

Environmental Systems Analysis

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Mycology

Ungulates

Plague

Beringia

Volcanos

Driftwood

Lateglacial

Mycology

Ungulates

Plague

Beringia

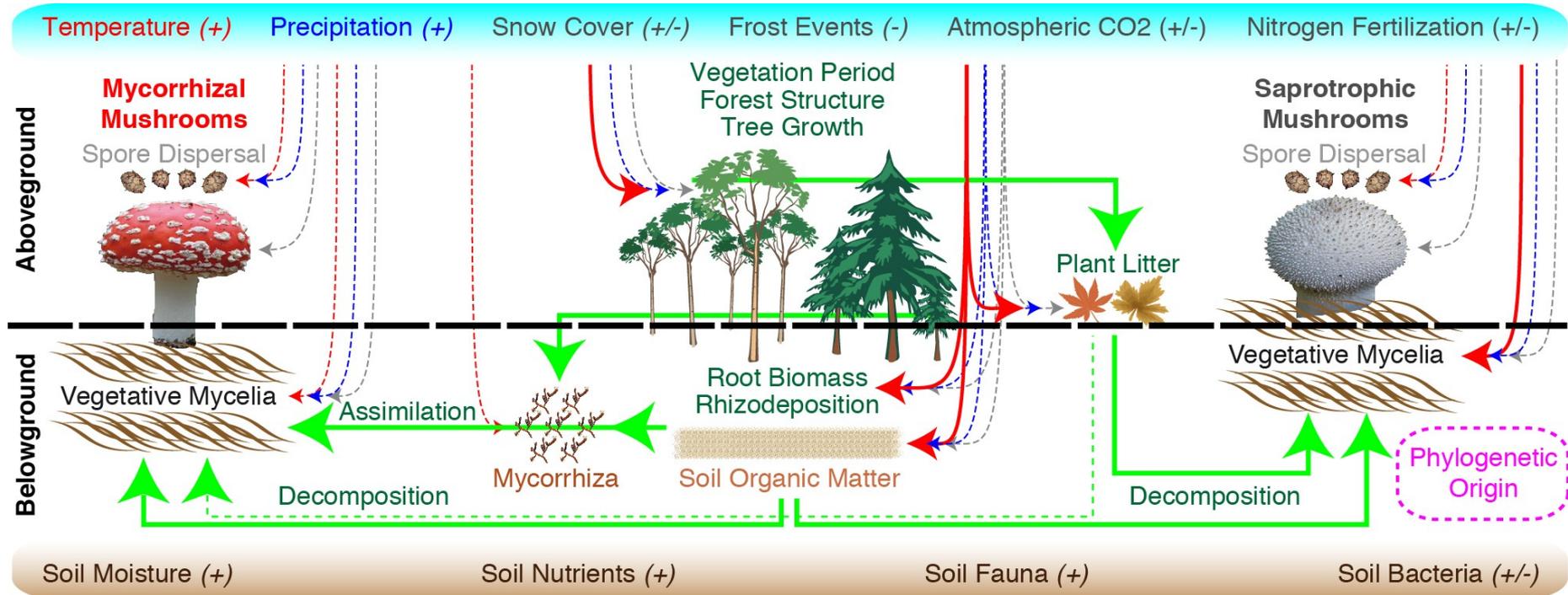
Volcanos

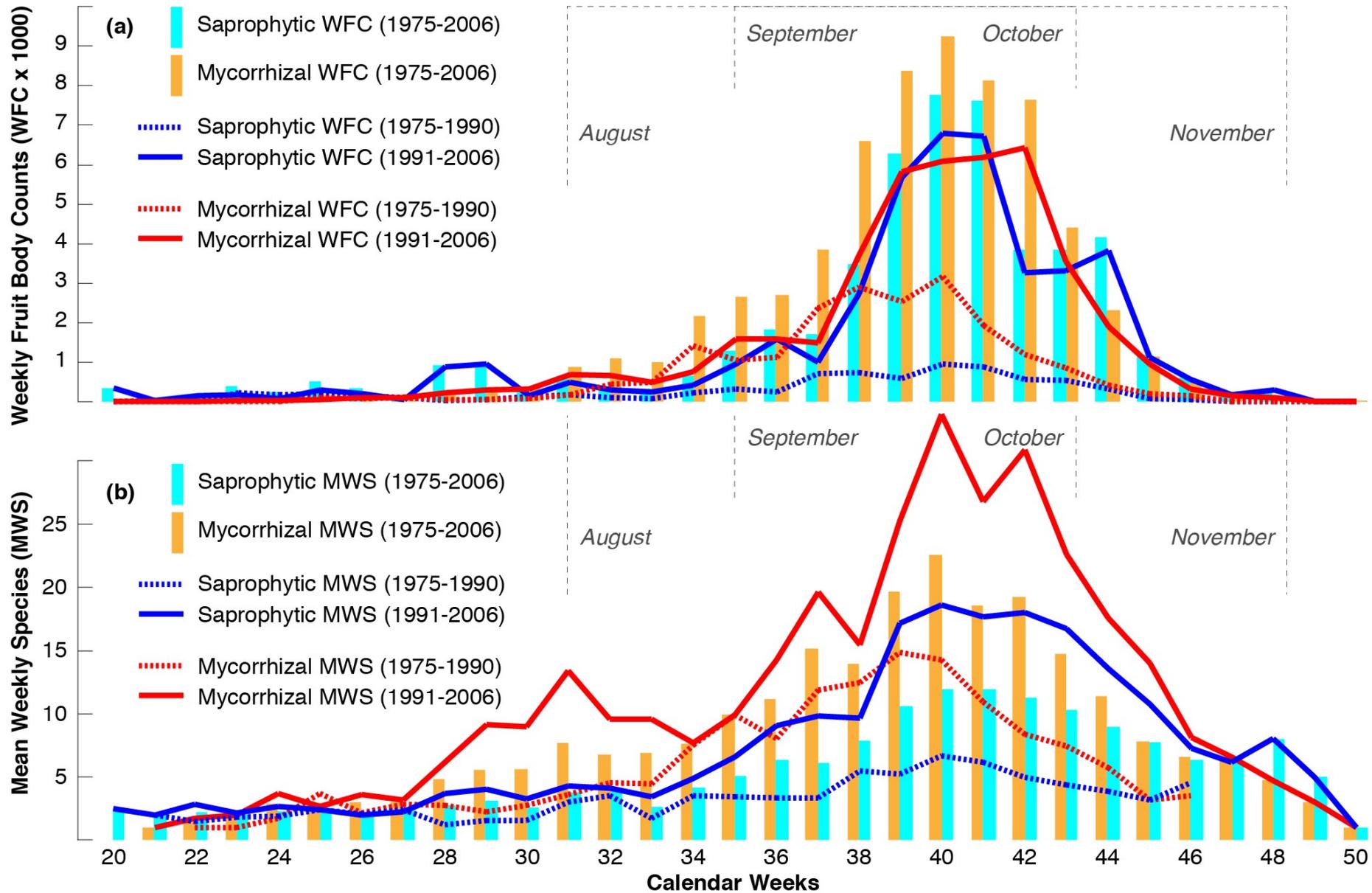
Driftwood

Lateglacial

Unraveling environmental drivers of a recent increase in Swiss fungi fruiting

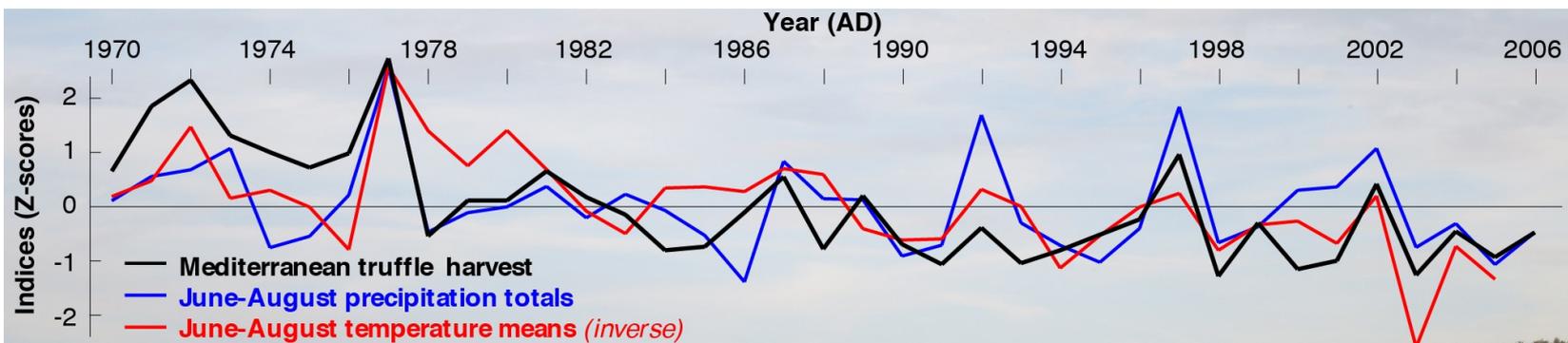


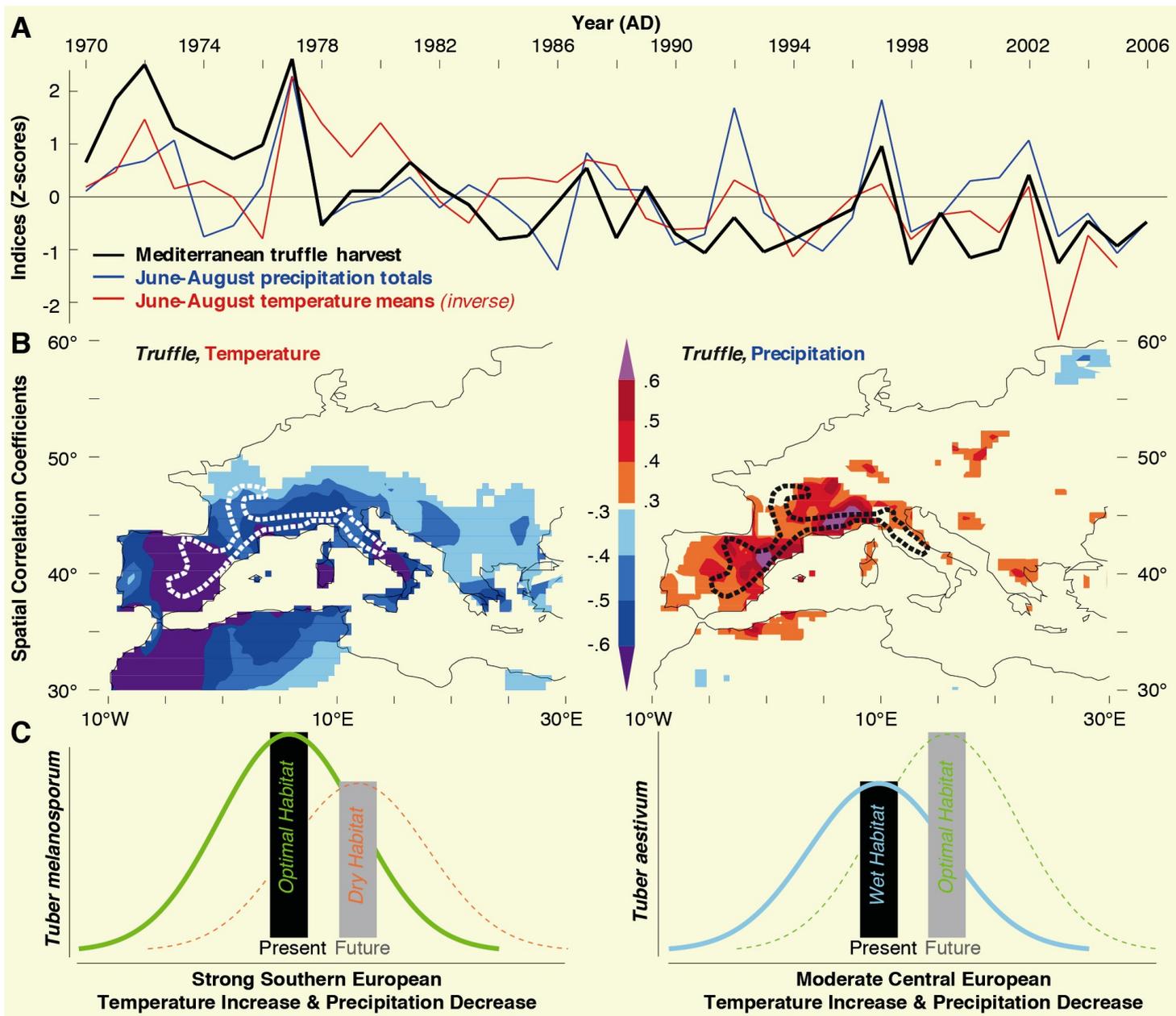


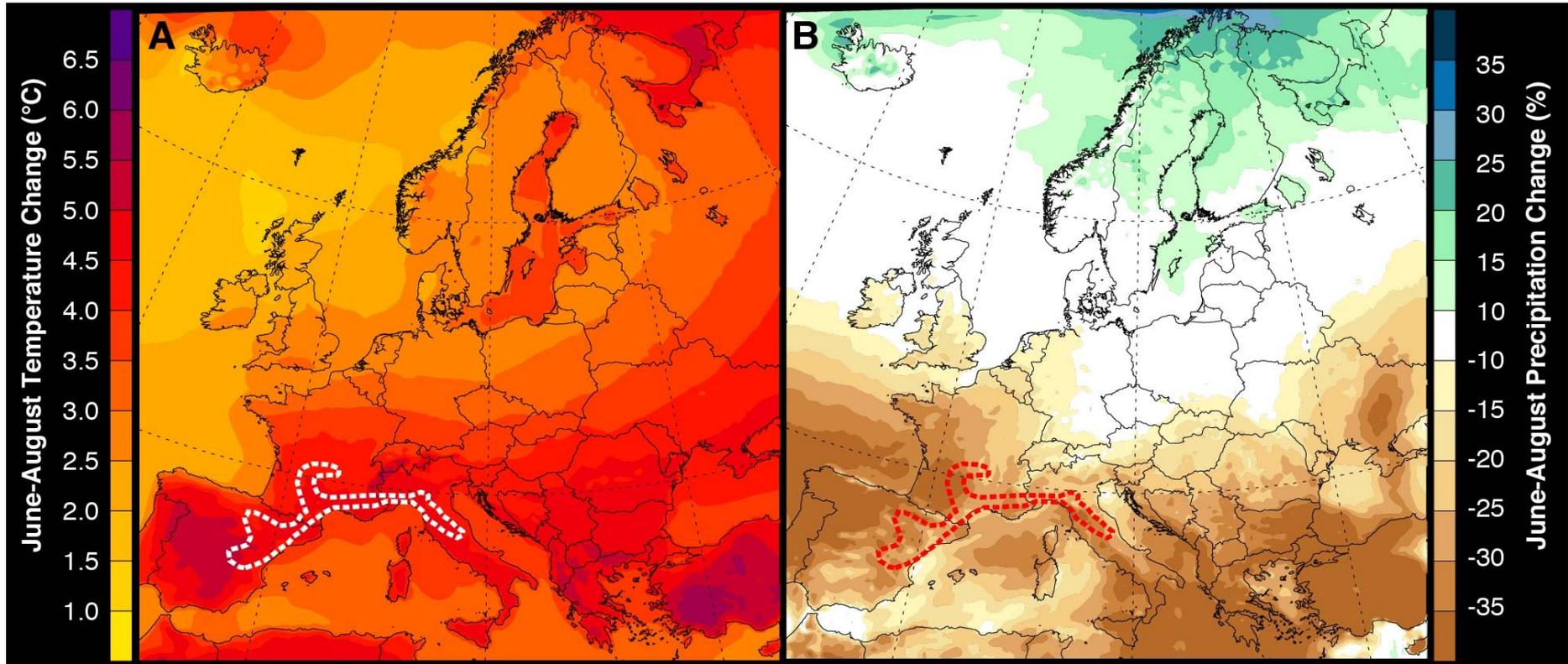


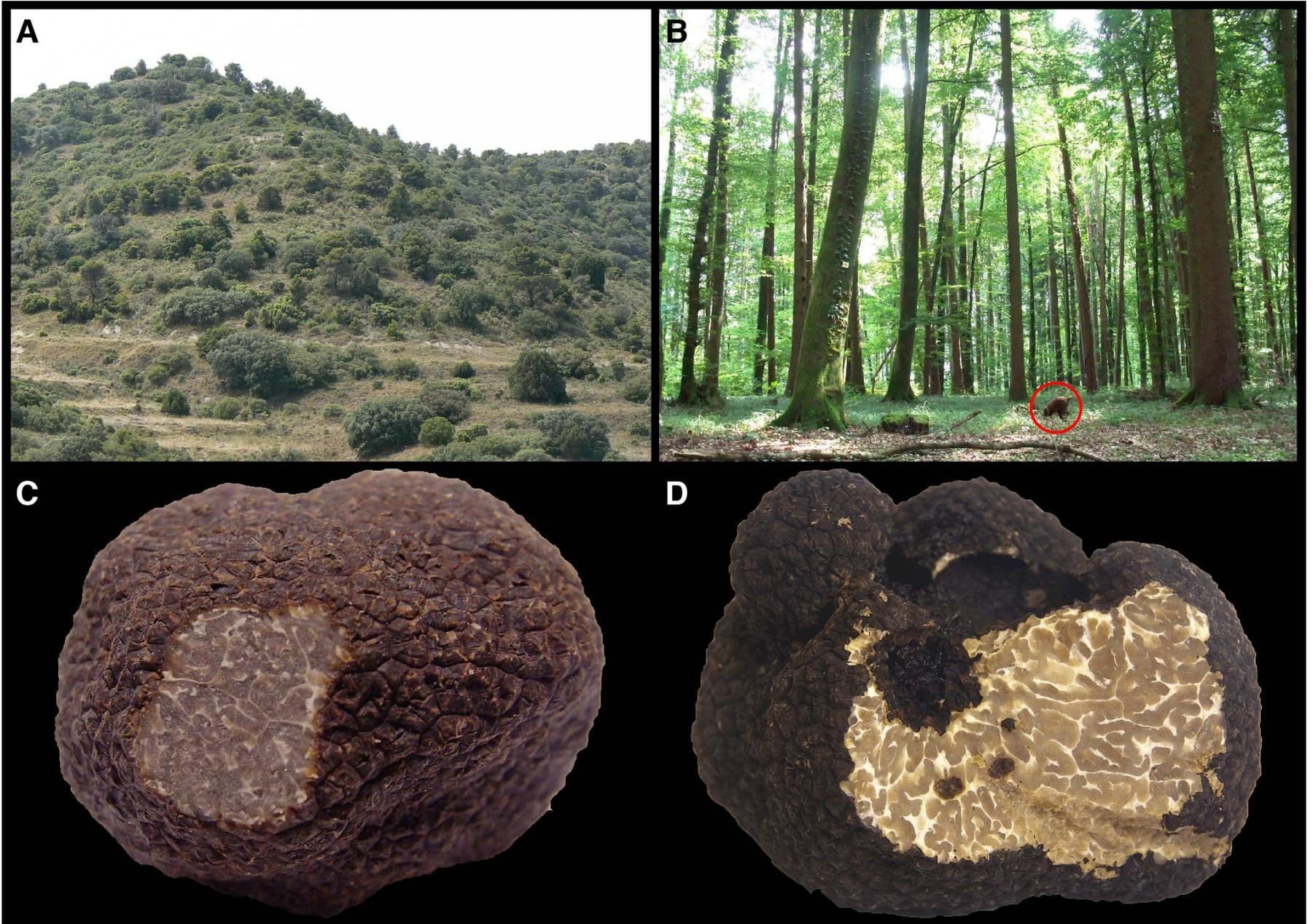
Drought-induced decline in Mediterranean truffle harvest













Mycology

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Rings beyond forests





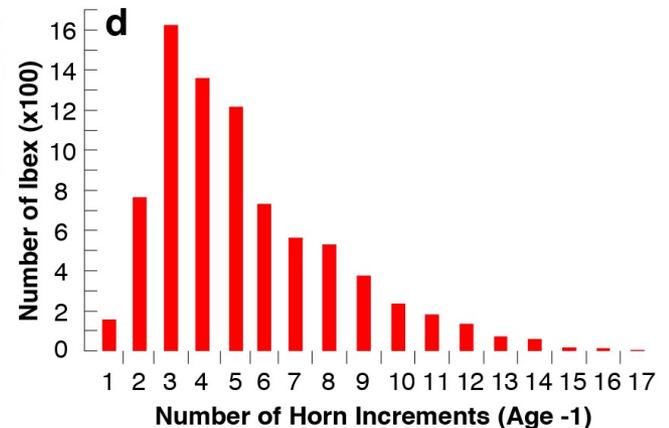
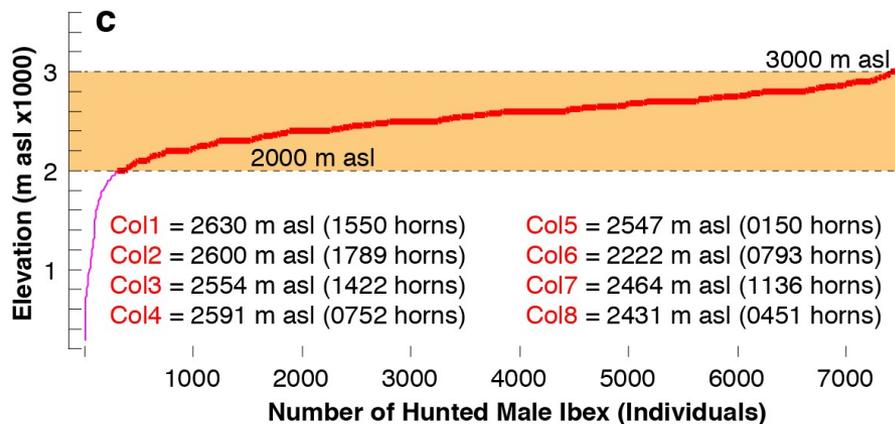
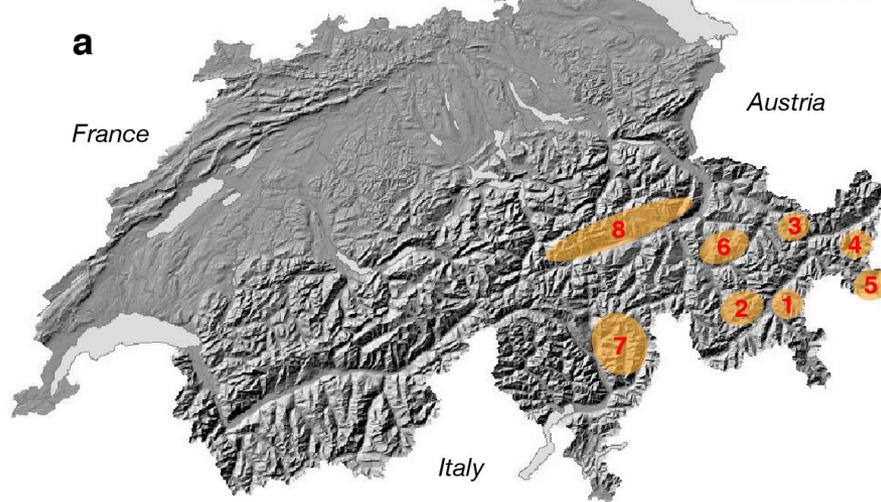


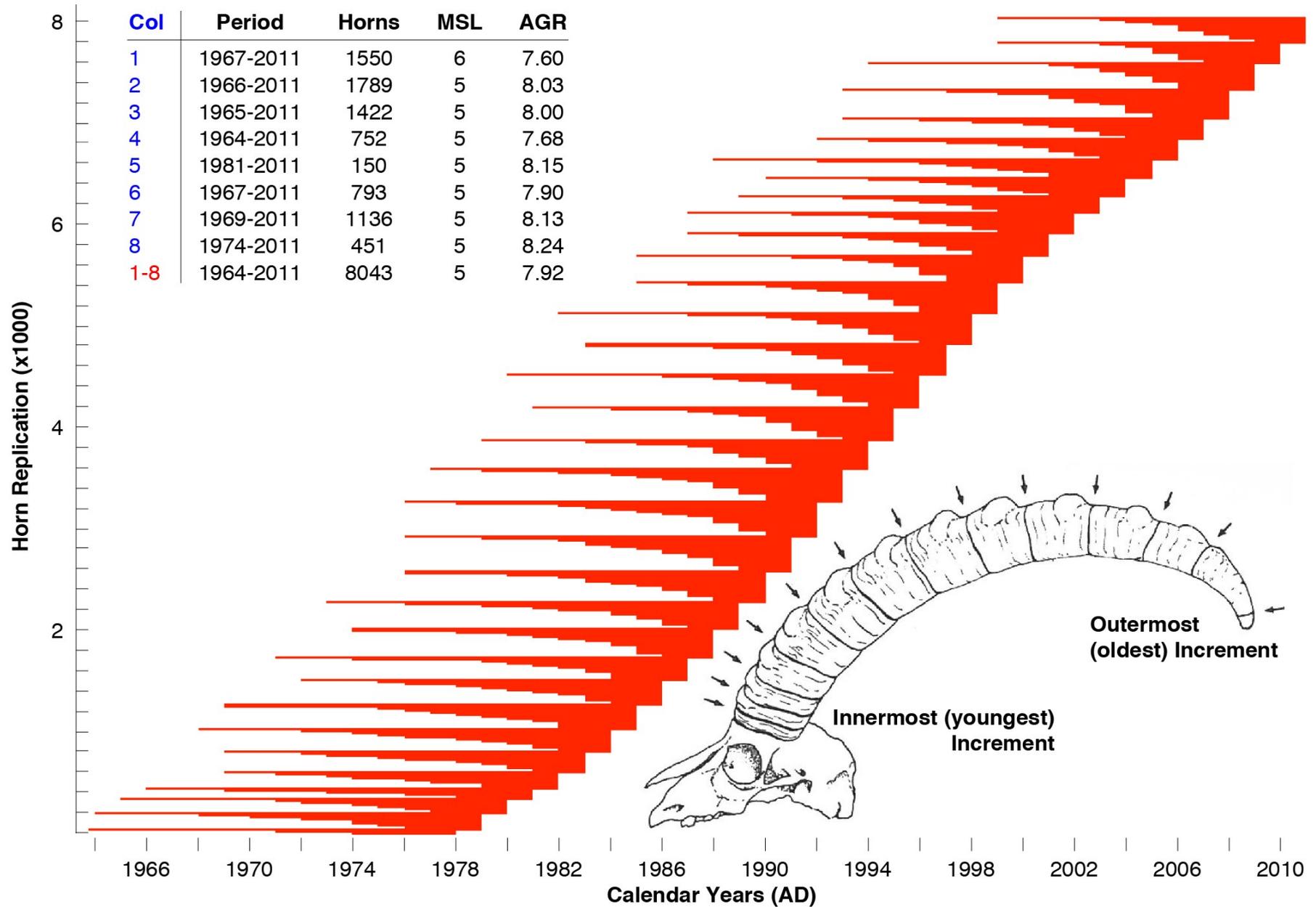


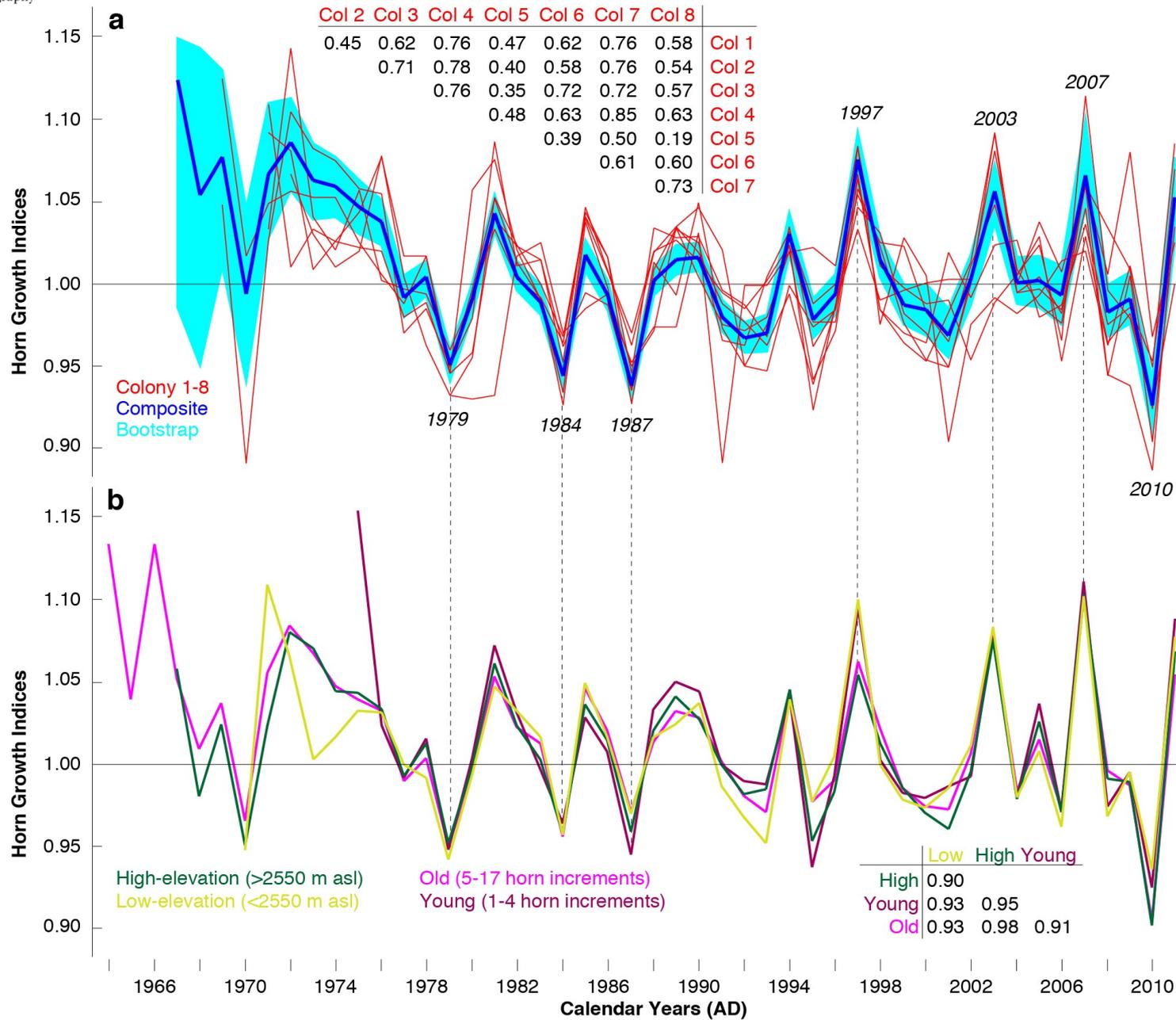


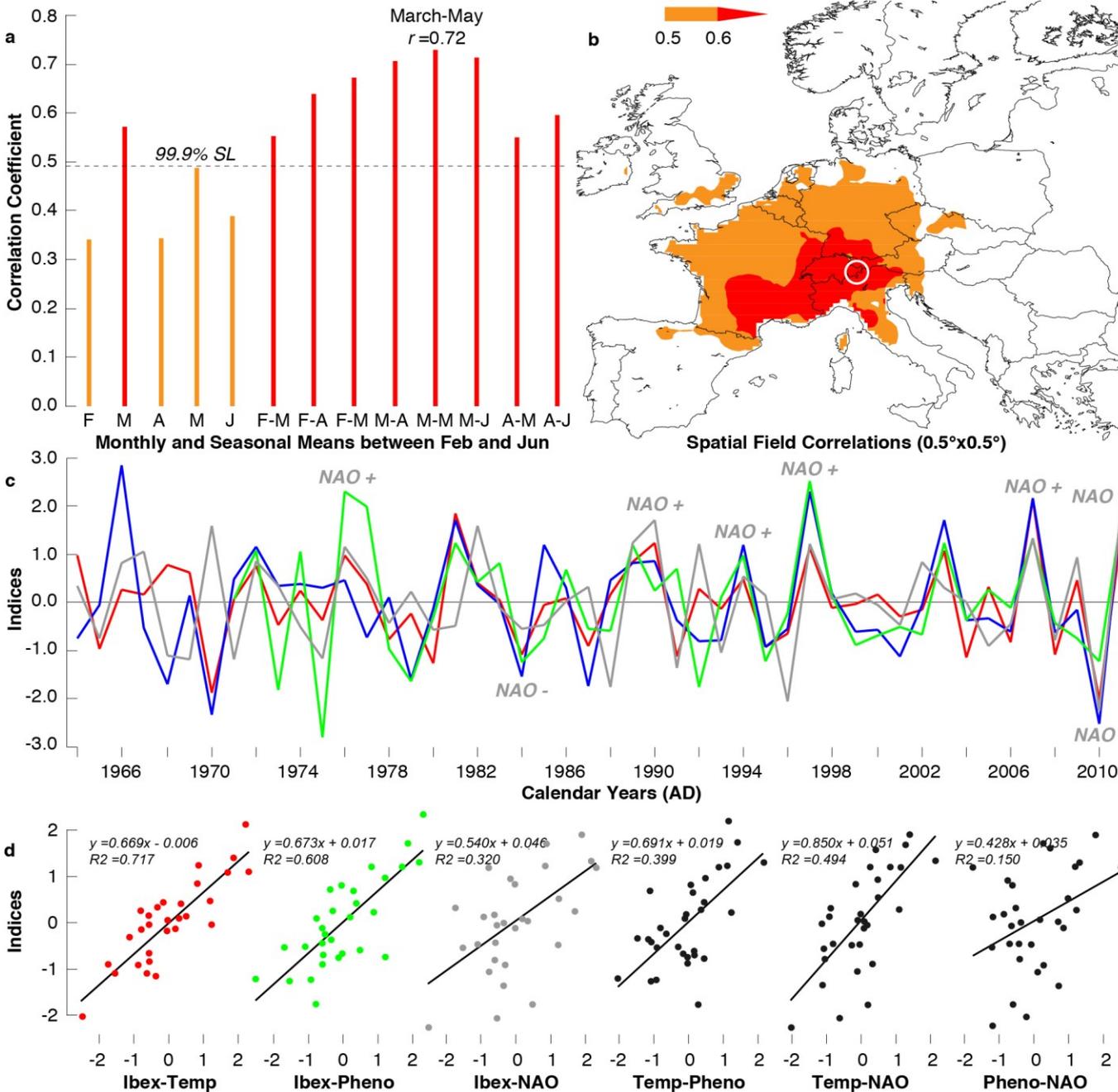


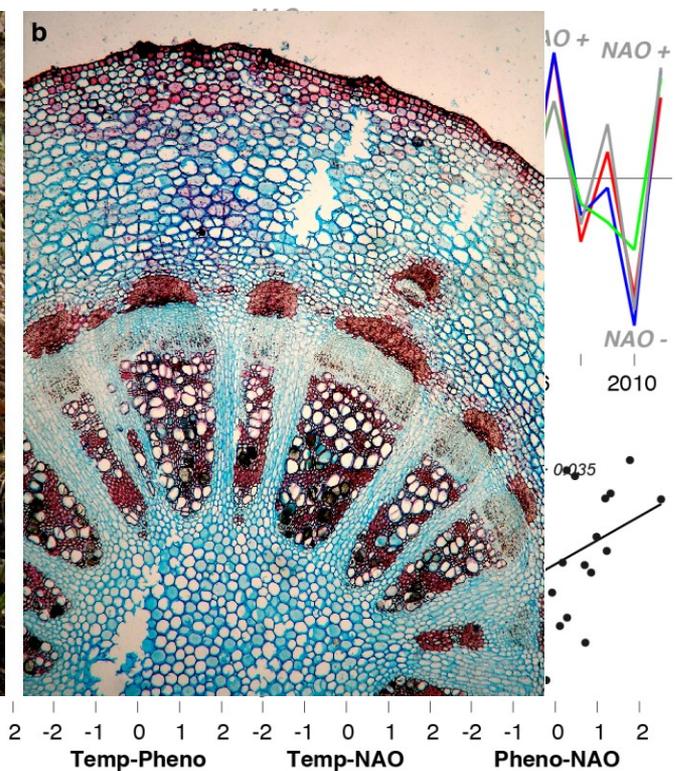
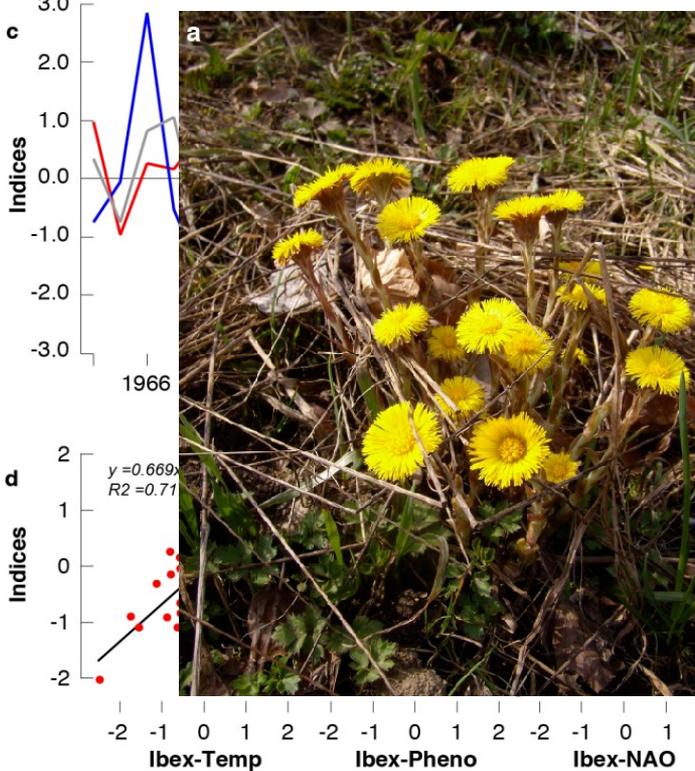
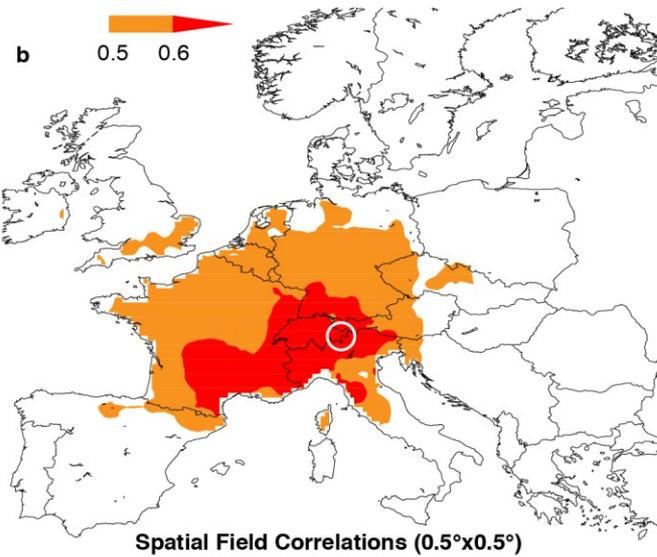
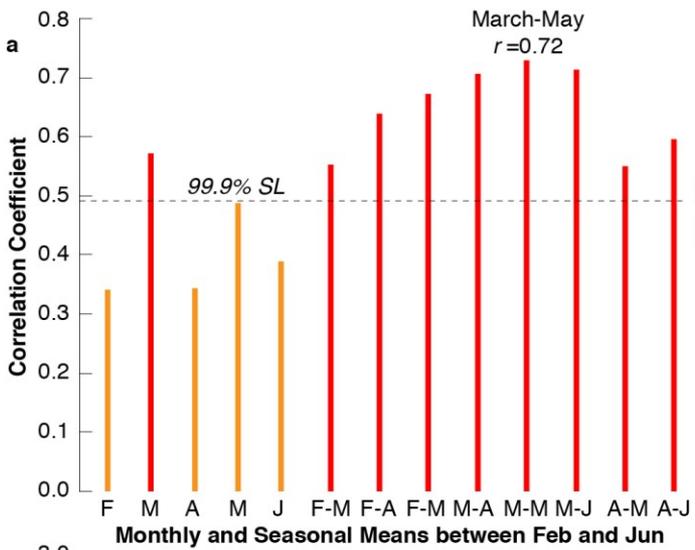
- 1.1 Albris
- 2.1 Val Bever
- 2.2 Julier South
- 2.3 Julier North
- 3.1 Flüela
- 3.2 Fergen Seetal
- 3.3 Falknis
- 4.1 Macun
- 4.2 Sesvenna
- 5.1 Umbrail
- 6.1 Rothhorn/Weissfluh
- 6.2 Howchwang
- 7.1 Safien-Rheinwald
- 7.2 Mesocco
- 7.3 Vals
- 7.4 Caschlegia
- 8.1 Oberalp-Frisal
- 8.2 Crap da Flem
- 8.3 Calanda





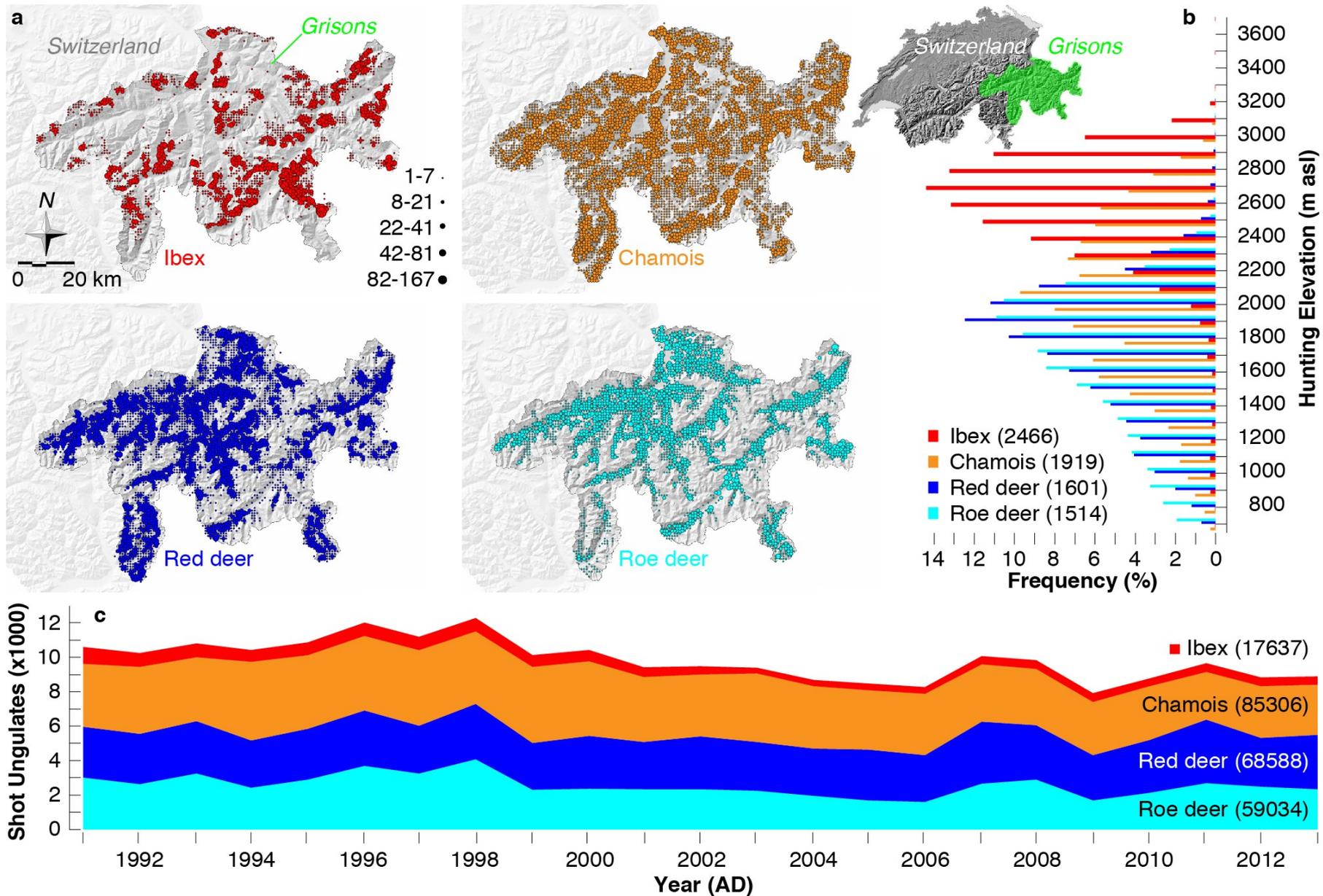


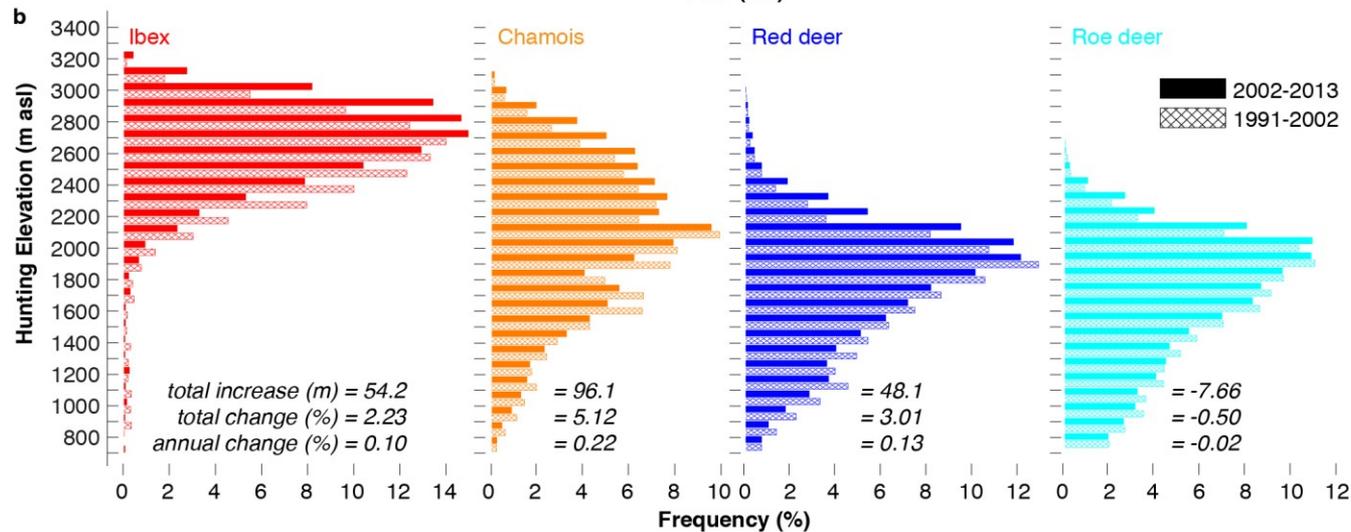
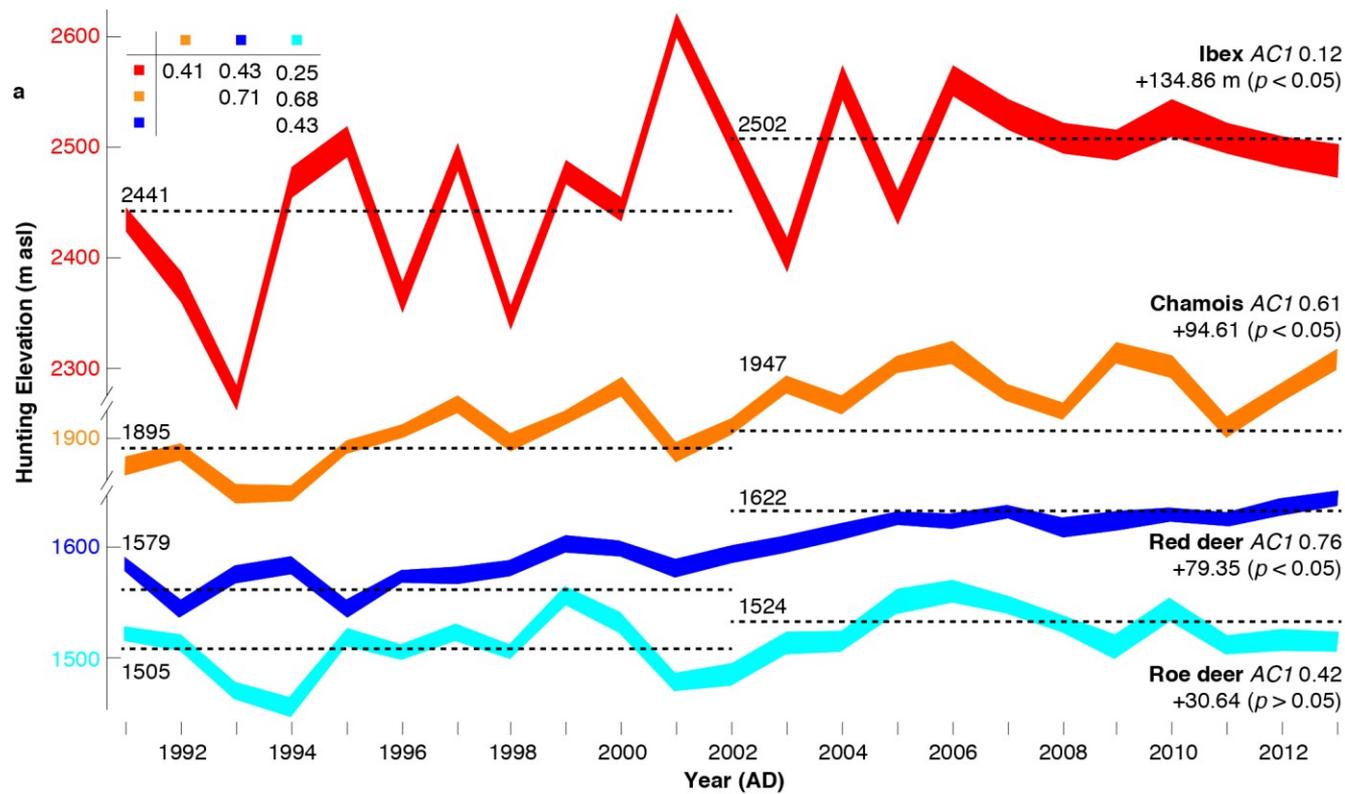


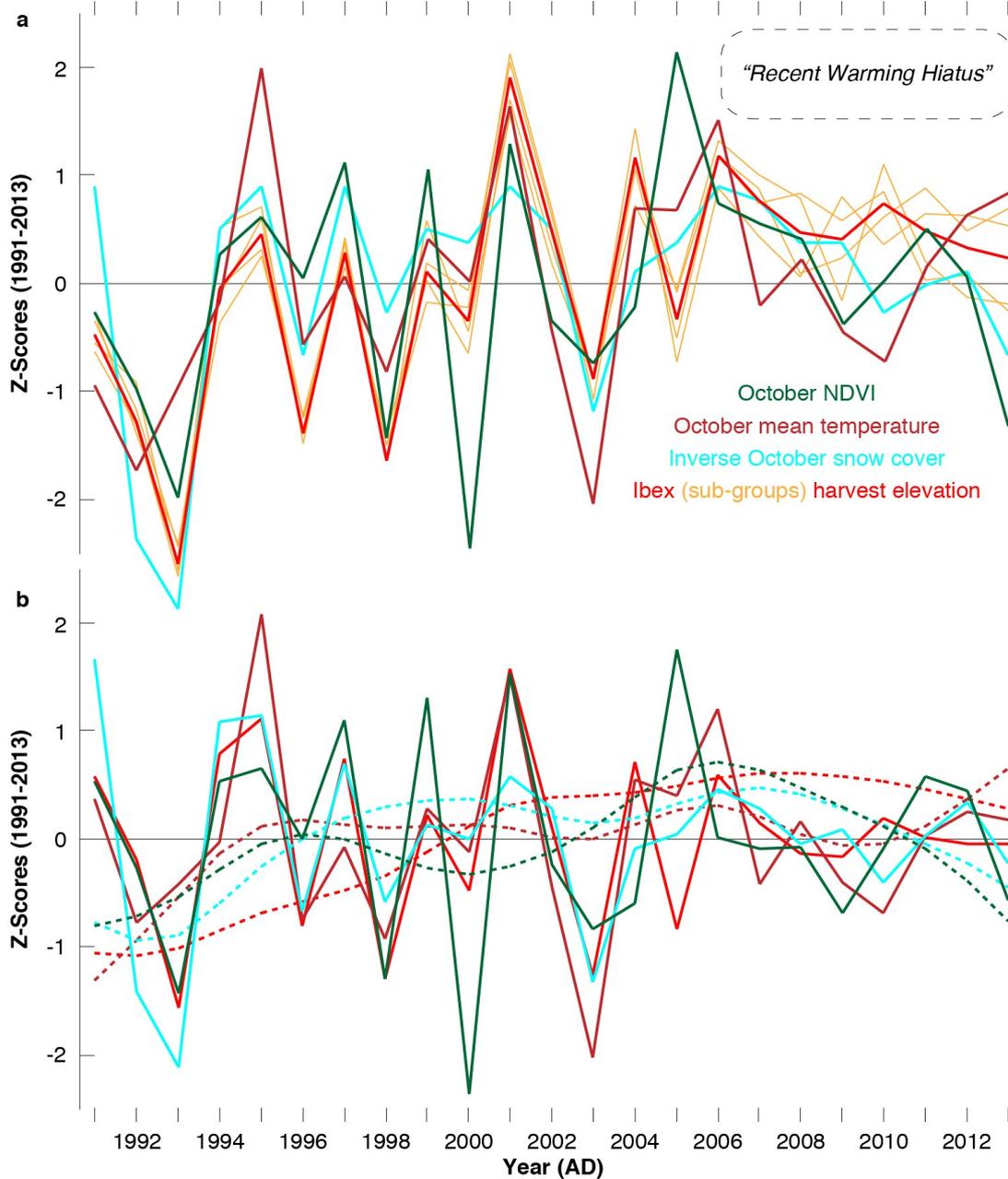


Elevational range shifts in four mountain ungulate species from the Swiss Alps



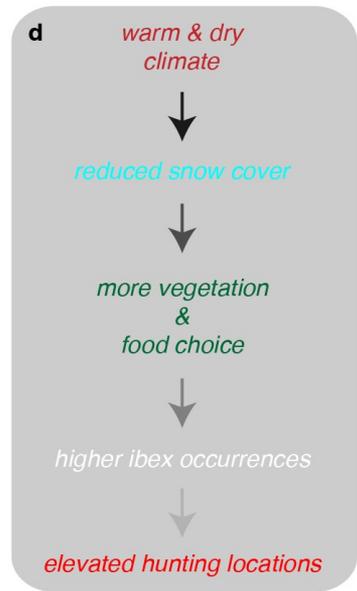






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	Snow	NDVI	Ibex	
Temp	0.59	0.48	0.65	original
Snow		0.56	0.74	
NDVI			0.53	
Temp	0.63	0.46	0.65	low-pass
Snow		0.65	0.76	
NDVI			0.64	
Temp	0.63	0.49	0.72	high-pass
Snow		0.55	0.77	
NDVI			0.55	



Mycology

Ungulates

Plague

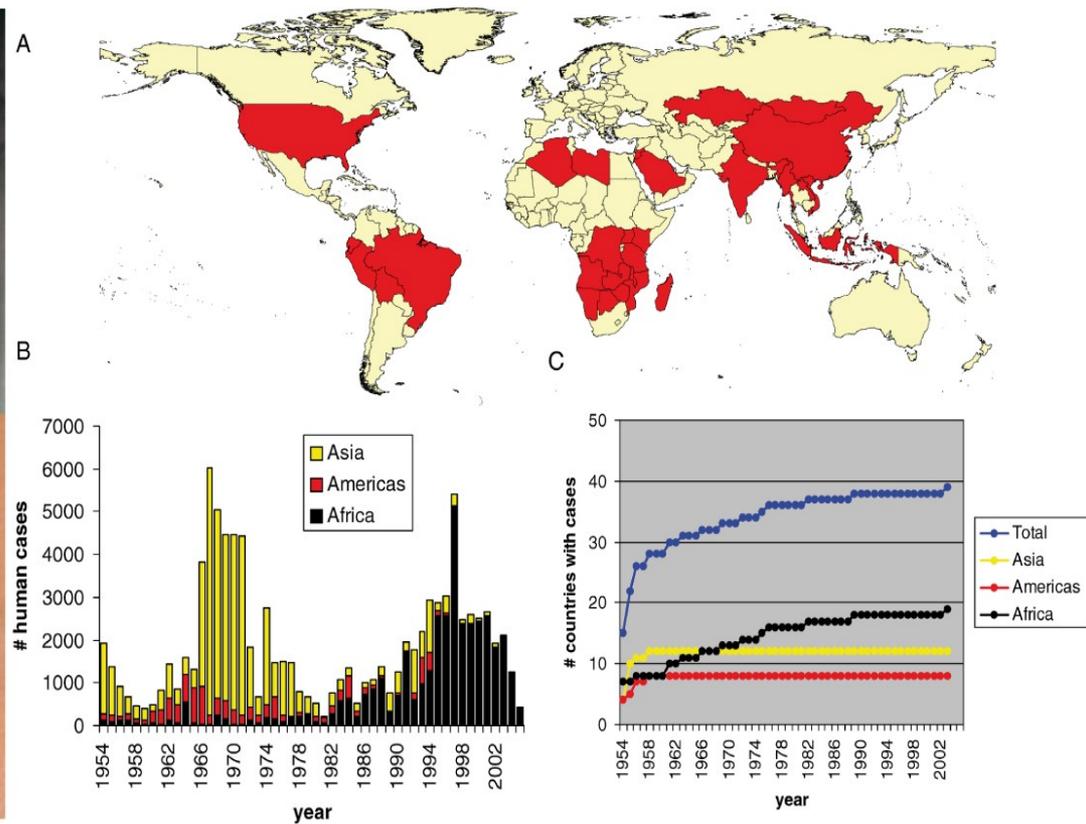
Beringia

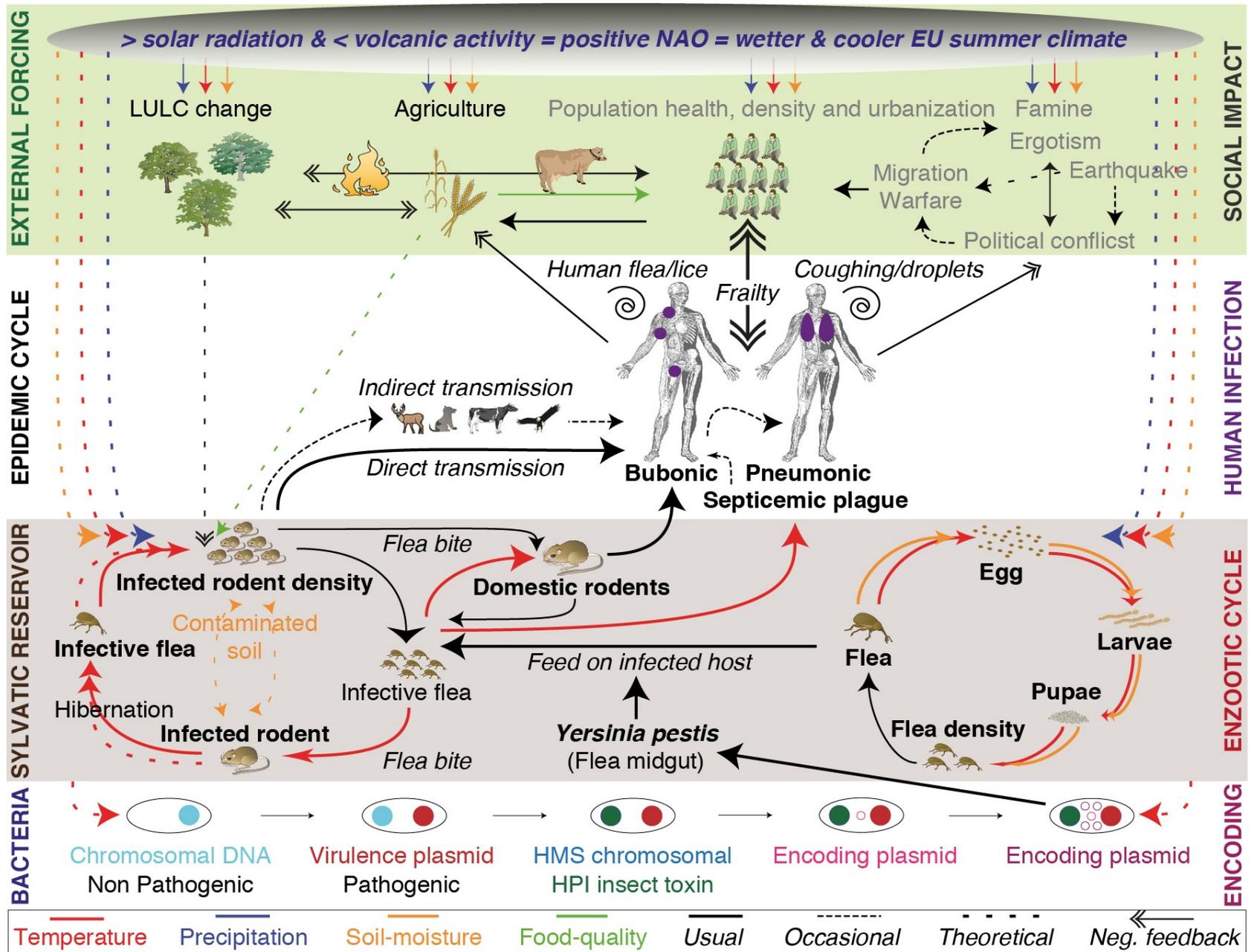
Volcanos

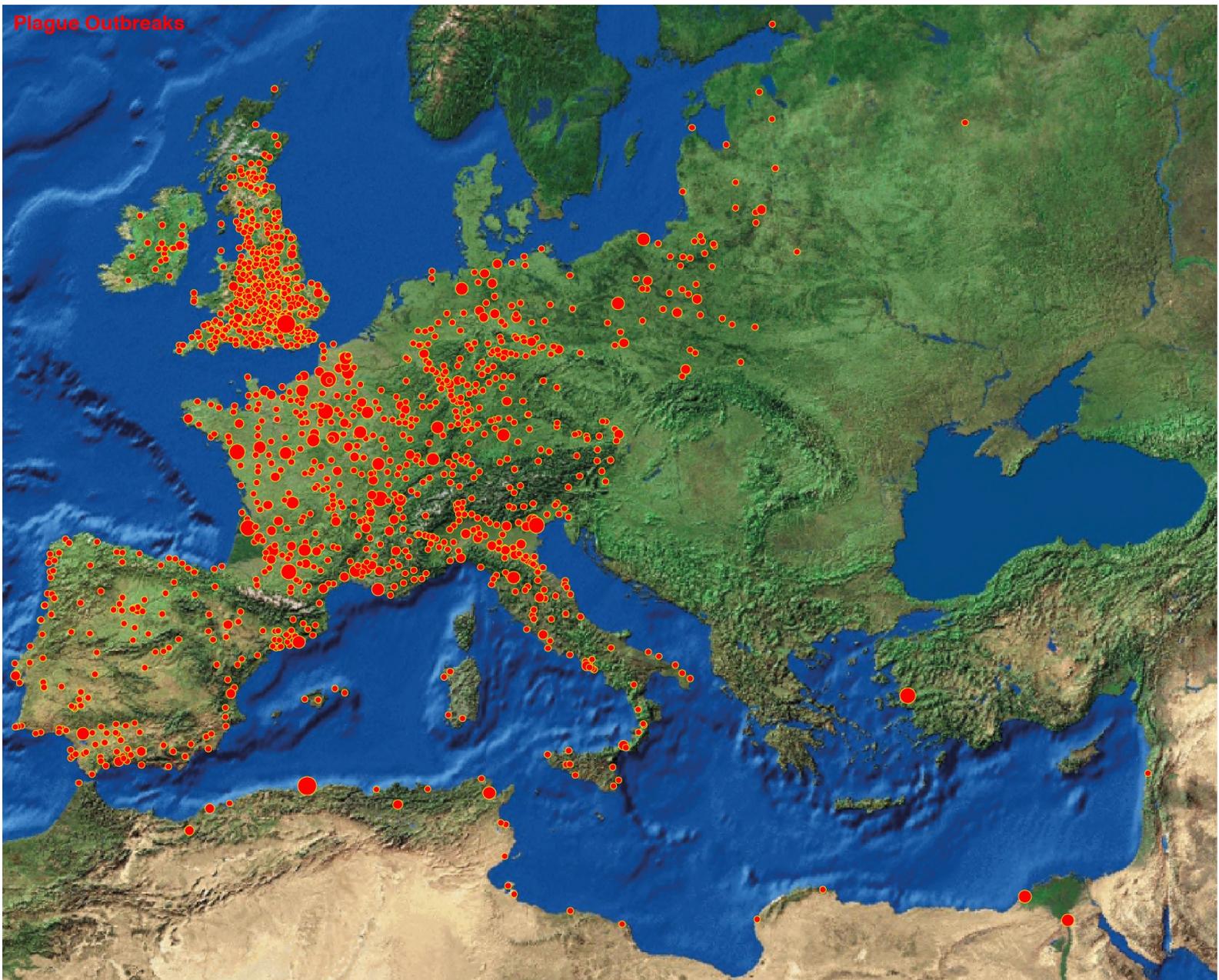
Driftwood

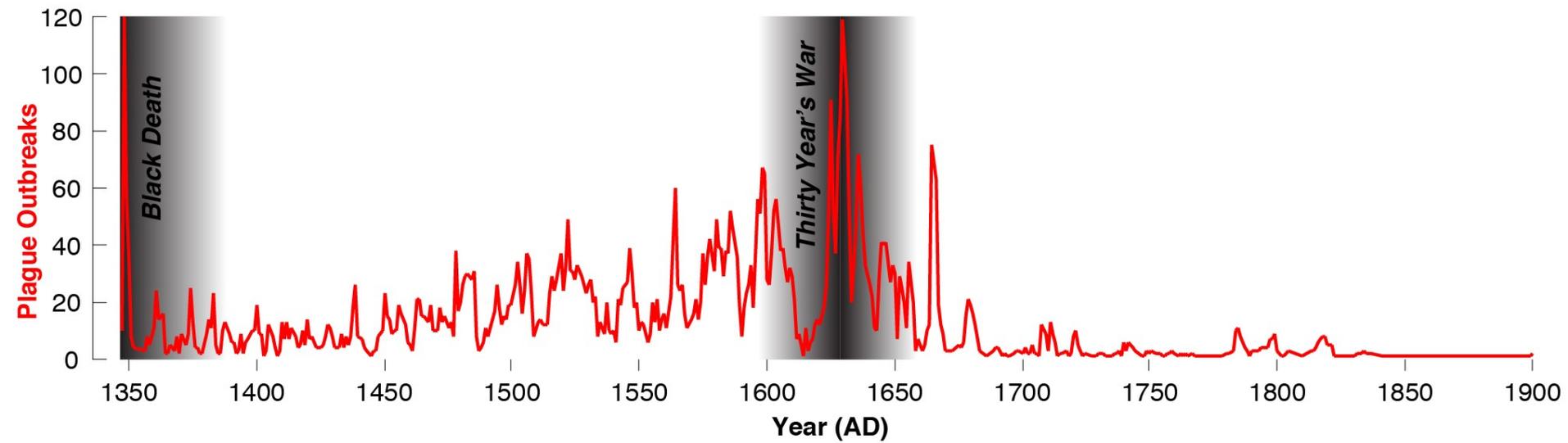
Lateglacial

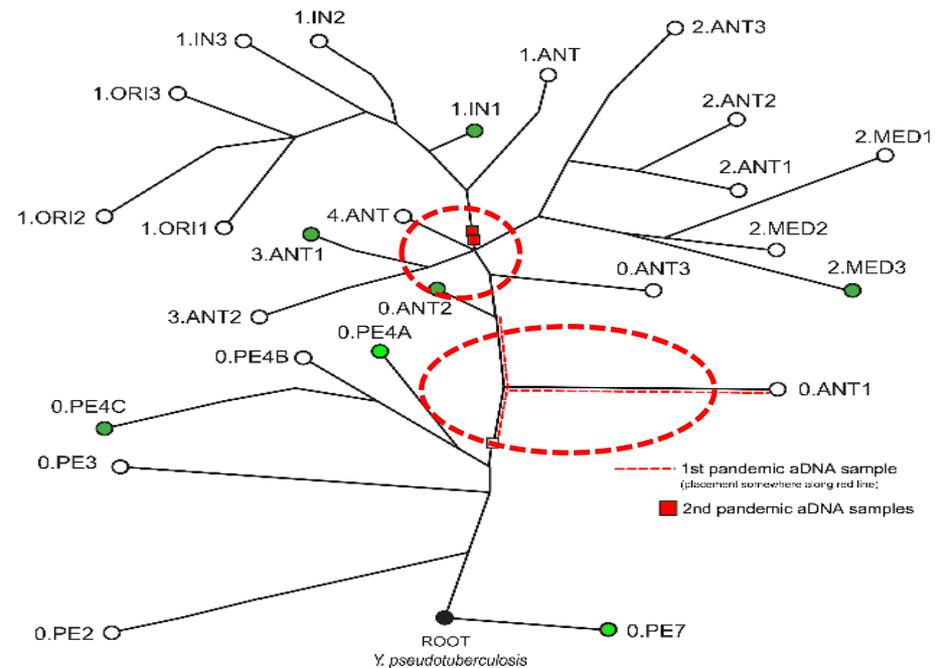
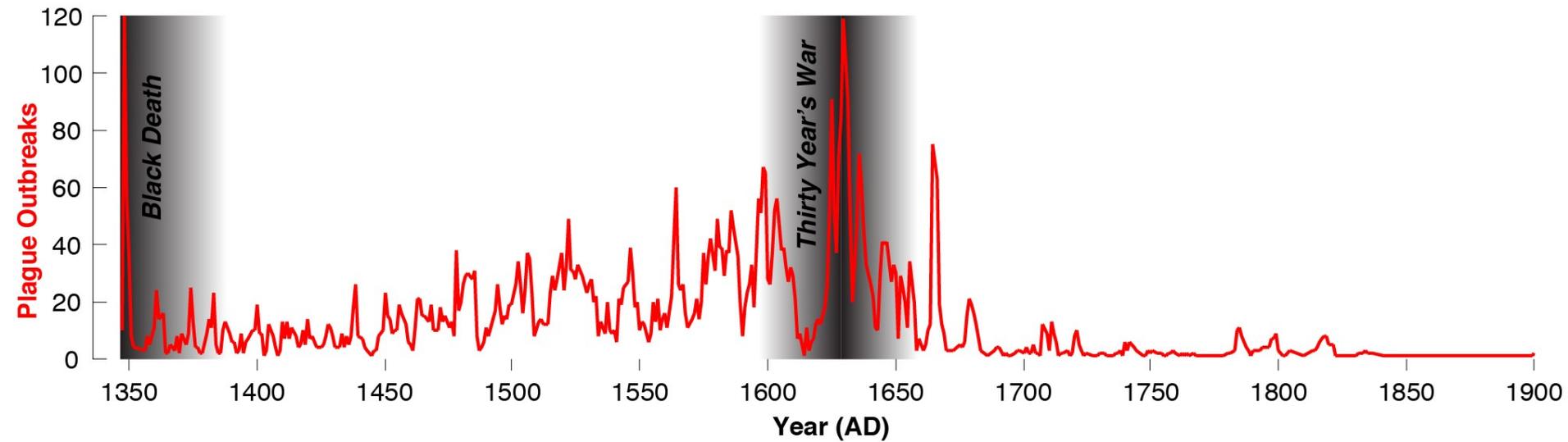
Tracing the origin of the Black Death























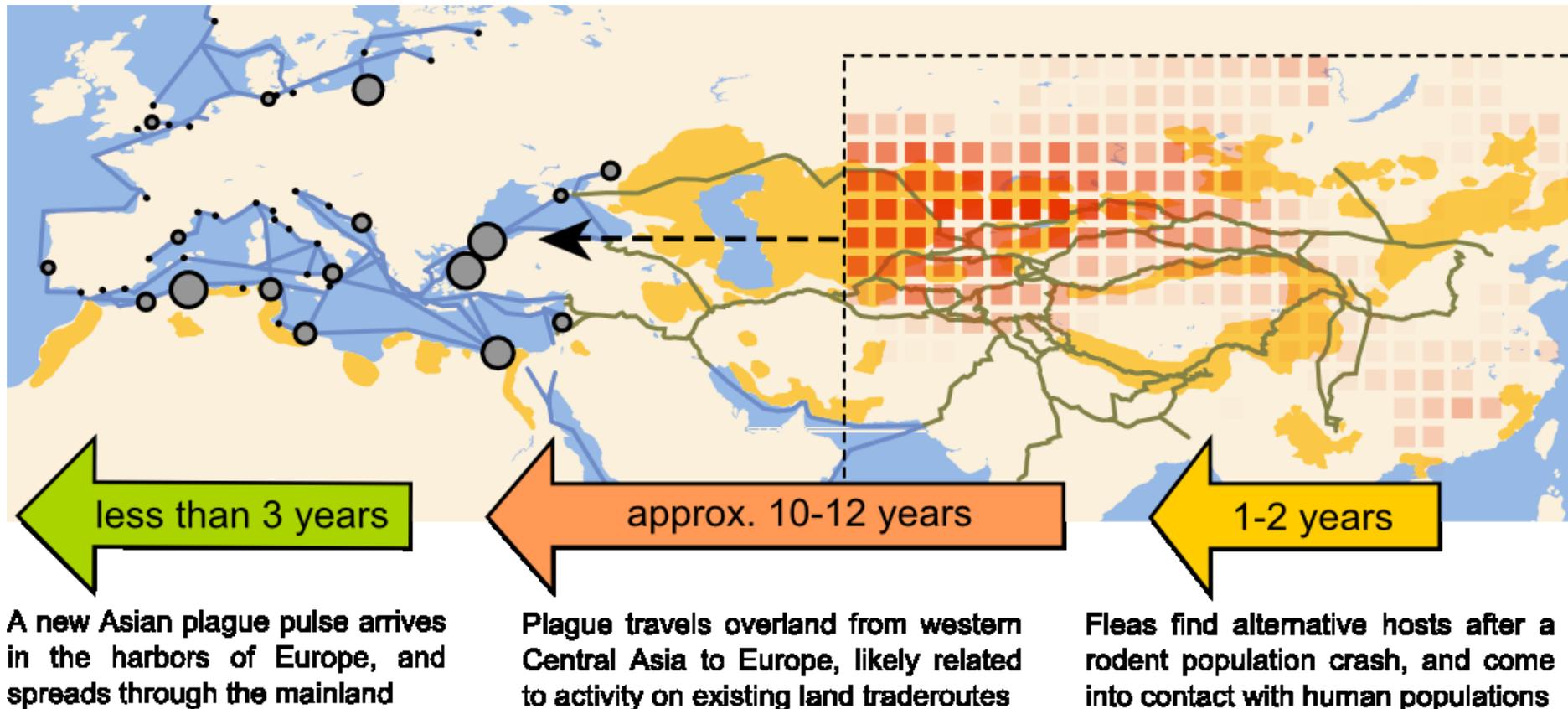


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The climatic pulse of Asia

Climate-driven plague outbreaks in Asia were repeatedly introduced into medieval Europe



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Bridge over troubled water – Valuing Russia’s scientific landscape

Environmental change not only implies research needs but also offers collaborations between Russia and the international scientific community





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MERCURY



Climate change and zoonotic infectious diseases at high-northern latitudes:
warming-induced recent anthrax outbreaks in Siberia

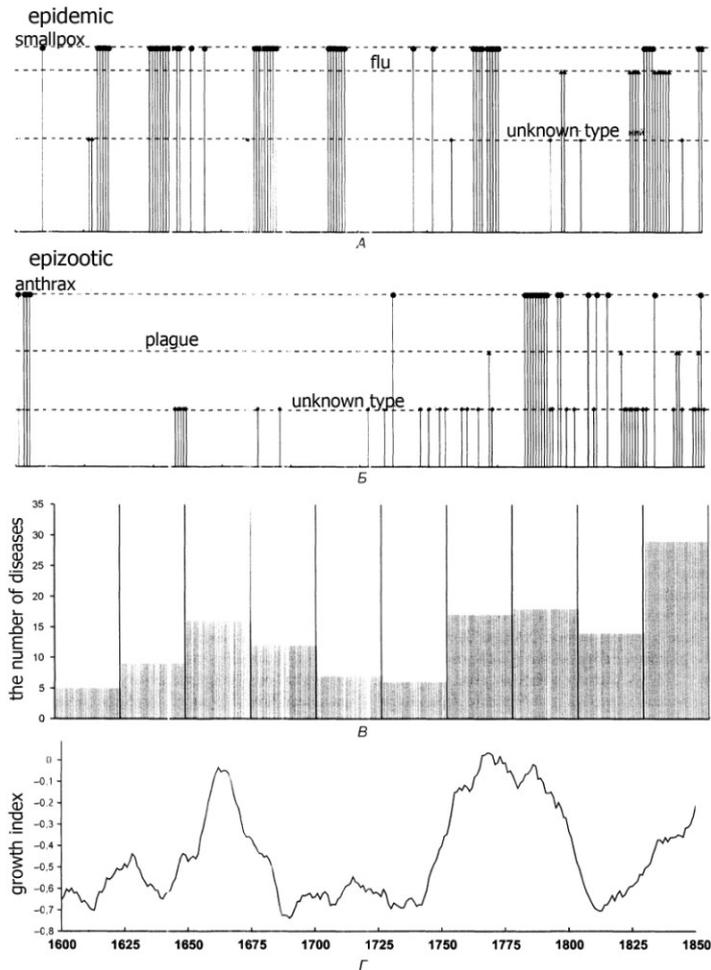
Climate change and zoonotic infectious diseases at high-northern latitudes:
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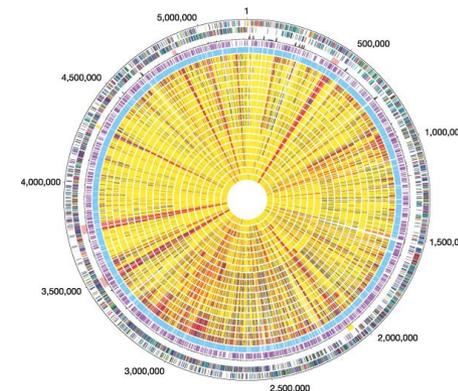
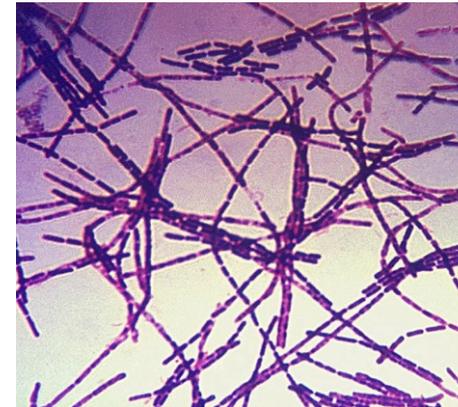
142



Outbreaks of epidemics (A) and epizootic (B) diseases, the total number of outbreaks (C) and the variations of temperature in northern Eurasia (D)

“мора” в 1546 г. (с повторением в 1576–1577 гг.) в Мексике погибло ок. 2 млн жителей (некоторые из Антилских островов полностью обезлюдели). Масштабы потерь можно представить, если исходить из того, что в 1568 г. численность населения этой страны составляла ок. 2 650 тыс. чел. [Бродель, 1986, с. 47–48]. Не менее

высокая смертность отмечалась и в более поздний период. По данным французского мореплавателя Лаперуза, в 1786 г., на о-ве Пасхи численность населения, вышедшего ему навстречу, составляла ок. 2 тыс. чел., а после эпидемии оспы в 1863 г. на острове осталось всего 111 чел. [Хейердал, 2003, с. 30]. Таким образом, про-



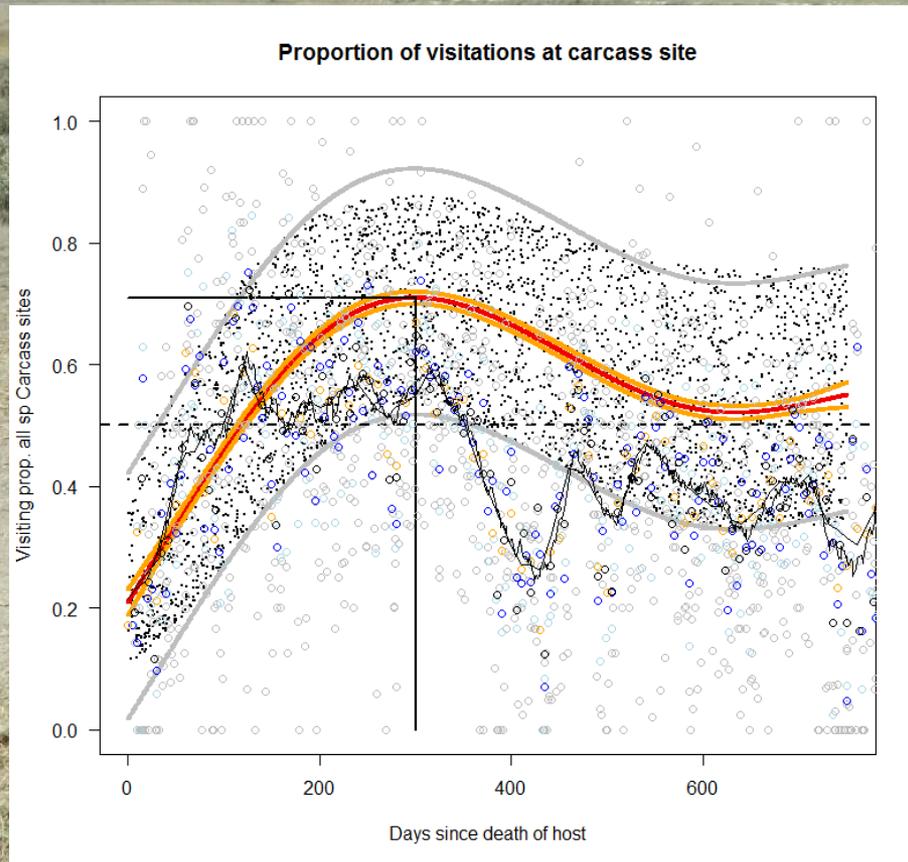
B. anthracis concentrations in the wildlife of Etosha NP, Namibia



B. anthracis concentrations in the wildlife of Etosha NP, Namibia



B. anthracis concentrations in the wildlife of Etosha NP, Namibia



Reconstructing the Beringia “standstill hypothesis”
and extinction patterns of the (woolly) mammoth fauna





Man in light blue shirt and dark trousers.

Man in white V-neck t-shirt and blue jeans.

Man in dark blue polo shirt, dark trousers, and a shoulder bag.

Man in blue polo shirt with 'CBФУ' logo and blue jeans.

Although anatomically defined, about 98% of all bone-remains from the Yakutian mammoth fauna are not (yet) dated





X 410 G.
9.84 KG.
12.80 KG.

11



Bridge over troubled water – Valuing Russia's scientific landscape

Mycology

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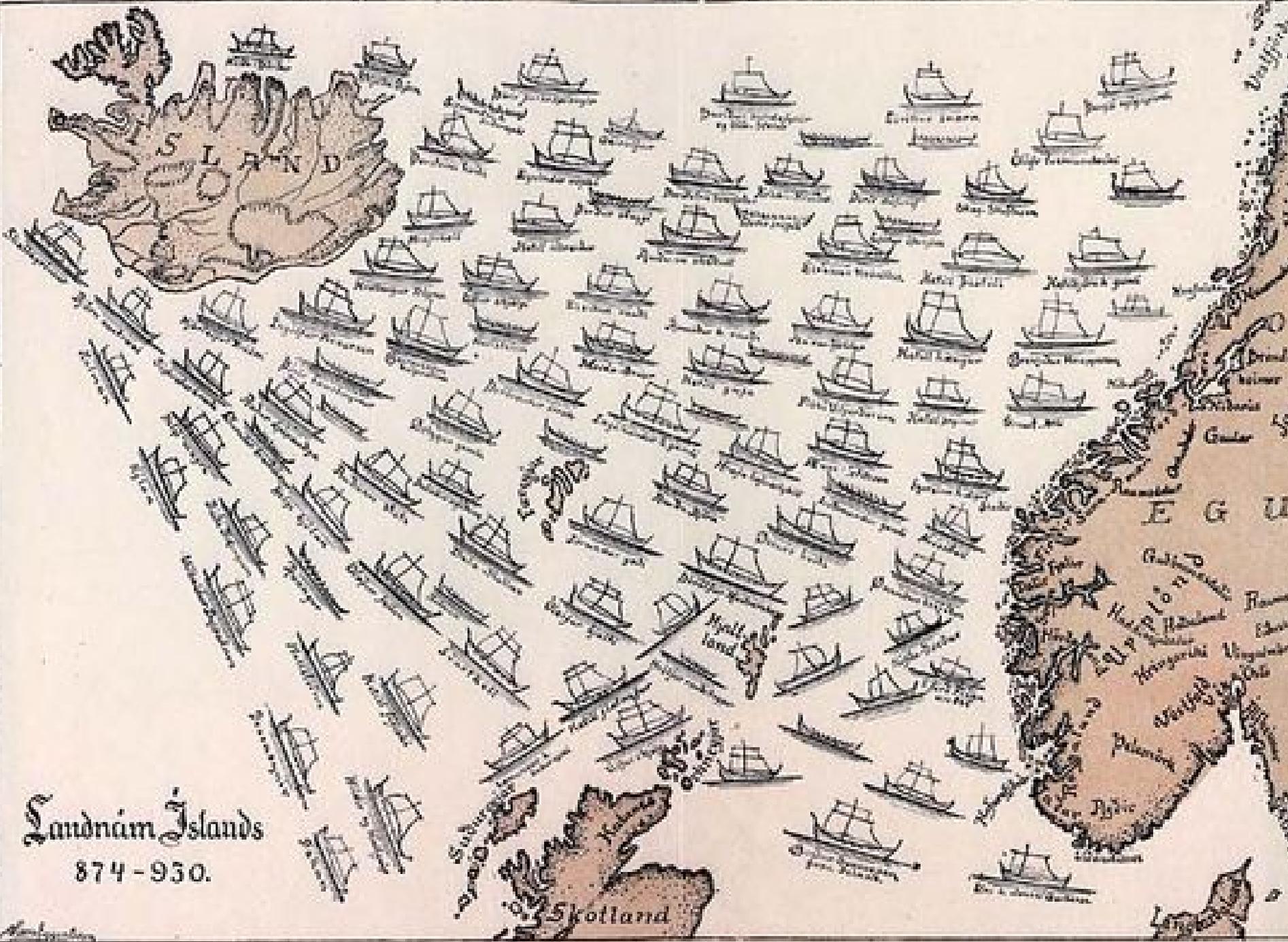
Beringia

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Lateglacial

Dating volcanic eruptions

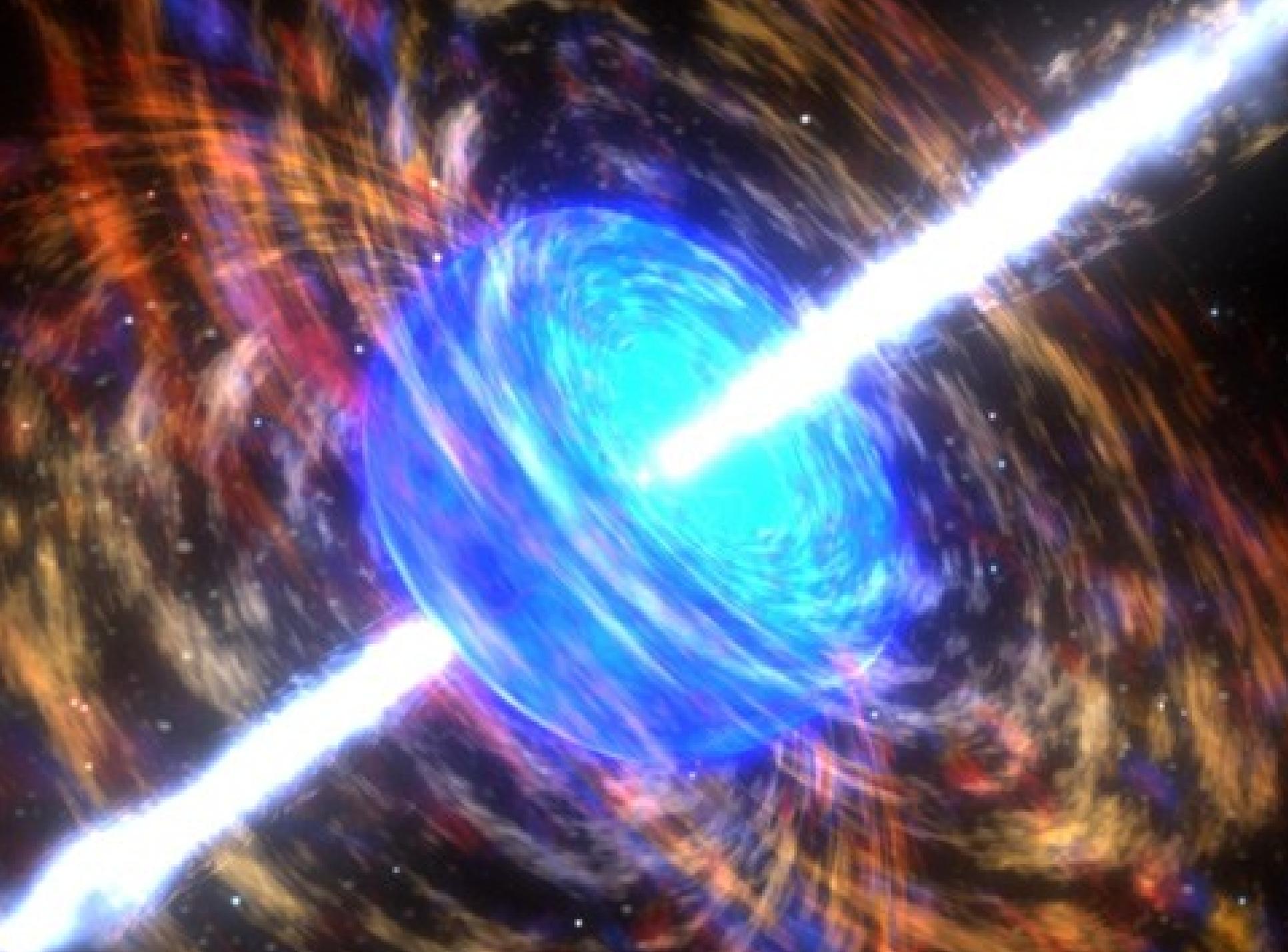


Landnam Islands
874-930.

Amberg

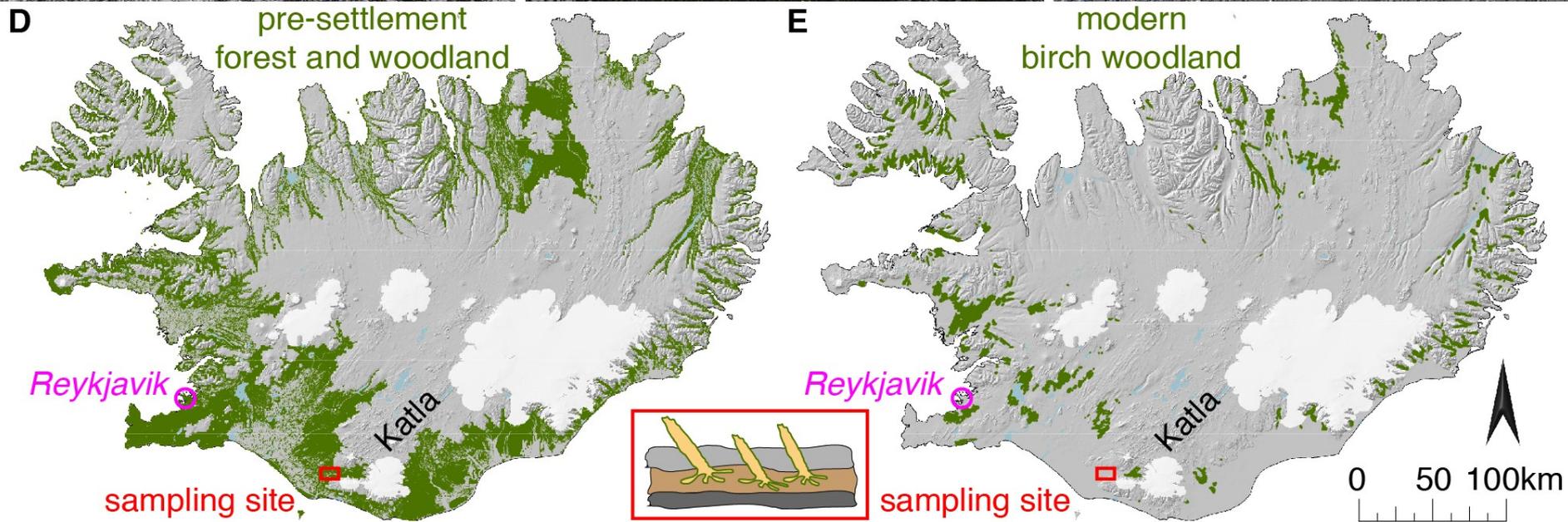
Handwritten text in a cursive script, likely a historical document or manuscript. The text is densely packed and covers most of the page area.







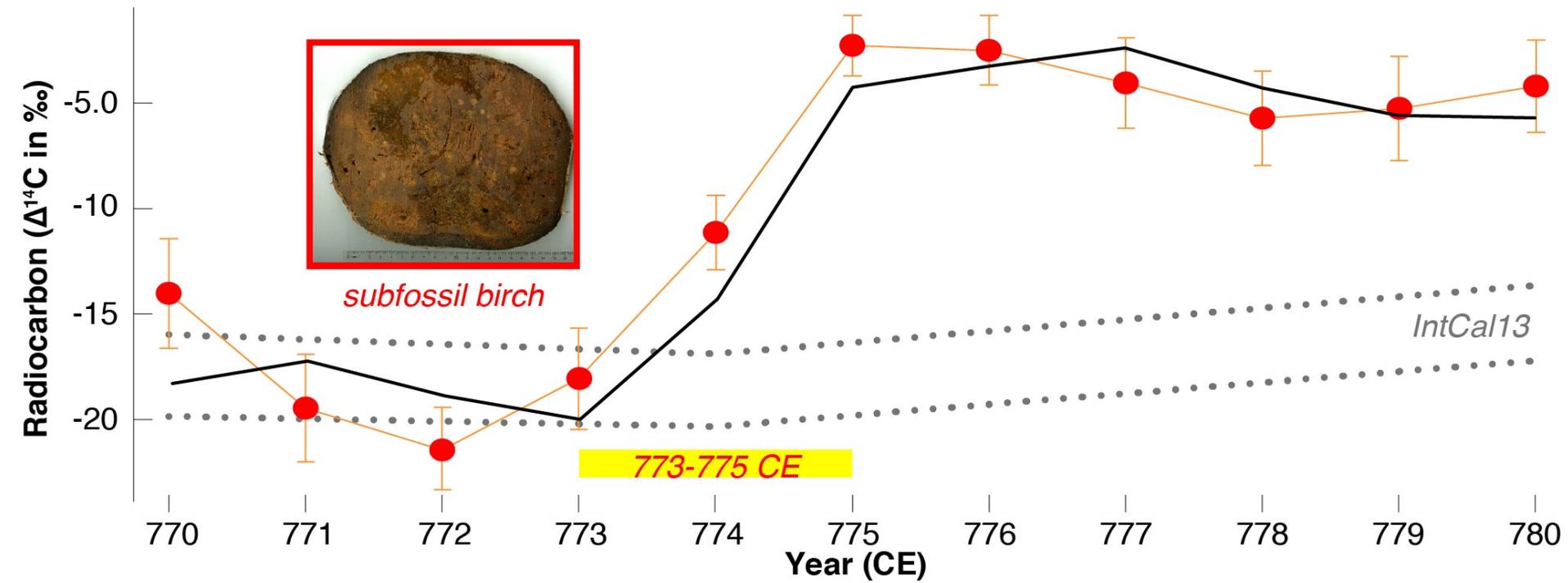


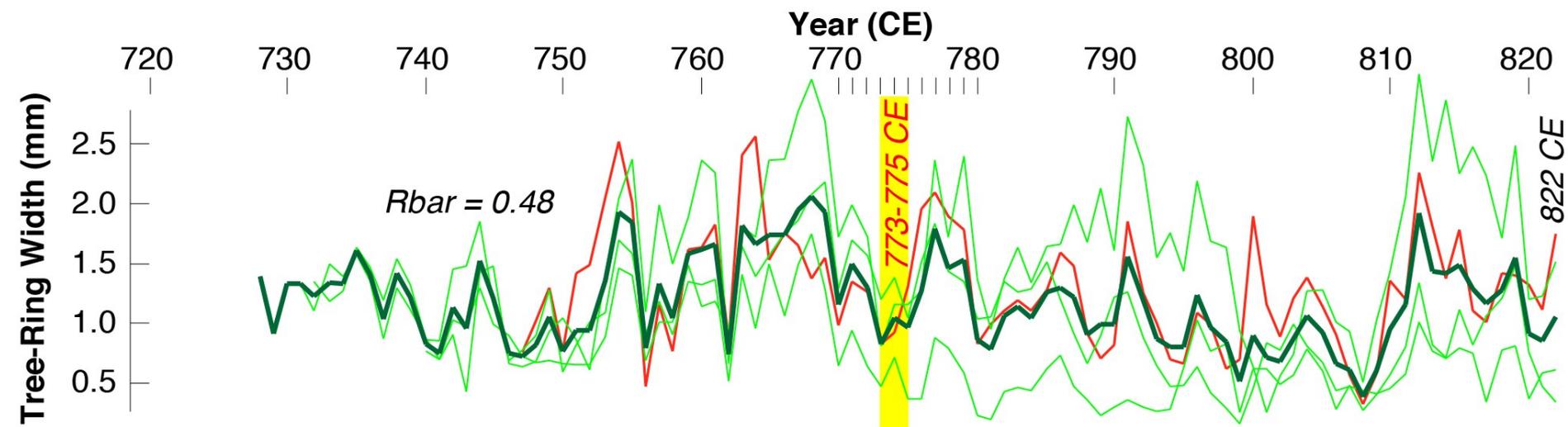


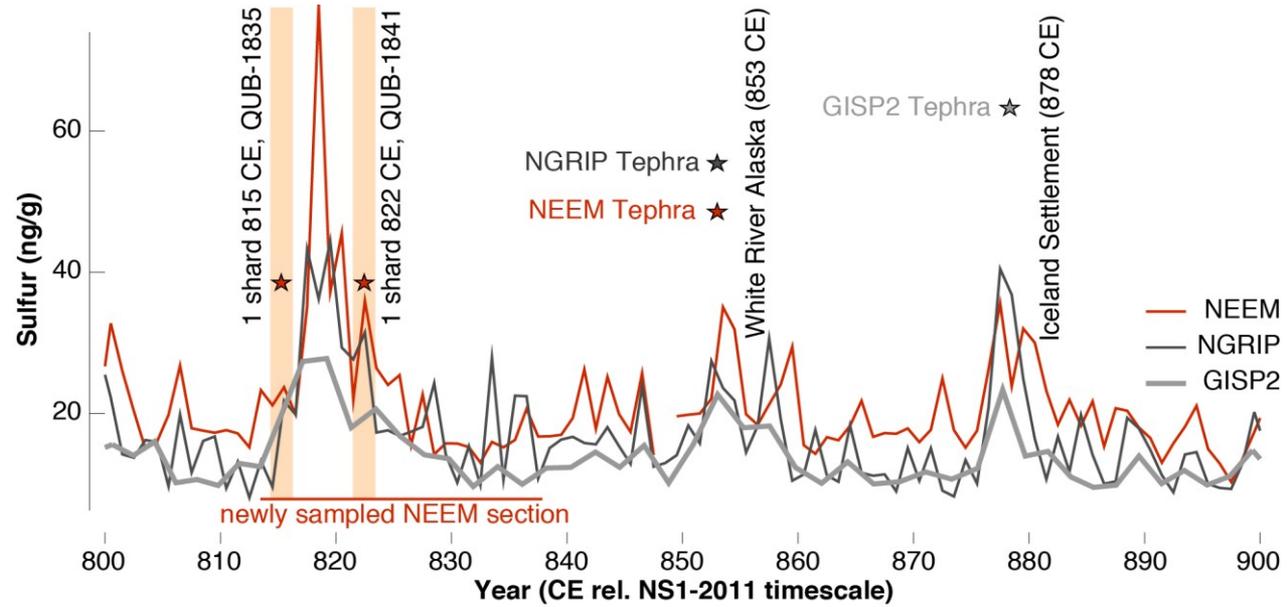
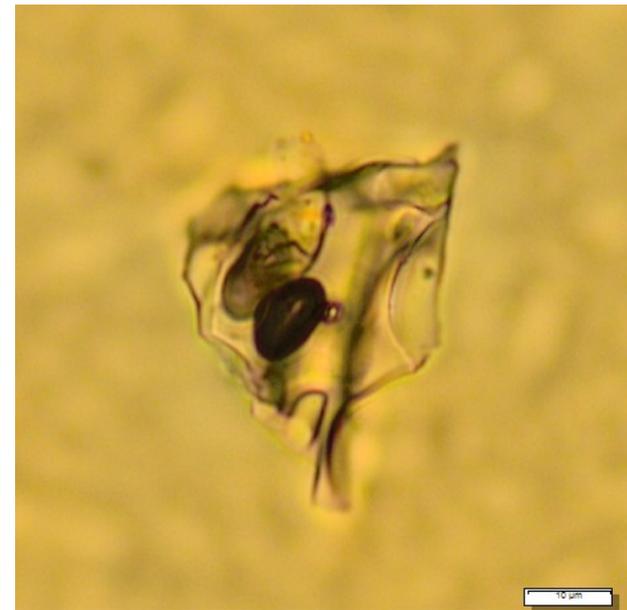




MICADAS - Mini Carbon Dating System (<https://www.ionplus.ch/products/micadas/>)







Multi-proxy dating
of Iceland's major pre-settlement Katla eruption to 822/3 CE reveals:

- *abrupt summer cooling in 824 CE reported from NH tree-ring reconstructions and written historical sources from Europe and China*
- *the oldest, precisely dated, high-latitude volcanic eruption*
- *insight into the existence of pre-historic woodland cover*
- *the nature of volcanism before Iceland's permanent settlement began*

Into the Inferno

by Werner Herzog and Clive Oppenheimer





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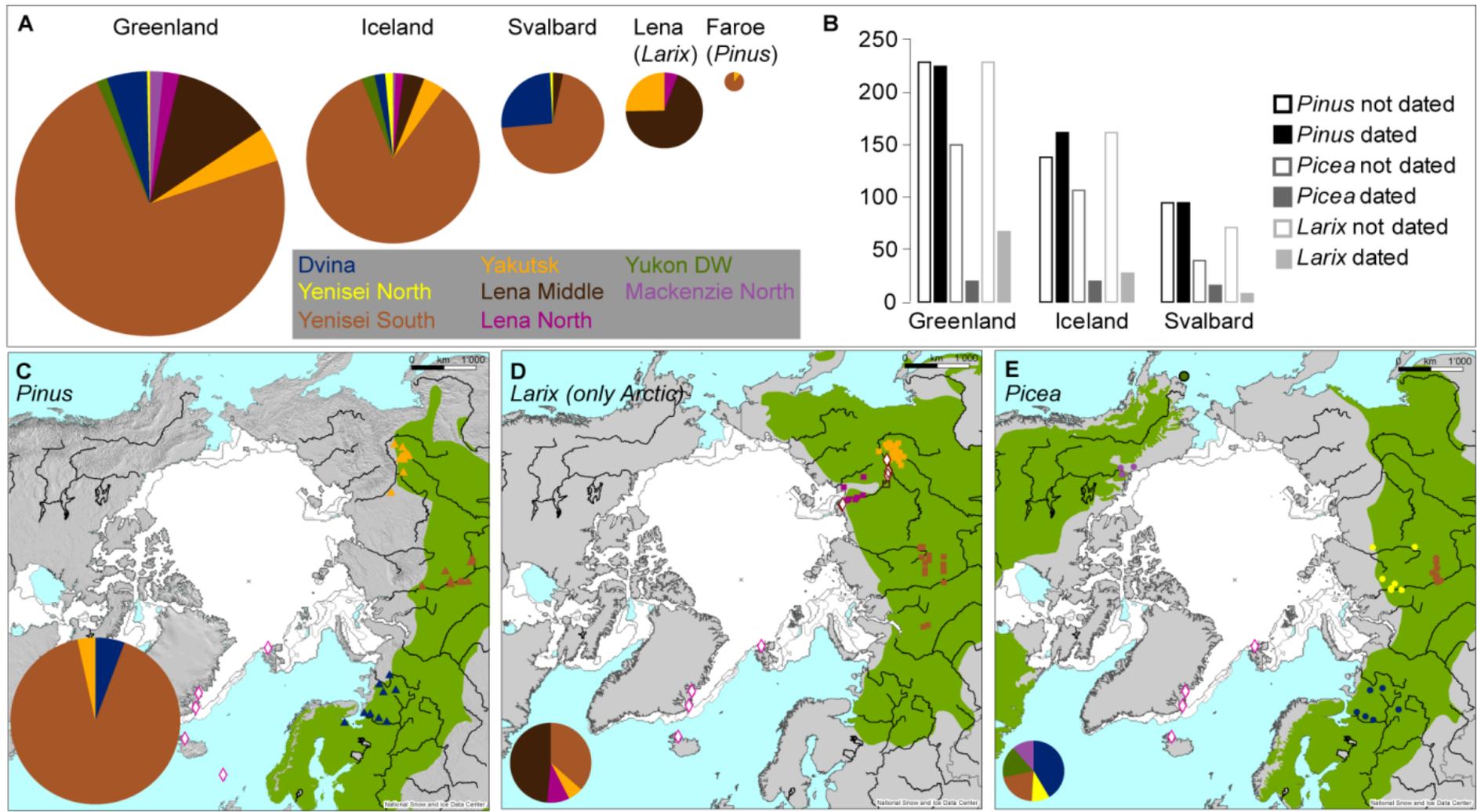
Driftwood

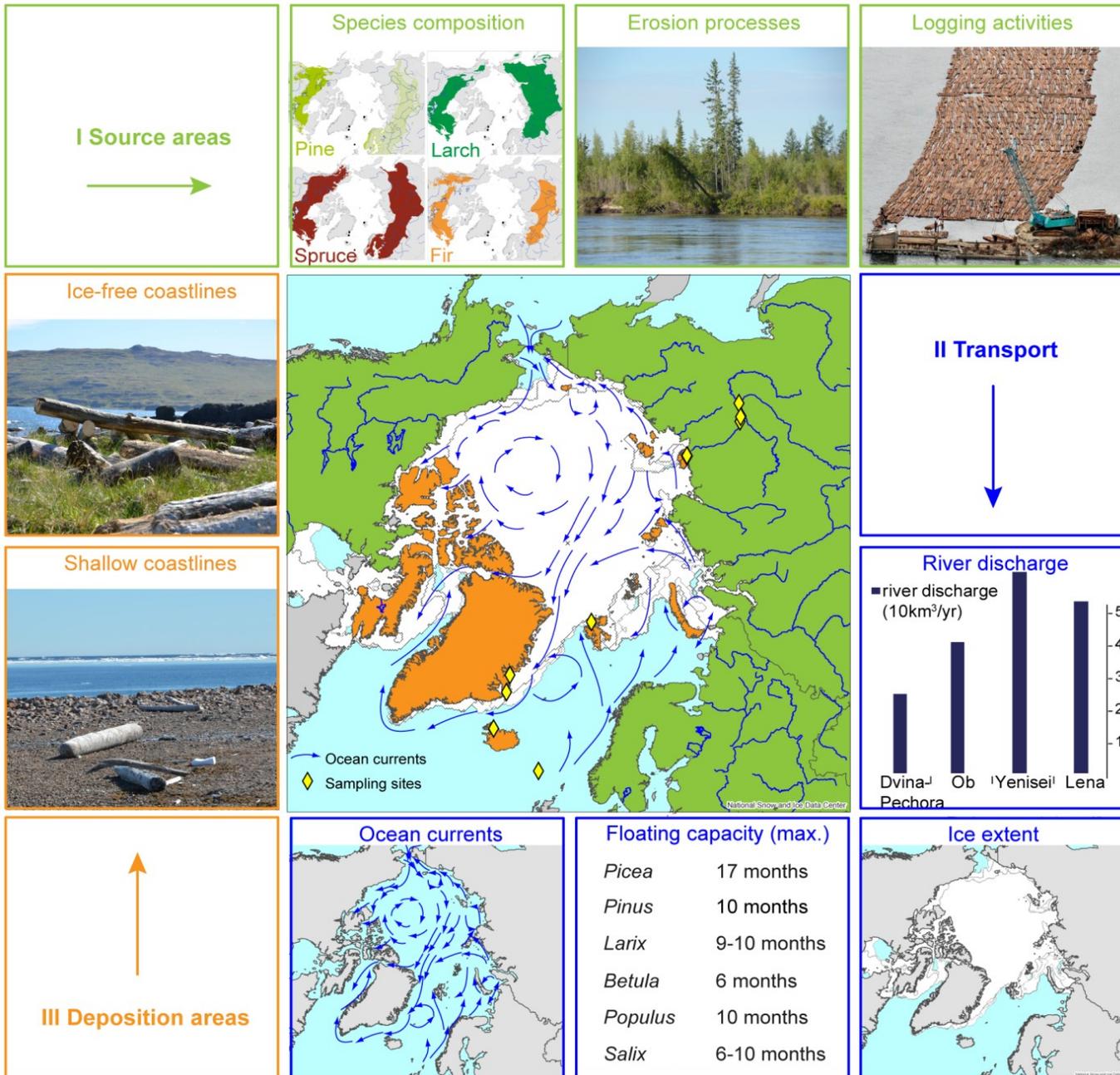
Lateglacial

Tracing ocean currents











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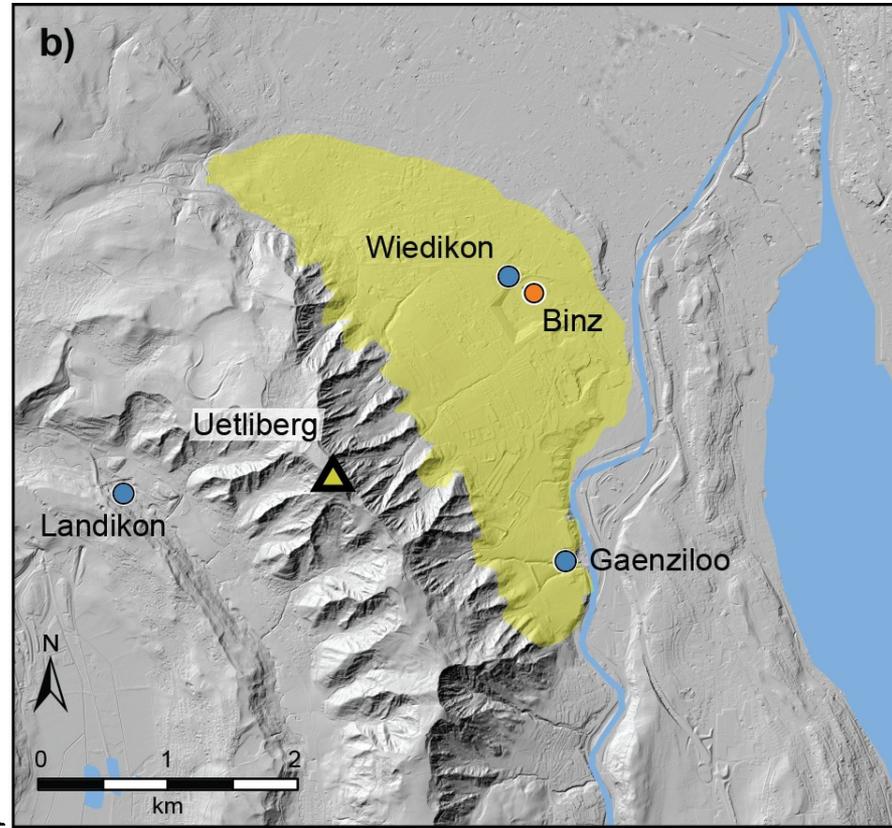
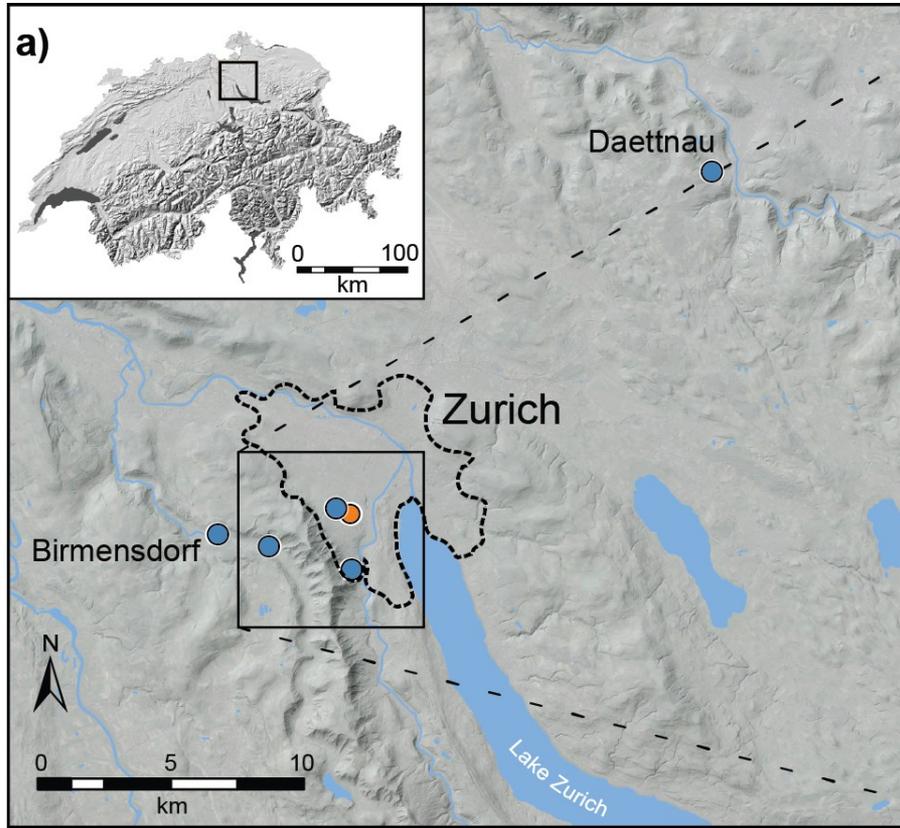
Lateglacial











New Binz
Material



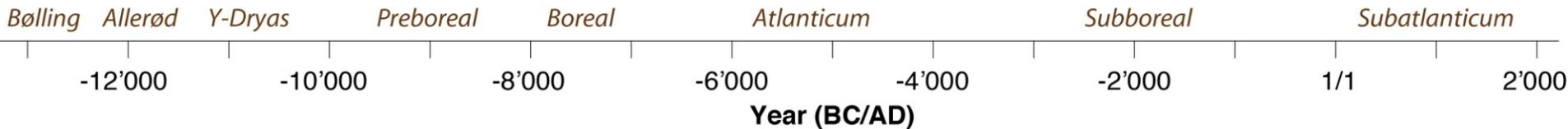
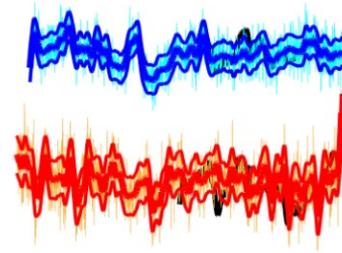
New Binz Material contains 256 pines spanning ~2'200 years
 Swiss LG Chrono contains ~150 pines spanning ~1'600 years
 European Pine Chrono contains ~510 pines spanning 7'942-10'360 BC
 Southern-German Oak Chrono contains ~6'000 oaks back to 8'480 BC

Swiss LG
(floating)

European Pine
Chronology



Absolutely dated
S-German Oak
chronology





Informational sign with text and graphics, including a small diagram of a tree cross-section.

A B

EPAL

DBI

ELIP

EPAL

DBI

R

EPAL

RENFE - E
3-7-05

EPAL



disc a



disc b



disc c





Wood Anatomy



RW Track 1

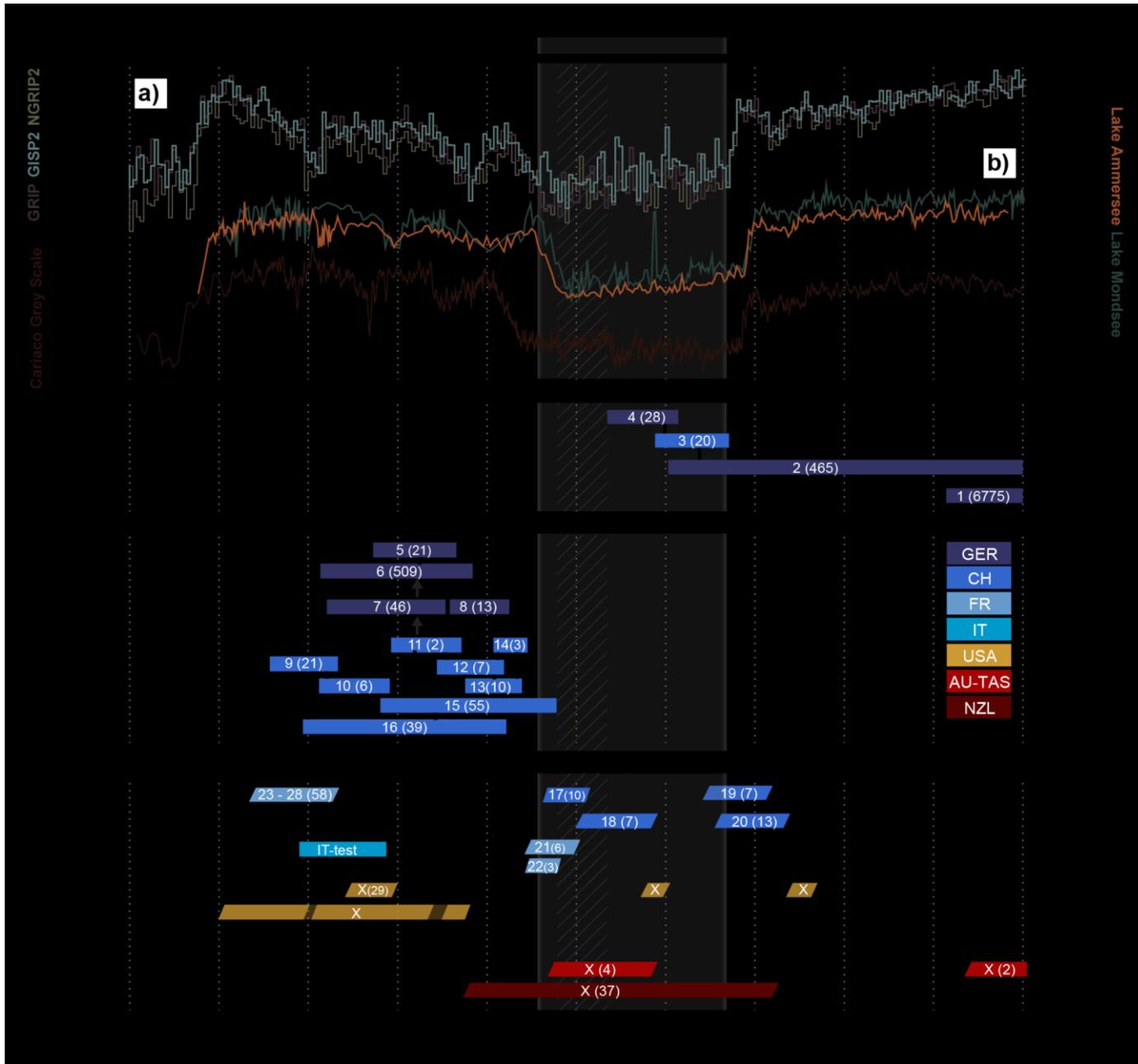
Additional Material

- Density
- Isotopes
- ...

RW Track 2

aDNA Extraction







Thanks

