

**Supplementary material to:**

**Si cycling in a forest biogeosystem – the importance of  
transient state biogenic Si pools**

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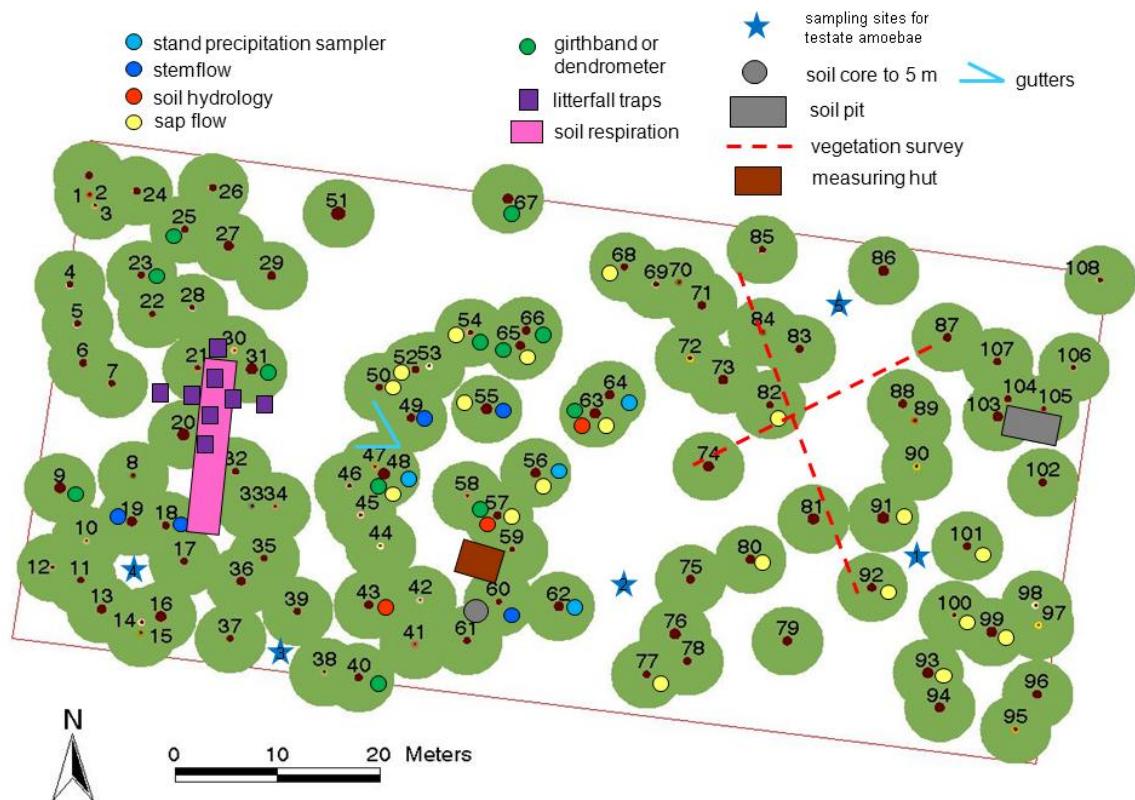
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Figure S1: Recent land cover of the study site Beerenbusch ( $53^{\circ}09'10''N$ ,  $12^{\circ}59'22''E$ ); yellow dot: location of site characterization in 1954 (soil pit, vegetation survey)



Figure S2: Instrumentation, sampling sites, soil pit with position of Kubiena boxes, thin sections & SEM-EDX of feldspars at Beerenbusch (ICP Forests DE1207)

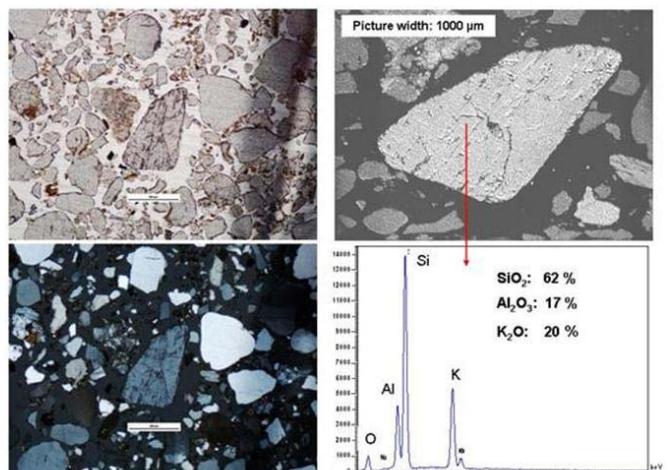


Brunic Arenosol (Dystric)



Feldspar weathering

Unweathered orthoclase, Beerenbusch 10-18 cm



Multi-mineral grain in coarse sand fraction:  
feldspar + quartz

Beerenbusch

Figure S3: History of land use / forest management at Beerdenbusch from 1780-2010

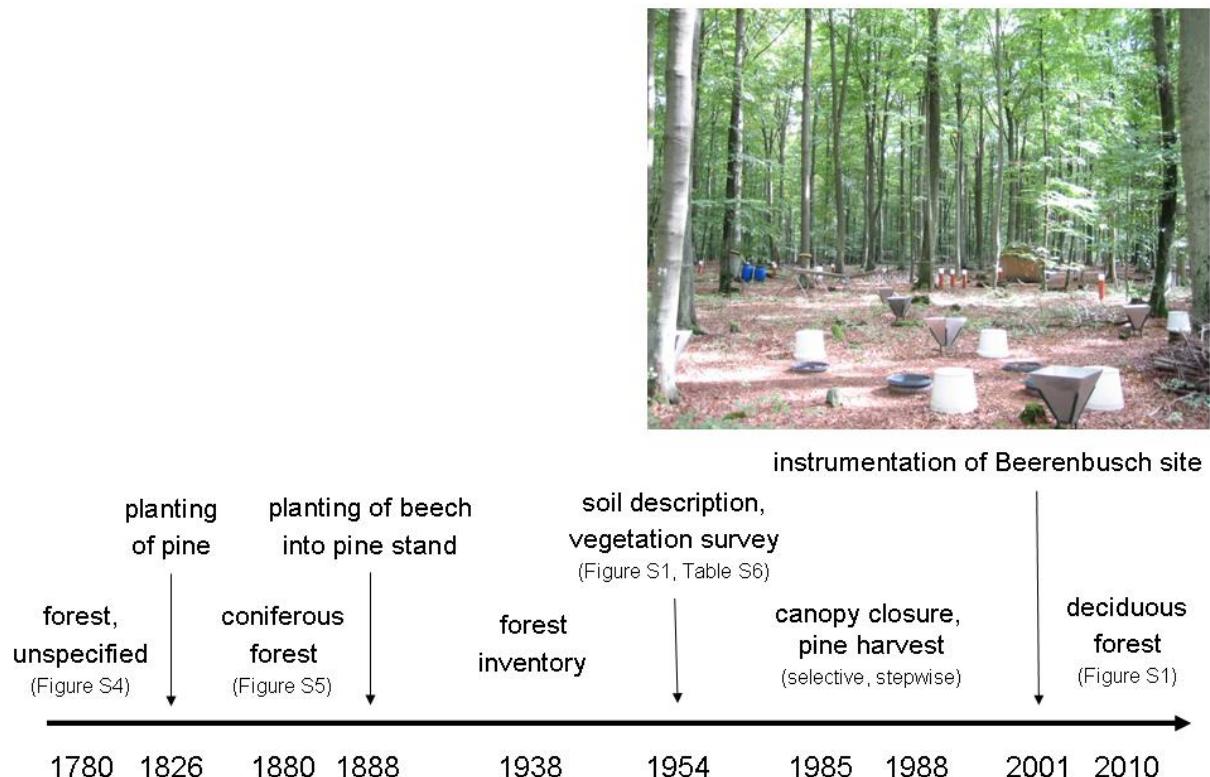


Figure S4: Land cover at Beerenbusch around 1780

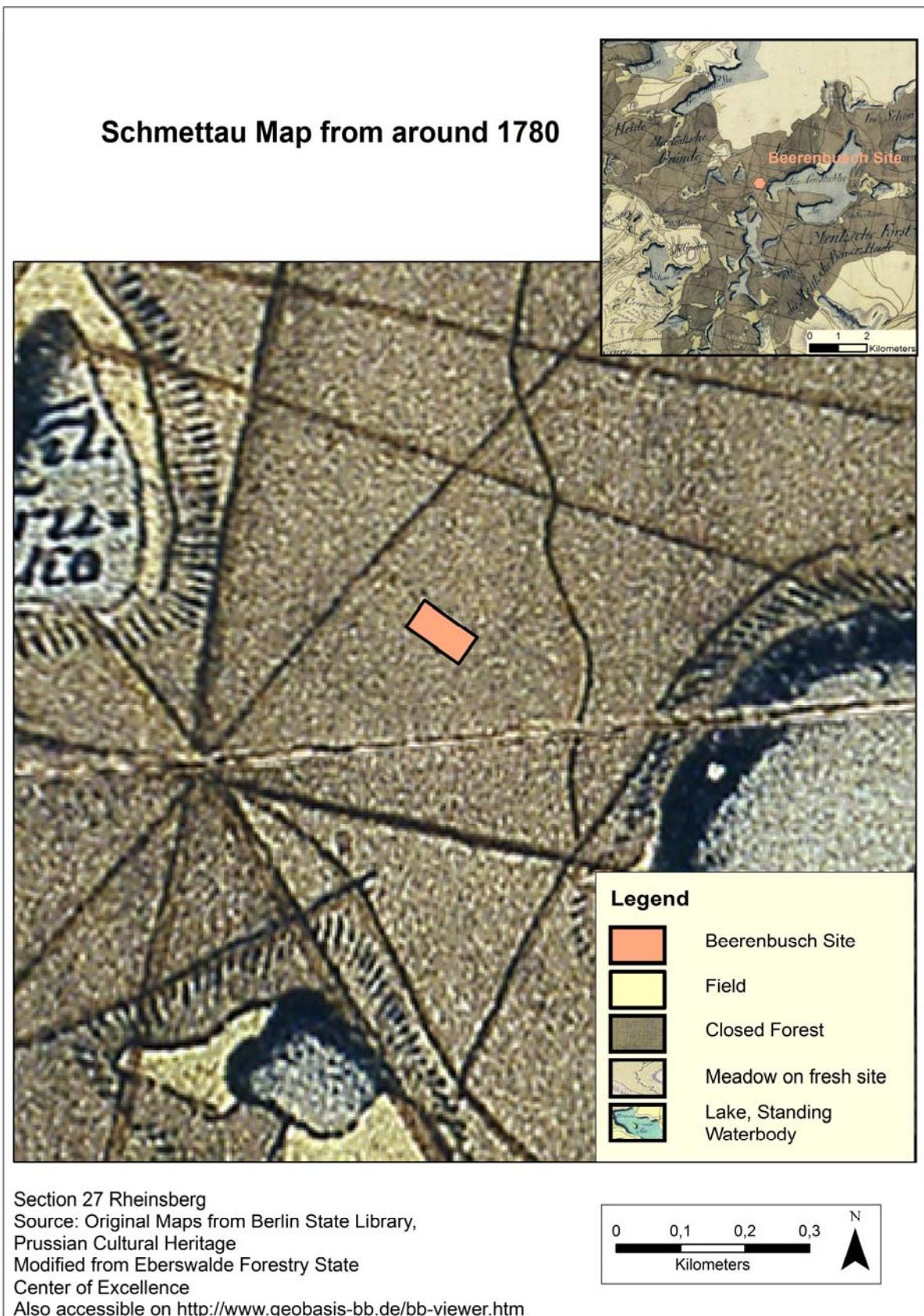


Figure S5: Land cover at Beerenbusch around 1880



Table S6: Ground vegetation ( $20 \times 20 \text{ m}^2$ ) at site 255 (yellow dot in S1) in 1954

Species	Braun-Blanquet	coverage (%)	% Si in d.m. (mean) Hodson et al. ( 2005)
Calamagrostis epigejos	3.3	25-49	2.2
Pteridium aquilinum	2.3	5-24	1.5
Brachypodium sylvaticum	1.2	1-4	3.1
Oxalis acetosella	1.2	1-4	n.a.
Agrostis capillaris	1.1	1-4	1.4
Veronica officinalis	1.1	1-4	n.a.
Anthoxanthum odoratum	+1	<1	0.5
Carex leporina	+1	<1	n.a.
Fragaria vesca	+1	<1	n.a.
Hypericum perforatum	+1	<1	n.a.
Melica uniflora	+1	<1	1.9
Poa compressa	+1	<1	1.2
Potentilla spec.	+1	<1	n.a.
Rubus idaeus	+1	<1	0.1
Urtica dioica	+1	<1	1.3

n.a. = no data available

#### Sources:

Forstliche Standortskartierung des Staatlichen Forstwirtschaftsbetriebes Rheinsberg 1954:  
Bohrpunktunterlagen (Kartierer: Schultz). Archiv der Standortskartierung im LFE,  
Eberswalde, unpublished data;  
vegetation list comes from a stand gap - “under beech and pine no ground vegetation”  
(handwritten note of Schultz in German)

Si contents assigned from data in Hodson et al. (2005)