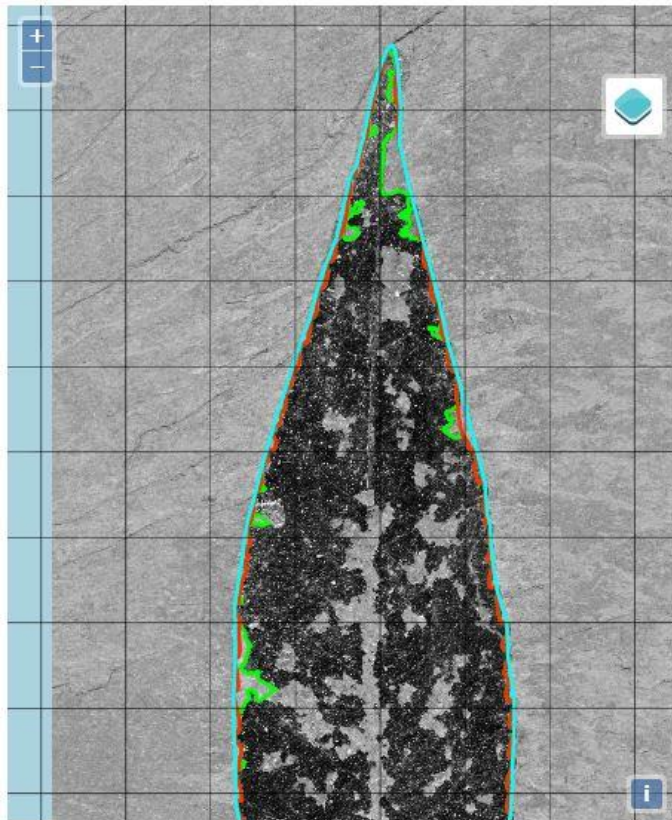


Morphyll: a database for fossil leaf data

Platanus neptuni

Stuttgart: SMNS_P-1952-130



Speaker: Jörg Lange

Tools

Postgresql database

Postgis for geometry

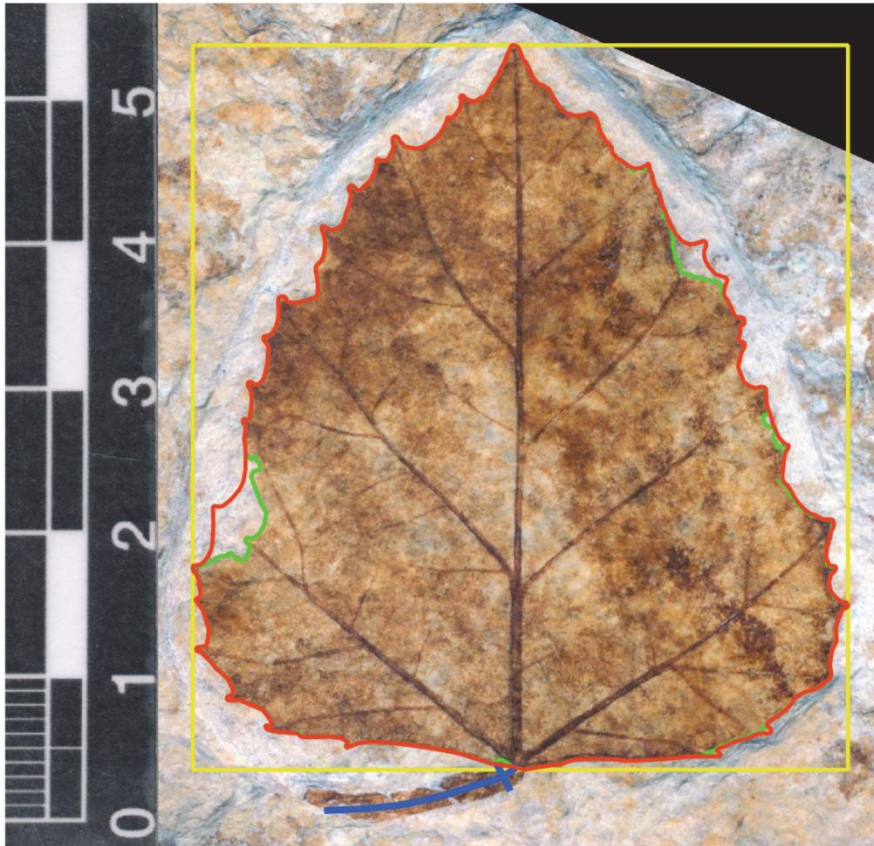
QGIS for shape analysis

Apache/PHP web platform

R shiny for interactive identification

fossil leaf data

Shape vector data



22 fossil measurements/estimates

e.g

Morphometrical measure

lamina Area = 1497 mm**2

Morphological character

Margin type= toothed

Morphyll metrical measures

lamina area	lamina length	lamina width	lamina l/w	area index	petiole length	petiole width
647,5	51,6	19	2,71	0,98		
545,7	37,7	20,3	1,86	0,66	21,8	1,3
1611,4	161,3	18,5	8,7	0,91	1,7	

Morphyll morphology

size type	pri_vein_type	sec_vein_type	petiole type
microphyll	pinnate		not preserved
microphyll	palmate		preserved
			questionable
microphyll			preserved
notophyll	pinnate		not preserved
	not visible		not preserved
notophyll	pinnate	not visible	not preserved

Fossil leaf location and age

location	str. Age	epoch
Willershausen, Germany	2.5-3.5 Myr	Pliocene
Linz, Austria	20-23 Myr	Miocene
Markvartice u Děčína, Česká r.	28-34 Myr	Oligocene
Geiseltal, Germany	34-41 Myr	Eocene
Gelinden, Belgium	59-62 Myr	Paleocene

5 from 22 fossil locations from Central Europe

Goals

Internet database of leaf trait data,
analysis and annotation data

Identification tool for fossil leaves

Finding relationships between leaf
traits and climate of Central Europe

Morphyll links

Morphyll web site:

<http://morphyll.naturkundemuseum-bw.de>

Traiser et al in Palaeontologia Electronica (2018):

<https://doi.org/10.26879/773>

Roth-Nebelsick et al in Palaeogeography,
Palaeoclimatology, Palaeoecology 472, (2017) 1-14

<https://doi.org/10.1016/j.palaeo.2017.02.008>

Programs and sponsors of Morphyll

Scientific library services and
information systems (LIS)



Research in museums



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