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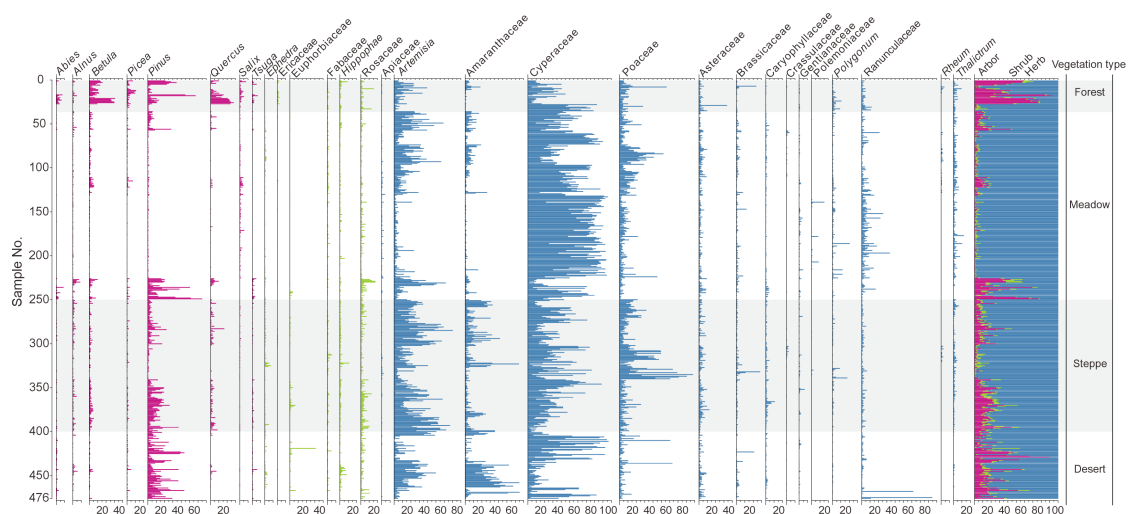


Figure S1. Pollen percentage diagram of lake surface-sediment samples of the pollen dataset ($n=476$) on the Tibetan Plateau (TP), showing the percentages of major pollen types. All the samples are arranged according to their vegetation types.

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Table S1. Importance (imp) of different pollen taxa on the spatial distribution of net primary production (NPP) and mean annual precipitation (P_{ann}) repeatedly assessed by the random forest (RF) algorithm based on the 476 pollen assemblages on the Tibetan Plateau.

NPP		P_{ann}	
Pollen taxa ($n=28$)	Importance (imp)-run3	Pollen taxa ($n=33$)	Importance (imp)-run2
<i>Salix</i>	19.4839986	Amaranthaceae	31.1037824
<i>Pinus</i>	19.8022754	Cyperaceae	26.4987187
<i>Betula</i>	17.7791088	<i>Salix</i>	23.1811138
Amaranthaceae	13.9496322	<i>Betula</i>	22.9971708
Ranunculaceae	12.1631207	<i>Pinus</i>	16.8917440
<i>Quercus</i> evergreen	11.6310224	<i>Thalictrum</i>	15.6379411
Rosaceae	10.6234364	Poaceae	13.9012905
<i>Thalictrum</i>	9.9464501	<i>Picea</i>	12.7461460
<i>Artemisia</i>	9.3907533	<i>Ephedra</i>	12.2018925
Poaceae	9.0934940	<i>Artemisia</i>	10.8837170
<i>Picea</i>	8.6308727	Cupressaceae	9.7513824
<i>Ephedra</i>	7.7736029	Ranunculaceae	9.5576085
<i>Polygonum</i>	7.3053366	<i>Quercus</i> evergreen	8.6028444
Cupressaceae	7.1944707	<i>Polygonum</i>	8.2891315
<i>Abies</i>	5.6786919	Caryophyllaceae	7.8953665
Caryophyllaceae	5.4357953	Ericaceae	7.3228007
Lamiaceae	4.6565913	<i>Abies</i>	6.3238765
Ericaceae	3.9006778	Euphorbiaceae	6.2325398
<i>Tsuga</i>	3.6106466	Brassicaceae	5.7070695
<i>Rheum</i>	3.4326692	<i>Quercus</i> deciduous	5.5538244
Euphorbiaceae	3.4245700	Polemoniaceae	4.1431988
<i>Hippophae</i>	3.3500095	<i>Tsuga</i>	3.4107383
<i>Alnus</i>	2.6025614	Asteraceae	2.8274240
Fabaceae	2.4004326	<i>Alnus</i>	2.7715730
Brassicaceae	2.2107667	Rosaceae	2.7022827
Asteraceae	1.4448549	Crassulaceae	2.2734196
Crassulaceae	1.2139072	<i>Rheum</i>	2.0161046
Saxifragaceae	0.8734724	Lamiaceae	1.7719331
		Gentianaceae	1.2938579
		<i>Hippophae</i>	0.9779099
		Apiaceae	0.7277241
		Fabaceae	0.2016468
		Saxifragaceae	0.1072096