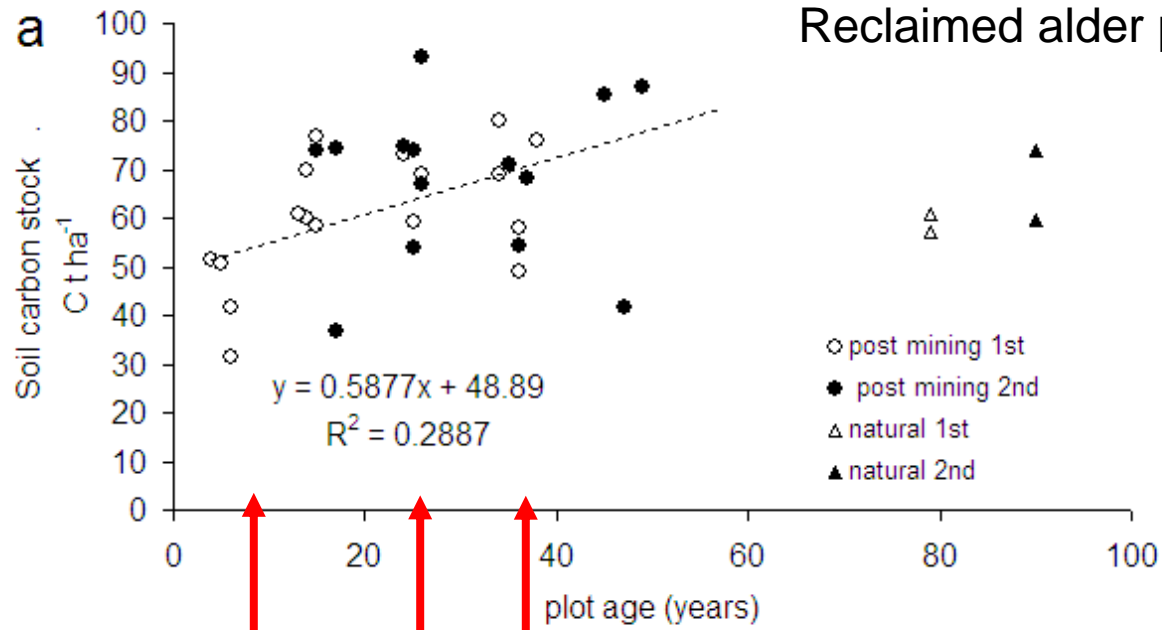


Establishment of late succession species

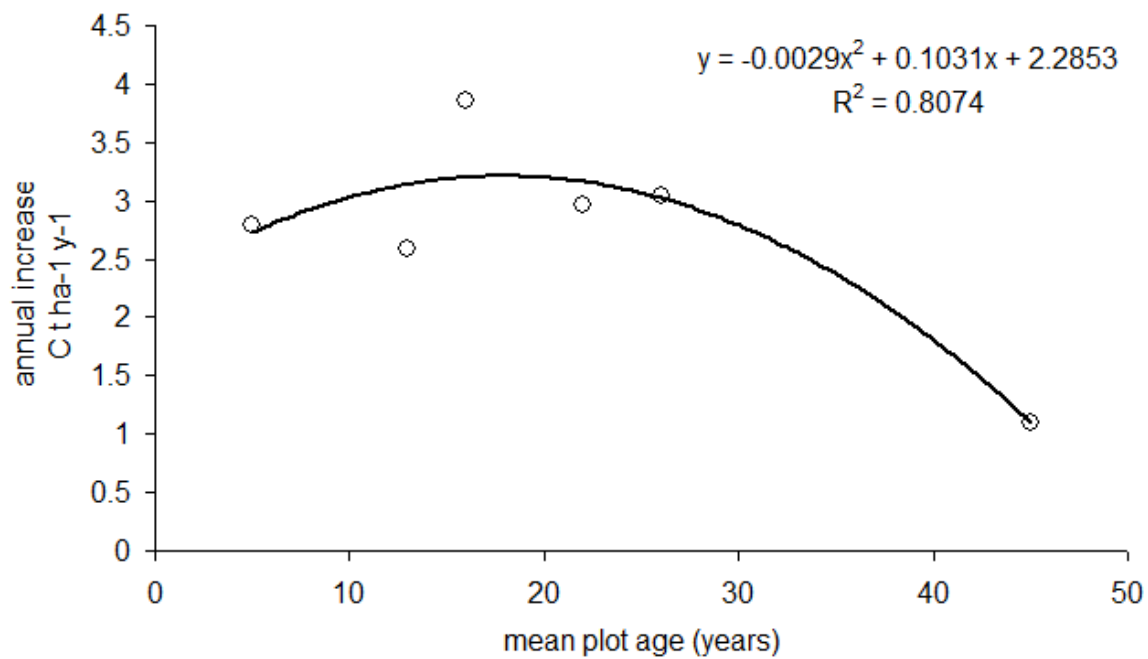
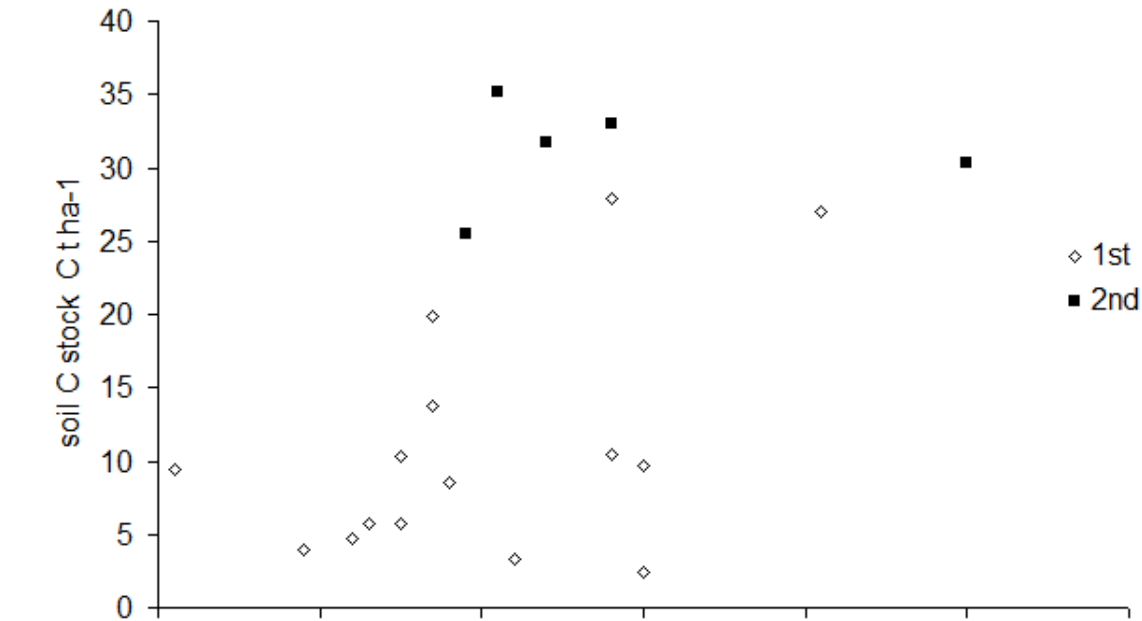




Reclaimed alder plantations

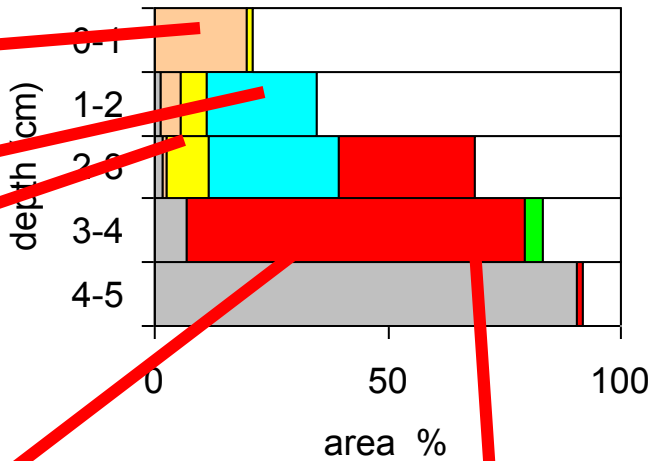
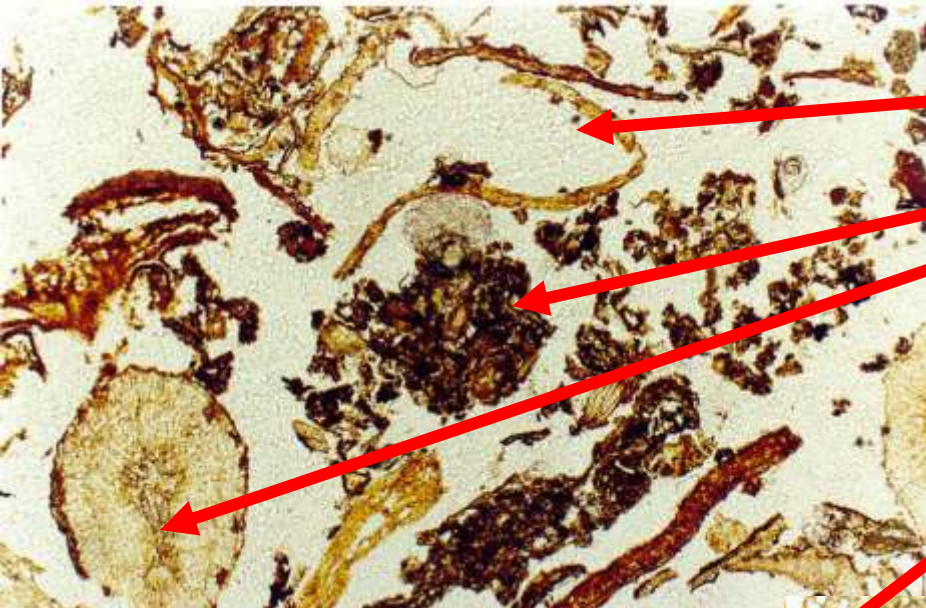


Unreclaimed succession

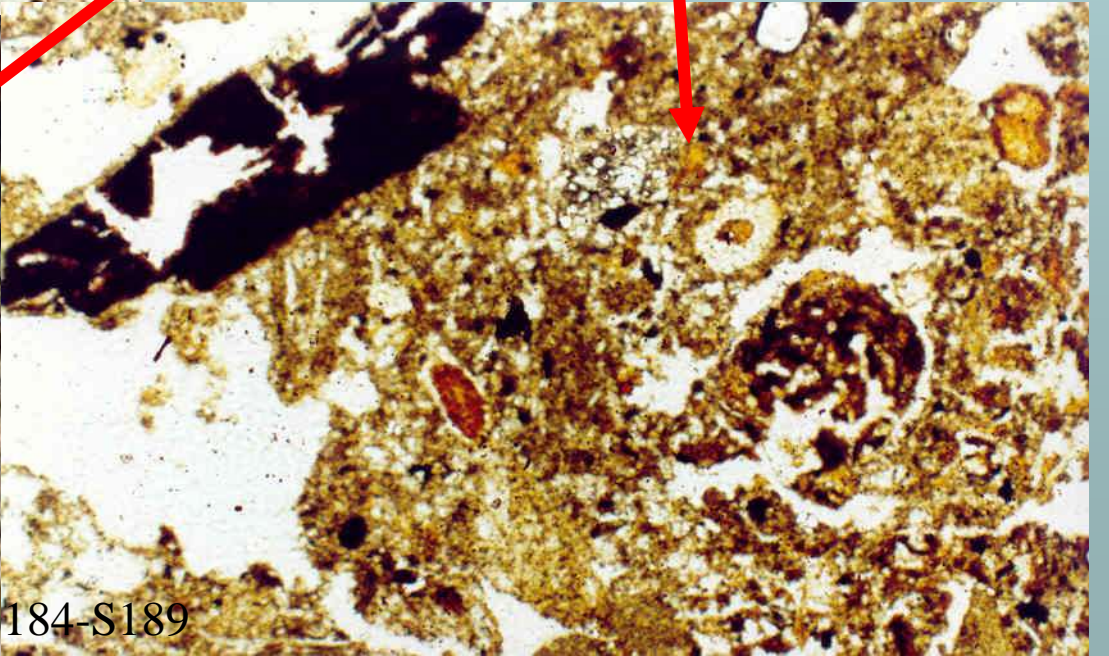
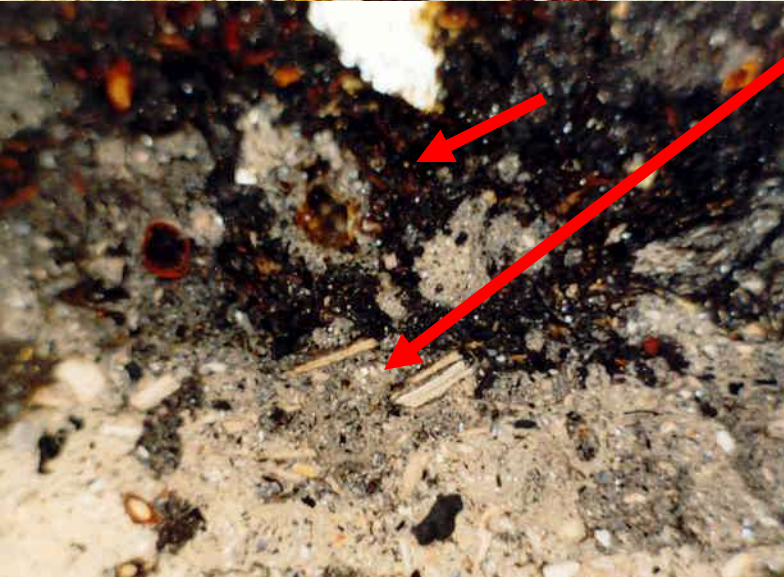




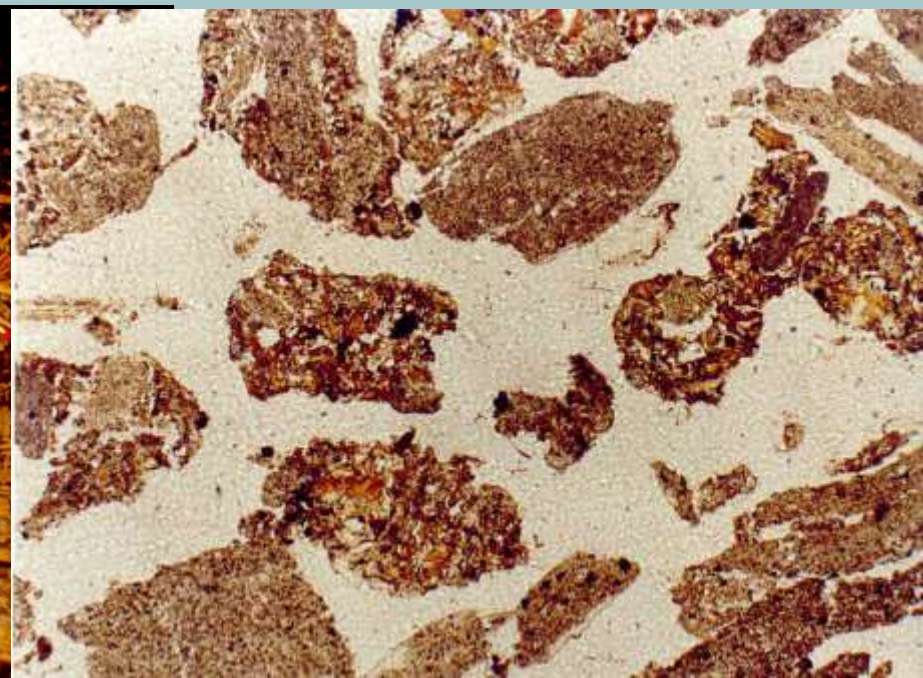
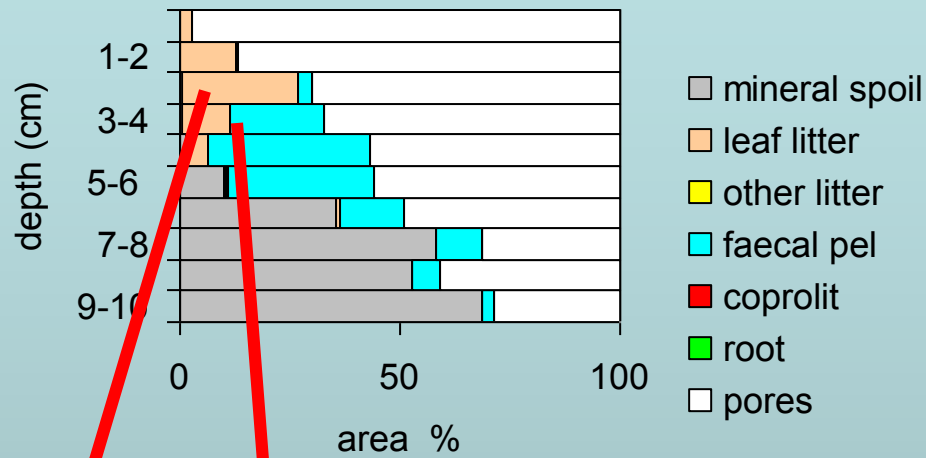
Reclamation - 23 years old plot



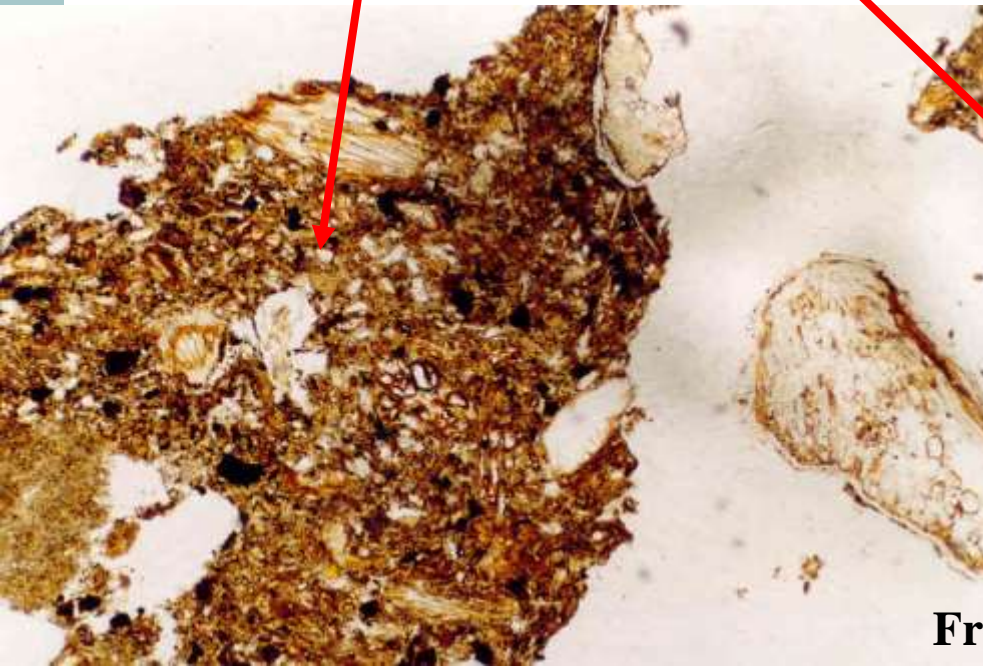
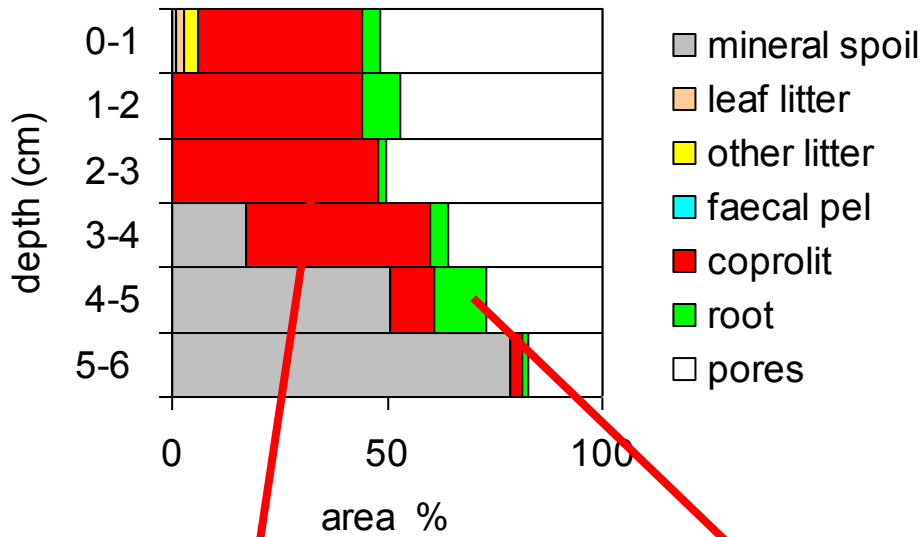
- mineral spoil
- leaf litter
- other litter
- faecal pel
- coprolit
- root
- pores

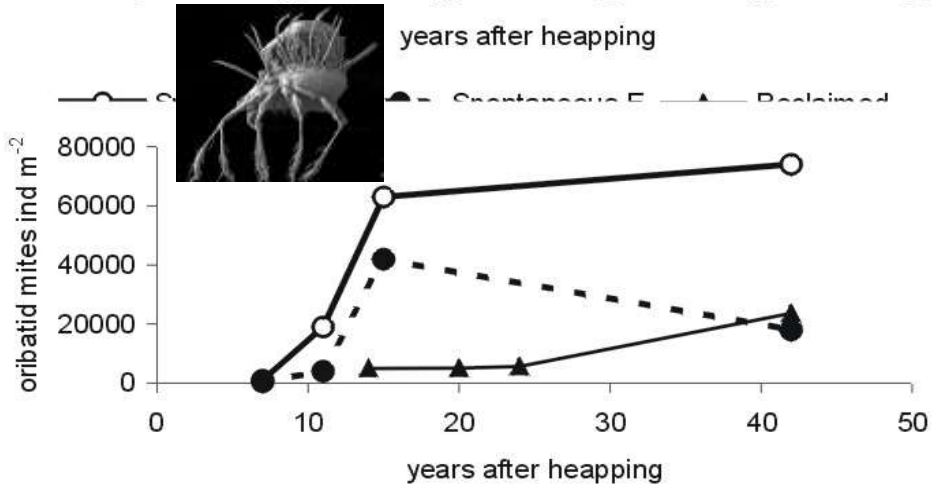
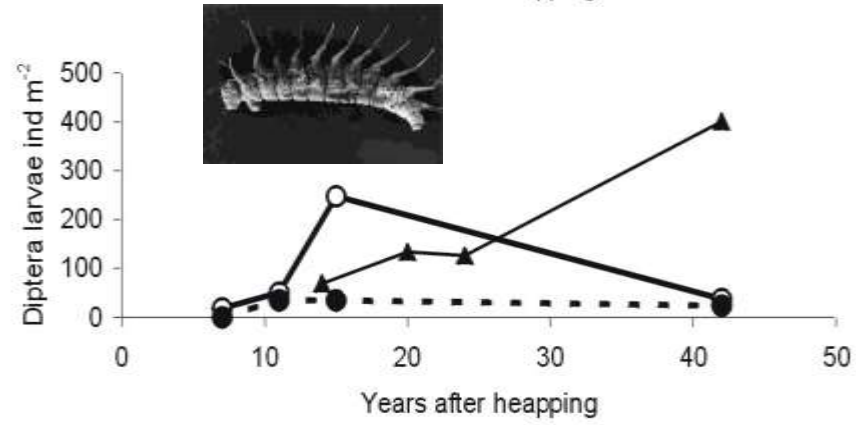
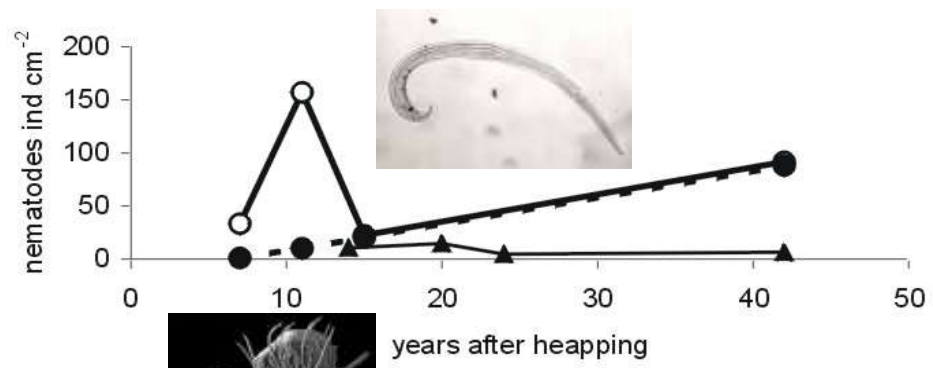
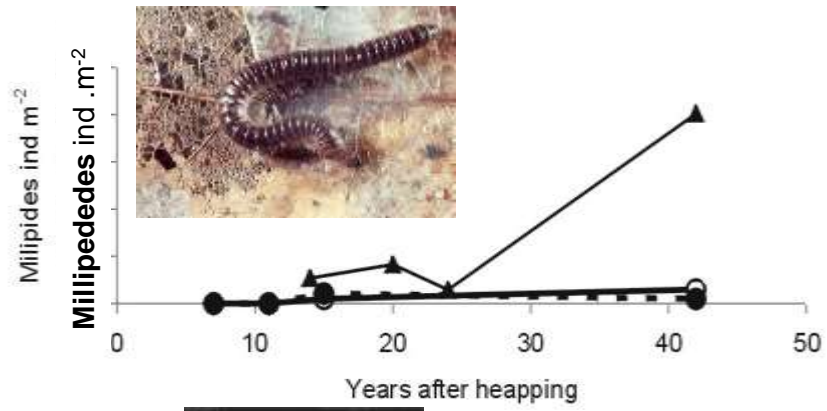
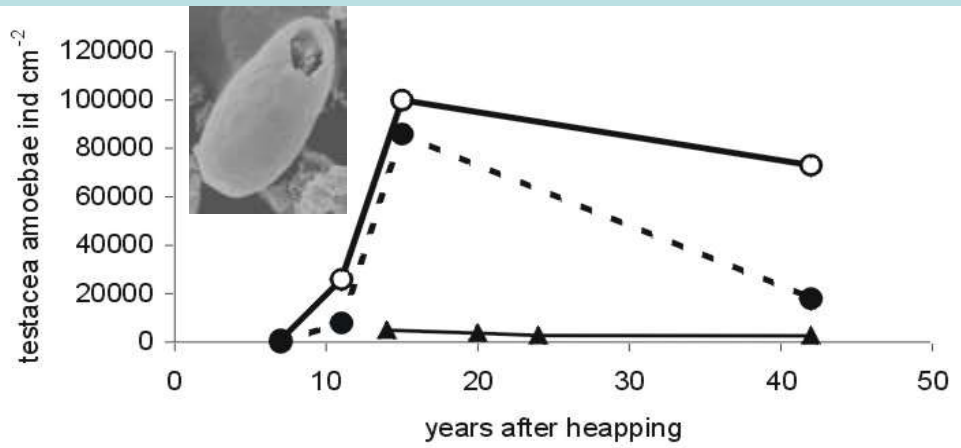
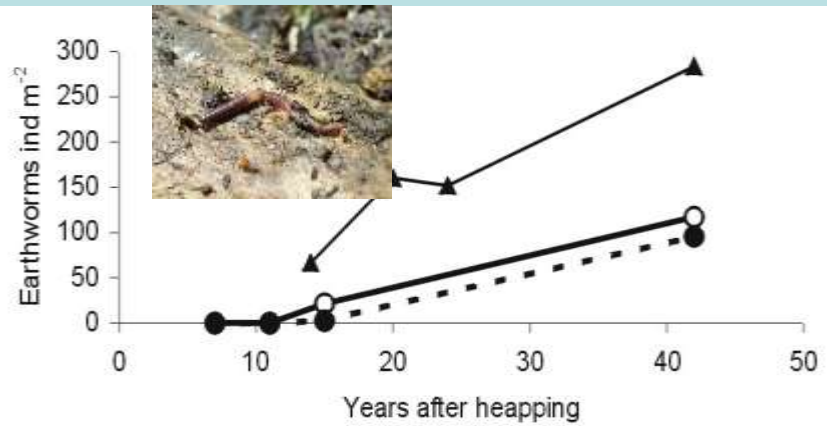


Spontaneous succession - 23 years old plot



Spontaneous succession - 40 years old plot





○ Spontaneous D ● Spontaneous E ▲ Reclaimed

○ Spontaneous D ● Spontaneous E ▲ Reclaimed

reclaimed



unreclaimed



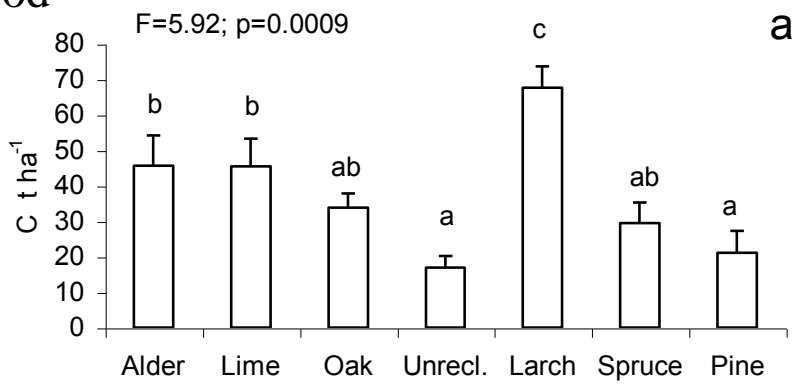
Seven types of forest on one large post mining heap



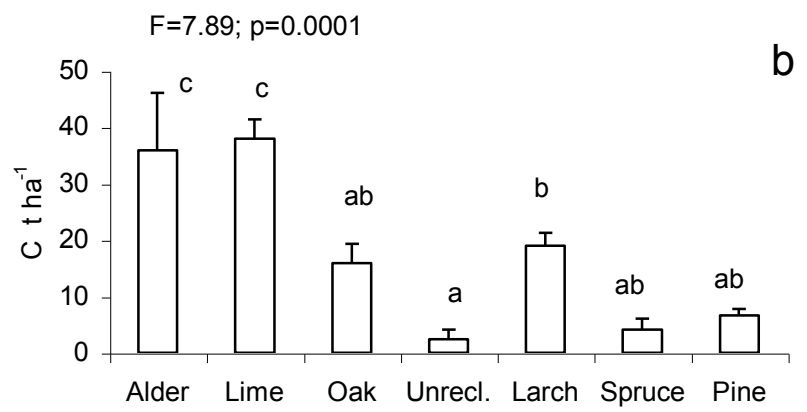
- sponta
- alder
- lime
- oak
- spruce
- pinus
- larch



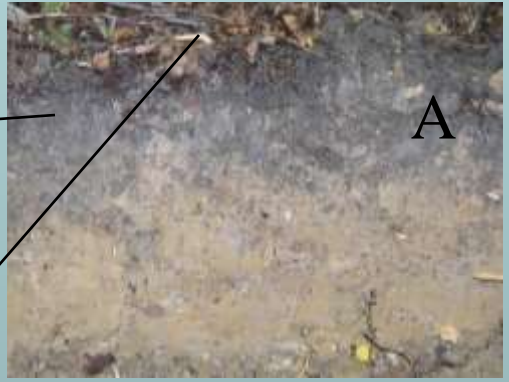
Carbon in wood



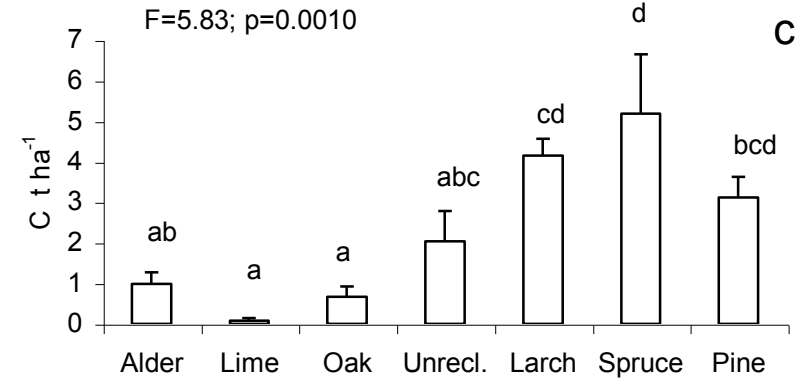
Carbon in A layer of soil

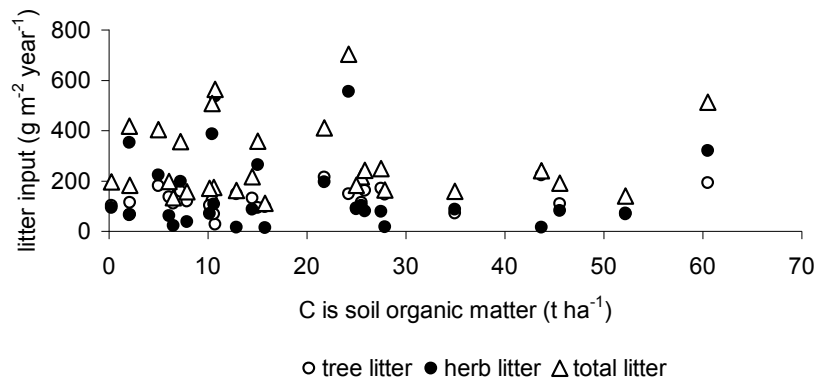
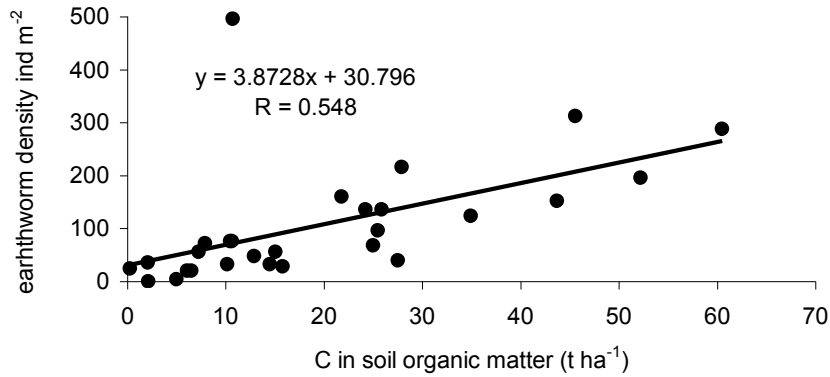
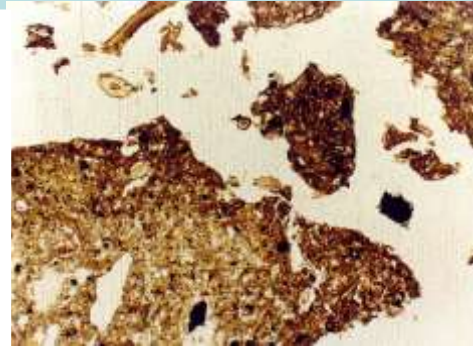
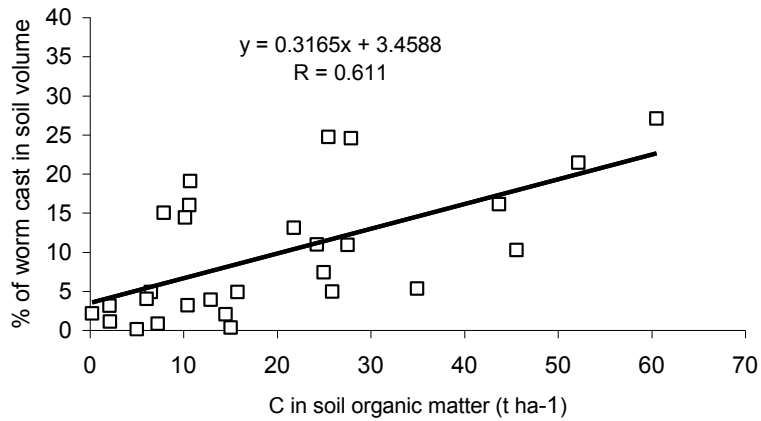


LF (Oa Oe)

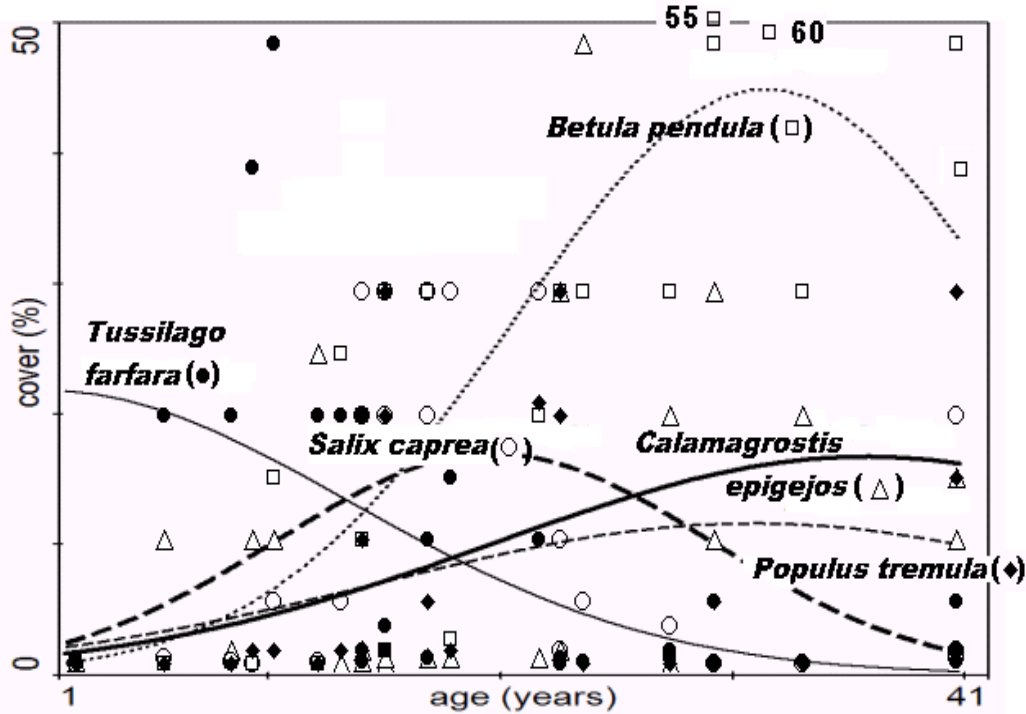


Carbon in Oe layer

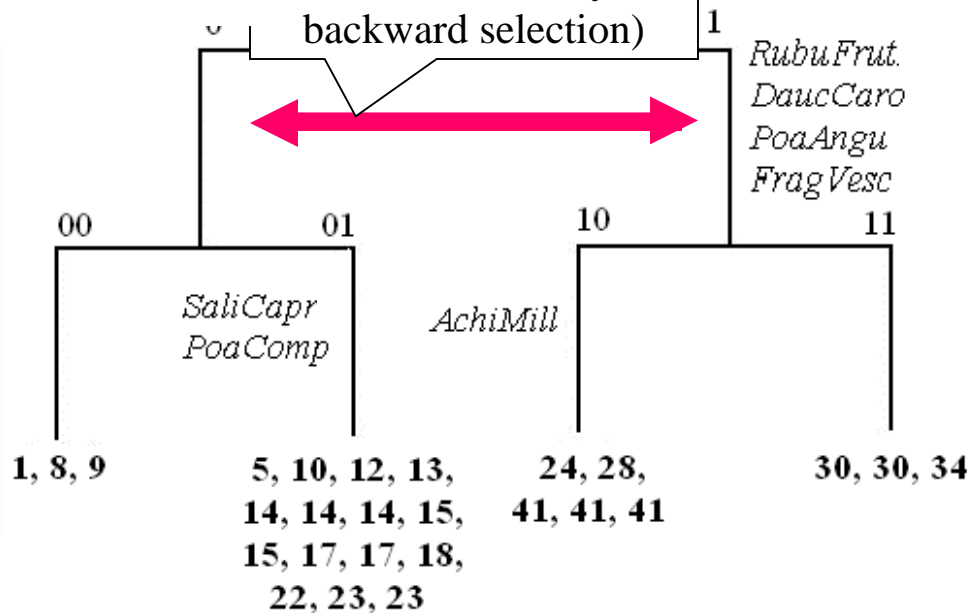
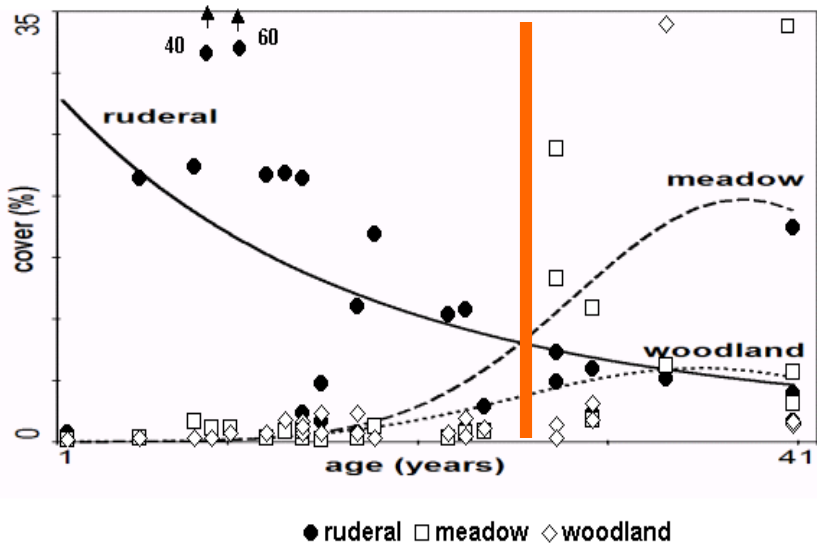




Plant community changes



presence humus layer
s strongest predictor of
these groups
(discriminant analysis,
backward selection)



Thank you for your
attention

