

Supplementary Material

Table S1. Station names and coordinates of the observatories and experimental stations plotted in Figure 1. Locations were taken from the different literature references (e.g., Müttrich, 1877) and where coordinates were missing, the locations were researched using auxiliary information stated in the literature, e.g., vicinity to major landmarks, such as hilltops or forest names

Location	Latitude	Longitude	Network	Source
Grillenburg	50.952361	13.506417	Kingdom of Saxony	Krutzsch
Hubertusburg	51.28647	12.997202	Kingdom of Saxony	Krutzsch
Georgengrün	50.4667	12.4667	Kingdom of Saxony	Krutzsch
Reitzenhain	50.562391	13.215092	Kingdom of Saxony	Krutzsch
Rehefeld (Altenberg)	50.730853	13.704657	Kingdom of Saxony	Krutzsch
Hinterhermsdorf (Sebnitz)	50.916362	14.356526	Kingdom of Saxony	Krutzsch
Gorisch (Riesa)	51.397468	13.338288	Kingdom of Saxony	Krutzsch
Zwenkau (Leipzig)	51.221828	12.31907	Kingdom of Saxony	Krutzsch
Johanniskreuz (Pfälzer Wald)	49.335284	7.825375	Kingdom of Bavaria	Ebermayer
Ebrach (Steigerwald)	49.858159	10.4801	Kingdom of Bavaria	Ebermayer
Duschlberg (Bayr Wald)	48.791665	13.727143	Kingdom of Bavaria	Ebermayer
Groß-Karlowitz, Mähren	49.360833	18.284167	Moravia	Johnen & Breitenloner
Mariabrunn, Austria	48.218028	16.24125	Austria	Riegler
Adlisberg, Switzerland	47.370167	8.594278	Switzerland	Bühler
Haidenhaus, Switzerland	47.646167	9.015639	Switzerland	Bühler
Grosswald, Switzerland	47.646167	9.015639	Switzerland	Bühler
Hagenau	48.841389	7.82475	Kingdom of Prussia	Ney
Marienthal	52.266667	10.975	Kingdom of Prussia	Ney
Hadersleben	55.266667	9.491667	Kingdom of Prussia	Ney
Friedrichsrode	51.383999	10.557845	Kingdom of Prussia	Ney
Lahnhof	50.891667	8.241667	Kingdom of Prussia	Ney
Melkerei	48.416667	7.283333	Kingdom of Prussia	Ney
Neumath	48.983333	7.283333	Kingdom of Prussia	Ney
Brunneck (Wöglerin)	50.031528	11.875333	Austria	Hoppe
Farnleite	48.202556	16.016278	Austria	Hoppe
Ebrach	49.858159	10.4801	Kingdom of Bavaria	Ebermayer
Seeshaupt	47.822619	11.273884	Kingdom of Bavaria	Ebermayer
Hirschhorn	49.445627	8.892368	Kingdom of Bavaria	Ebermayer
Duschlberg	48.791665	13.727143	Kingdom of Bavaria	Ebermayer
Altenfurt	49.407073	11.182735	Kingdom of Bavaria	Ebermayer
Rohrbrunn	49.891936	9.392676	Kingdom of Bavaria	Ebermayer
Johanniskreuz	49.335284	7.825375	Kingdom of Bavaria	Ebermayer
Falleck	47.616448	13.683466	Kingdom of Bavaria	Ebermayer
Hirschhorn	49.445627	8.892368	Kingdom of Bavaria	Ebermayer
Forst Kasten (Planegg)	48.077159	11.422288	Kingdom of Bavaria	Wollny
Nymphenburg	48.155556	11.495975	Kingdom of Bavaria	Wollny
Fritzen	54.833333	20.558333	Kingdom of Prussia	Müttrich
Kurwien	53.566667	21.483333	Kingdom of Prussia	Müttrich
Carlsberg	50.475	16.341667	Kingdom of Prussia	Müttrich
Eberswalde	52.833333	13.825	Kingdom of Prussia	Müttrich
Schmiedefeld	50.608333	10.808333	Kingdom of Prussia	Müttrich
Sonnenberg	51.758333	10.508333	Kingdom of Prussia	Müttrich
Lintzel	52.983333	10.25	Kingdom of Prussia	Müttrich
Schoo	53.608333	7.4	Kingdom of Prussia	Müttrich
Hollerath	50.458333	6.391667	Kingdom of Prussia	Müttrich

Table S2. Overview of the data sources of digitized data including auxiliary information. Parameters are rainfall (P), throughfall (P_th), stemflow (P_sf), interception (I), evaporation (E), all in [mm], as well as in percentage of incident precipitation, %P_th, %P_sf.

#	Parameters	Type	Observation Time	Species	Stations	Sorting
1	P, P_th, I	annual, seasonal means	1868-1879, 1882-1891	Pinus, Picea, Fagus	Altenfurt, Ebrach, Rohrbrunn, Johanniskreuz, Seeshaupt, Hirschhorn, Duschlberg	winter, spring, summer, fall, winter half, summer half
2	%P_th	annual, seasonal means	1868-1879, 1882-1891	Pinus, Picea, Fagus		by tree and age classes
3	%P_th	annual, seasonal means	1869-1887	Larix, Fagus, Picea, Pinus	Interlaken, Bruntrut (Jura), Prussian network	
4	%P_th	seasonal means	12/1890-03/1891, 04-11/1891	Picea, Fagus	Haidenhaus	by tree age and crown density
5	%P_th	annual means	1889-1891	Fagus, Picea	Adlisberg (Zürich), Haidenhaus	by station, species and age
6	P, P_th	annual means		Pinus, Picea, Fagus	Altenfurt, Rohrbrunn, Johanniskreuz, Hirschhorn, Duschlberg	
7	%P_th	seasonal means	1894-1895 (summer only)	Pinus, Picea, Fagus	Wienerwald (4 Staatsforste)	by event amounts, species and age
8	I	seasonal means	1894-1895 (summer only)	Pinus, Picea, Fagus	Wienerwald (4 Staatsforste)	by event amounts and species
9	P, P_sf	annual sums	1882-1891	Picea	Hirschhorn	single tree
10	P_th, P_sf, P_net	sum	1879 (15.Apr-15.Jul)	Fagus, Quercus, Acer, Picea	Mariabrunn	by species
11	P_th, P_sf	sum	two large single events	Fagus, Quercus, Acer	Mariabrunn	by species, leafless (May), leafed (June)
12	P_th, P_sf, P_net			Pinus, Picea, Fagus		by event amounts, species and age
13	P_th, P_sf	event data	1879 (15.Apr-15.Jul)	Fagus, Quercus, Acer, Picea	Mariabrunn	by species
14	P_th, P_sf	sum	1879 (15.Apr-15.Jul)	Fagus, Quercus, Acer, Picea	Mariabrunn	by species
15	P_th, P_sf, E, P	sum	two long-duration events	Fagus, Quercus, Acer, Picea	Mariabrunn	by species
16	P_th, P_sf, E, P	sum	thunderstorm	Fagus, Quercus, Acer, Picea	Mariabrunn	by species
17	P, P_th	annual means, snow	1878-1890	Pinus, Fagus	Hagenau, Neumath, Melkerei	by species
18	P, P_sf	events	1879	Fagus	Mariabrunn	by species, leafless (May), leafed (June)
19	%P_th	storm classes	1879	Fagus	Mariabrunn	by storm size
20	%P_th		1880 (1.Jul-25.Sept)	various crops	unknown (probably at university site near Munich)	plant density
21	litter leachate (%P)		1886-1888	Quercus, Fagus, Picea, Pinus, Hypnum	unknown (probably at university site near Munich)	by litter depth
22	%P_sf	events	unknown	Fagus	Neumath, Melkerei	by event size (leafed, leafless)
23	%P_th	by gauge	1894	Picea	Brunneck	by distance to stem, event classes
24	%P_th	by gauge	1895	Pinus	Farnleite	by distance to stem, event classes
25	%P_th	by gauge	1894	Fagus	Brunneck	by distance to stem, event classes
26	%P_th	by gauge	1895	Fagus	Farnleite	by distance to stem, event classes
27	P_sf	means (L)	1895	Fagus	Farnleite	by event classes, DBH
28	P_sf, %P_th, %P	means (mm)	1895	Fagus	Farnleite	by event classes

Table S2 (continued). Overview of the data sources of digitized data including auxiliary information. Parameters are rainfall (P), throughfall (P_th), stemflow (P_sf), interception (I), evaporation (E), all in [mm], as well as in percentage of incident precipitation, %P_th, %P_sf

#	Literature	Year	Pages/Tables	Originally Cited from	Year	Comments
1	Ebermayer	1987	284			
2			285			
3			286	from Wollny	1882	
4			287	from Bühler	1892	
5			288			
6			292			
7			293	from Hoppe	1890	
8			293	from Hoppe	1890	
9			295			P_sf [mm] based on crown projected area (24.5 m ²)
10			295	from Riegler	1881	P_sf [mm] based on crown projected area
11			296	from Riegler	1881	
12			300			
13	Riegler	1881	239	same as Ebermayer		
14			240-241			P_sf [mm] based on crown projected area
15			243	same as Ebermayer		10-12 May & 12-14 June 1879
16			245			9 June & 15 July 1879
17	Ney	1893	6			
18			10	from Riegler	1881	
19			11	from Riegler	1881	
20			40	from Wollny	1890	
21			41	from Wollny	1890	
22	Ney	1894	121	from Ney	1893	
23	Hoppe	1896	Table 5			
24			Table 10			
25			Table 15			
26			Table 20			
27			57 top			
28			57 bottom			P_sf [mm] based on crown projected area