

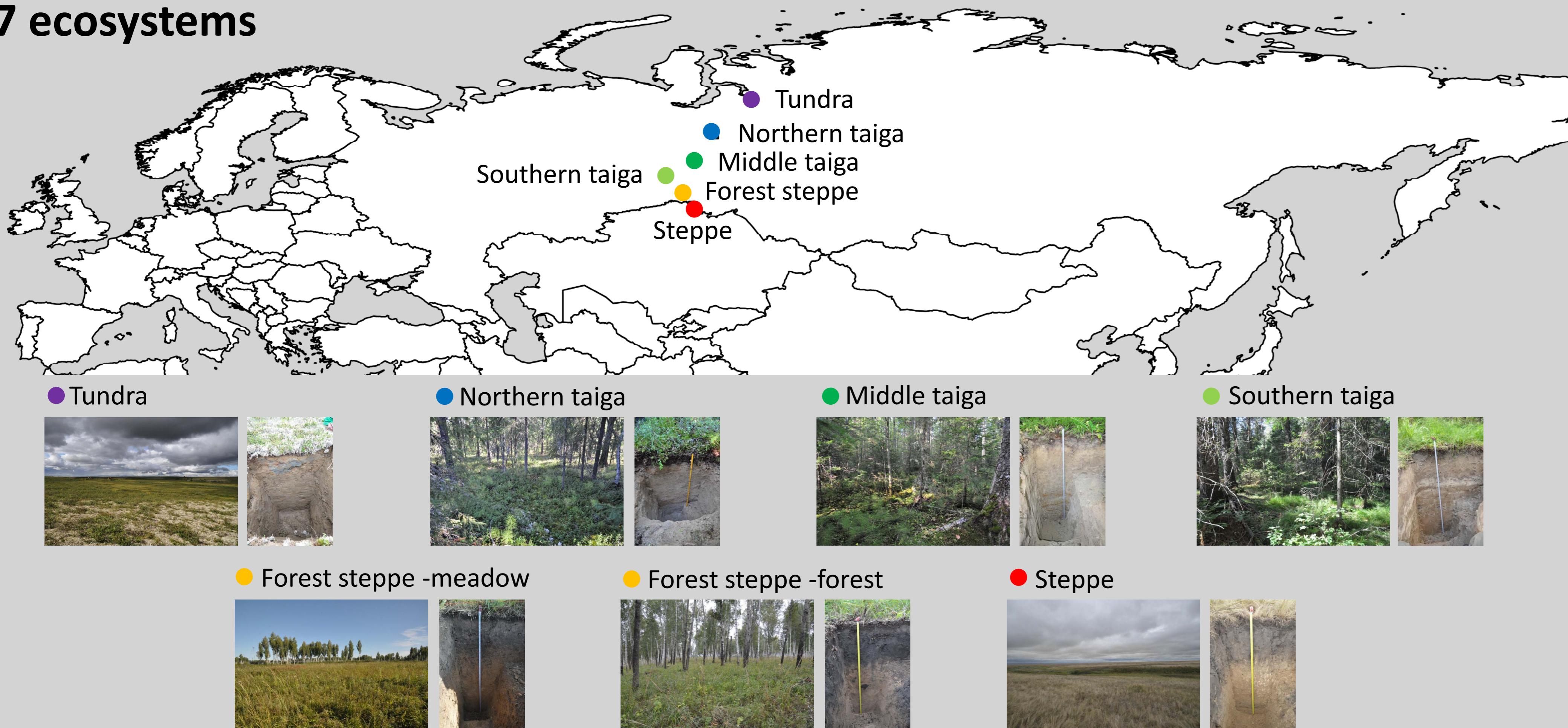
Enzyme activities in the subsoil

along a latitudinal transect in Western Siberia

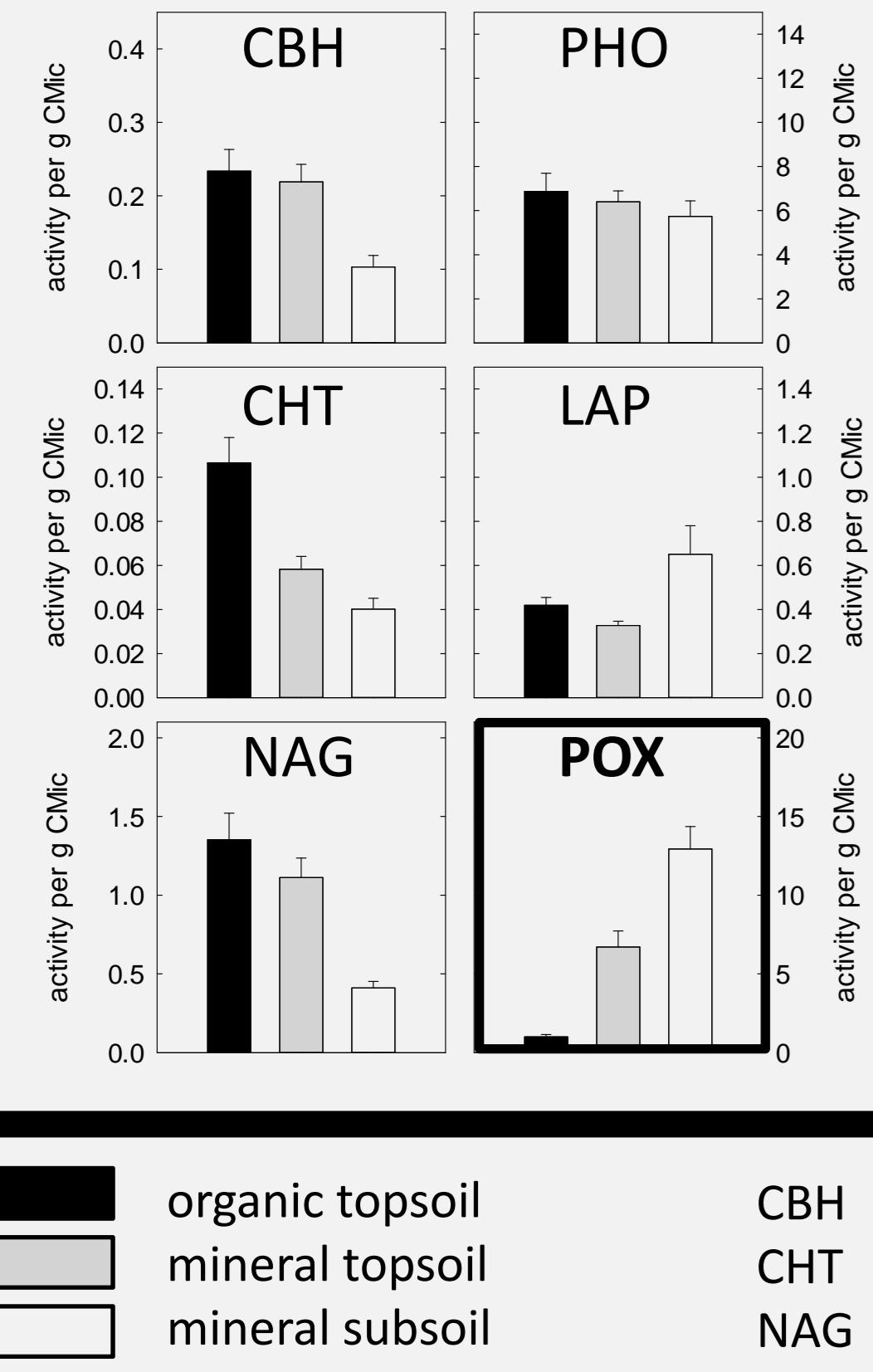
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Wild B¹, Eloy Alves RJ², Gentsch N³,
Gittel A^{2,4}, Hofer A¹, Knoltsch A¹, Lashchinskiy N⁵,
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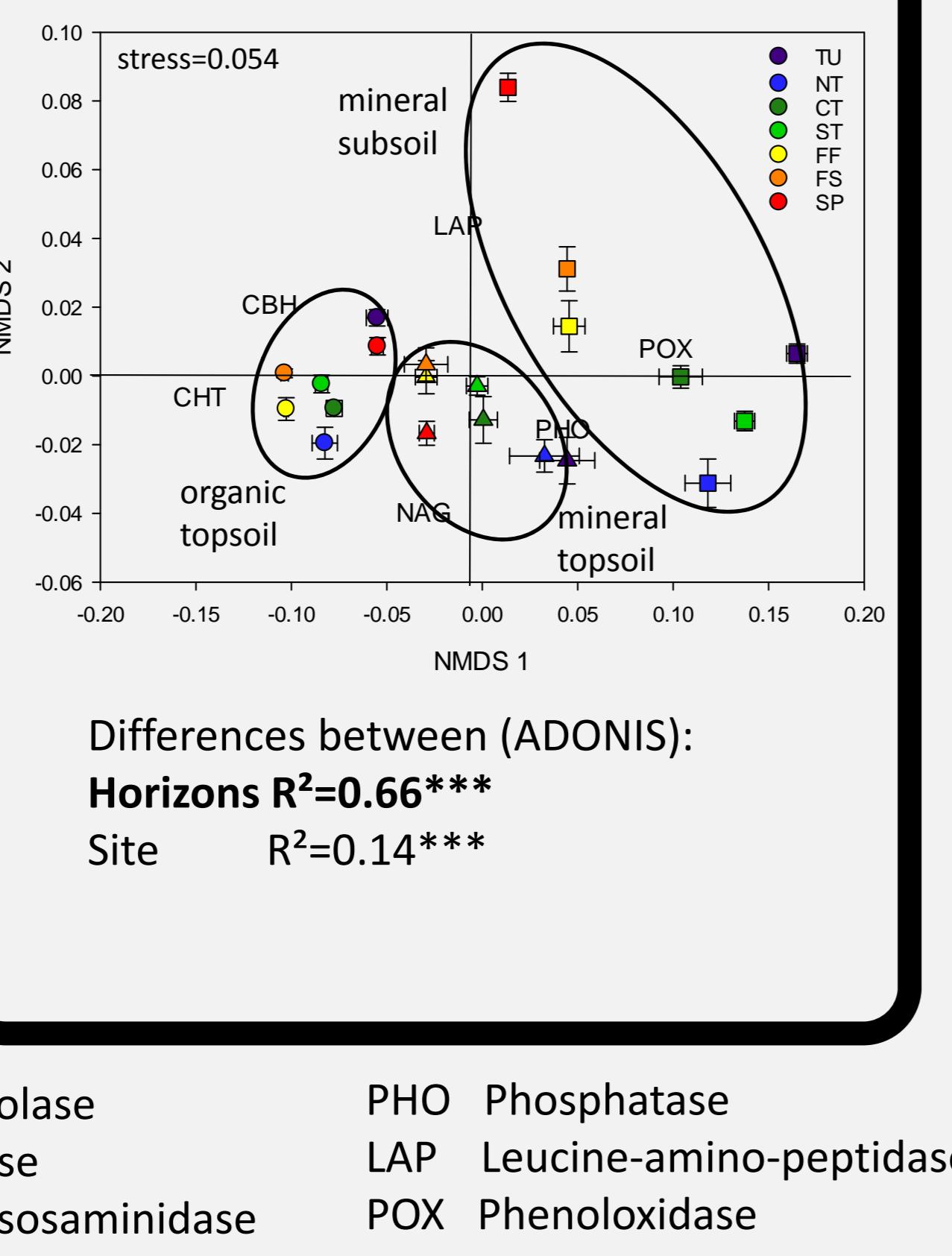
7 ecosystems



1 Enzyme activities



2 Enzyme pattern



3 Enzyme correlations

	organic topsoil	mineral topsoil	mineral subsoil
soil C	0.06		
soil N	0.22		
soil CN	0.05	0.04	
microbial C			
microbial N	0.03		0.02
microbial CN		0.05	
pH	0.02	0.03	0.29
water content		0.04	0.17
mic. comm. comp.	0.16		0.17
fungi:bacteria	0.10		0.24

Mantel tests of enzyme patterns and biotic and abiotic soil factors. Values are R^2 of significant correlations

organic topsoil

depth 0 - 10 cm
%C 3.5 - 44.8
%N 0.32 - 1.77
SOM C/N 11 - 36
pH 2.8 - 6.6
fungi:bacteria 0.29 - 0.92

mineral topsoil

depth 6 - 28 cm
%C 2.0 - 7.5
%N 0.14 - 0.35
SOM C/N 11 - 27
pH 3.1 - 5.1
fungi:bacteria 0.21 - 0.55

mineral subsoil

depth 23 - 75 cm
%C 0.4 - 1.7
%N 0.04 - 0.1
SOM C/N 9 - 16
pH 3.7 - 7.9
fungi:bacteria 0.19 - 0.44

hydrolytic enzyme activities

1

oxidative enzyme activities

1

differences between ecosystems

2

correlation to soil C and N

3

correlation to pH, water content, fungi:bacteria

3