

Supplementary Table 1: Fossil Ginkgoales stomatal data used to estimate genome size (2c DNA amount)

Fossil sample ID	Taxon	Stratigraphic age ¹	Bed at Astartekløft (Height in section, m) ¹	Mean stomata Pore Length (spl in μm) (measured) ²	Mean Guard Cell Length (gcl in μm) (estimated) ³	Estimated 2C DNA amount (in Gbp) ⁴	
46972	<i>Baeira</i>	<i>Rhaetian</i> (Triassic)		1	24.32	36.48	7.39
46978	<i>Baeira</i>	<i>Rhaetian</i> (Triassic)		1	19.54	29.31	2.46
46980	<i>Baeira</i>	<i>Rhaetian</i> (Triassic)		1	16.09	24.14	0.92
46983	<i>Baeira</i>	<i>Rhaetian</i> (Triassic)		1	19.95	29.93	2.73
46884	<i>Ginkgo</i>	<i>Rhaetian</i> (Triassic)		1	14.89	22.34	0.63
46882	<i>Ginkgo</i>	<i>Rhaetian</i> (Triassic)		1	18.45	27.68	1.84
46883	<i>Ginkgo</i>	<i>Rhaetian</i> (Triassic)		1	18.03	27.05	1.64
46992	<i>Ginkgo</i>	<i>Rhaetian</i> (Triassic)		2	18.80	28.20	2.02
47069	<i>Ginkgo</i>	<i>Rhaetian</i> (Triassic)		2	19.14	28.71	2.22
47080	<i>Ginkgo</i>	<i>Rhaetian</i> (Triassic)		2	21.50	32.25	3.98
47099	<i>Ginkgo</i>	<i>Rhaetian</i> (Triassic)		2	19.12	28.68	2.20
47103	<i>Ginkgo</i>	<i>Rhaetian</i> (Triassic)		2	19.10	28.65	2.19
46988	<i>Ginkgo</i>	<i>Rhaetian</i> (Triassic)		2	26.66	39.99	11.74
47113	<i>Ginkgo</i>	<i>Rhaetian</i> (Triassic)		2	17.45	26.18	1.39
47200	<i>Baeira</i>	<i>Rhaetian</i> (Triassic)		3	15.29	22.94	0.72
47250	<i>Baeira</i>	<i>Rhaetian</i> (Triassic)		3	17.78	26.67	1.53
47212	<i>Shenobaeira</i>	<i>Rhaetian</i> (Triassic)		3	17.48	26.22	1.40
47215	<i>Shenobaeira</i>	<i>Rhaetian</i> (Triassic)		3	17.77	26.66	1.52
47216	<i>Shenobaeira</i>	<i>Rhaetian</i> (Triassic)		3	16.59	24.89	1.08
47213	<i>Shenobaeira</i>	<i>Rhaetian</i> (Triassic)		3	16.45	24.68	1.03
48140	<i>Shenobaeira</i>	<i>Rhaetian</i> (Triassic)		3	17.00	25.50	1.22
	<i>Ginkgoales</i>	<i>Rhaetian</i>					
Bulk- Ginkgo 1	undet.	(Triassic)		4	16.41	24.62	1.02
	<i>Ginkgoales</i>	<i>Rhaetian</i>					
Bulk- Ginkgo 2	undet.	(Triassic)		4	20.02	30.03	2.78
	<i>Ginkgoales</i>	<i>Rhaetian</i>					
Bulk- Ginkgo 3	undet.	(Triassic)		4	18.74	28.11	1.99

	<i>Ginkgoales</i>	<i>Rhaetian</i>				
Ast.5.2_SH_8	undet.	(Triassic)	5	19.23	28.85	2.27
CB_5.2_Ginkgo	<i>Ginkgoales</i>	<i>Rhaetian</i>				
1	undet.	(Triassic)	5	17.50	26.25	1.41
5.6/5.7_Ginkgo	<i>Ginkgoales</i>	<i>Rhaetian</i>				
1	undet.	(Triassic)	5	15.41	23.12	0.74
5.6/5.7_Ginkgo	<i>Ginkgoales</i>	<i>Rhaetian</i>				
2	undet.	(Triassic)	5	15.09	22.64	0.67
5.6/5.7_Ginkgo	<i>Ginkgoales</i>	<i>Rhaetian</i>				
3	undet.	(Triassic)	5	17.47	26.21	1.40
	<i>Ginkgoales</i>	<i>Hettangian</i>				
Ginkgo 1	undet.	(Jurassic)	6	12.07	18.11	0.22
	<i>Ginkgoales</i>	<i>Hettangian</i>				
Ginkgo 2	undet.	(Jurassic)	6	14.10	21.15	0.48
	<i>Ginkgoales</i>	<i>Hettangian</i>				
Ginkgo 3	undet.	(Jurassic)	6	12.80	19.20	0.29
	<i>Ginkgoales</i>	<i>Hettangian</i>				
Ginkgo 4	undet.	(Jurassic)	6	15.08	22.62	0.67
	<i>Ginkgoales</i>	<i>Hettangian</i>				
Ginkgo 5	undet.	(Jurassic)	6	14.29	21.44	0.51
		<i>Hettangian</i>				
47671	<i>Ginkgo</i>	(Jurassic)	7	16.95	25.43	1.20
		<i>Hettangian</i>				
47689	<i>Ginkgo</i>	(Jurassic)	7	27.63	41.45	14.05
		<i>Hettangian</i>				
47720	<i>Ginkgo</i>	(Jurassic)	7	24.56	36.84	7.77
		<i>Hettangian</i>				
47700	<i>Ginkgo</i>	(Jurassic)	7	23.99	35.99	6.90
		<i>Hettangian</i>				
47760	<i>Ginkgo</i>	(Jurassic)	7	19.72	29.58	2.57
		<i>Hettangian</i>				
47692	<i>Shenobaeira</i>	(Jurassic)	7	16.03	24.05	0.91
		<i>Hettangian</i>				
47735	<i>Shenobaeira</i>	(Jurassic)	7	19.84	29.76	2.65
		<i>Hettangian</i>				
47805	<i>Shenobaeira</i>	(Jurassic)	8	26.48	39.72	11.35
		<i>Hettangian</i>				
47820	<i>Shenobaeira</i>	(Jurassic)	8	24.58	36.87	7.80
		<i>Hettangian</i>				
47856	<i>Shenobaeira</i>	(Jurassic)	8	24.92	37.38	8.36
		<i>Hettangian</i>				
47869	<i>Shenobaeira</i>	(Jurassic)	8	23.49	35.24	6.21
		<i>Hettangian</i>				
47853	<i>Shenobaeira</i>	(Jurassic)	8	35.14	52.71	47.13
		<i>Hettangian</i>				
47863	<i>Shenobaeira</i>	(Jurassic)	8	35.10	52.65	46.87
		<i>Hettangian</i>				
47889	<i>Shenobaeira</i>	(Jurassic)	8	25.03	37.55	8.55

¹ McElwain et al. (2007)

² Steinhorsdottir et al. (2011)

³ gcl=1.5(spl)

⁴ 2C DNA = (1.3894-Log¹⁰gcl)/-0.1987) Beaulieu et al. 2008