

Table S2. Summary of all radiocarbon dates from all the cores and the exposure GD-1. Calibrated radiocarbon ages younger than 16 cal kyr BP are highlighted in bold. GD-1 data according to Solov'eva et al. (accepted)

Lab ID	Sample ID	Interval depth (m)	Sample depth (m)	Material	Radiocarbon age (yr BP)	2 σ age range (cal yr BP)	Mean age (cal yr BP)
AWI 2887.1.1	Bbg 2/2	2.5	2.5	plant fragments	modern		modern
AWI 2888.1.1	Bbg 2/9	5.1	5.1	plant fragments	modern		modern
IGAN 5855	Bbg 2	5.5	5.5	bulk	31000 \pm 100	34625-35139	34882
IGAN 5855	Bbg 6	1.7	1.7	bulk	21060 \pm 50	25221-25620	25421
AWI 5591.1.1	Bbg 7/2	1	1.0	bulk	23115 \pm 151	27199-27698	27449
IGAN 5857	Bbg 7_6.8m	6.8	6.8	bulk	35680 \pm 150	39848-40765	40307
AWI 2885.1.1	Bbg 7/5	8.9	8.9	plant fragments	12844\pm105	15047-15658	15353
IGAN 5858	Bbg 7_10.8m	10.8	10.8	bulk	24730 \pm 70	28538-28961	28750
AWI 5592.1.1	Bbg 7/6	11.6	11.6	bulk	31114 \pm 379	34695-36189	35442
AWI 2886.1.1	Bbg 7/6	11.6	11.6	plant fragments	3885\pm74	4140-4449	4295
AWI 5588.1.1	Bbg 8/3	0.5	0.5	bulk	28730 \pm 227	32139-33789	32964
AWI 2876.1.1	Bbg 8/9	1.7-2.0	1.9	plant fragments	6124\pm51	6881-7162	7022
IGAN 5859	Bbg 8/15	2.55-2.65	2.6	bulk	8500\pm30	9473-9538	9506
AWI 2877.1.1	Bbg 8/17	3.65-3.85	3.8	plant fragments	6674\pm52	7431-7617	7524
AWI 2878.1.1	Bbg 8/21	5.4-5.7	5.6	plant fragments	7025\pm54	7725-7963	7844
AWI 2879.1.1	Bbg 8/23	7.5-8.0	7.8	plant fragments	6720\pm59	7478-7676	7577
AWI 2880.1.1	Bbg 8/30	10.45-10.7	10.6	plant fragments	5860\pm82	6450-6883	6667
AWI 2881.1.1	Bbg 8/34	12.2-12.6	12.4	plant fragments	13248\pm55	15721-16097	15909
AWI 2882.1.1	Bbg 8/38	16.7-17.0	16.9	plant fragments	5307\pm79	5927-6220	6074
AWI 2883.1.1	Bbg 8/41	17.7-18.1	17.9	bulk	14208 \pm 63	17078-17411	17245
AWI 2884.1.1	Bbg 8/46	19.4-19.7	19.5	plant fragments	4612\pm72	5207-5480	5344
IGAN 5861	Bbg 8_20.1-20.35m	20.1-20.35	20.2	plant fragments	23450 \pm 70	27461-27788	27625
AWI 9191.1.1	Bbg 19_2.4-2.5m	2.4-2.6	2.5	twig and root fragments, graminoid rhizomes	5856\pm50	6538-6789	6664
AWI 9192.1.1	Bbg 19_4.2-4.4m	4.2-4.5	4.4	moss stems and leaves, small twig fragments	7164\pm54	7919-8043	7981

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AWI 9193.1.1	Bbg 19_5.0-5.2m	5.0-5.3	5.2	plant fragments	5784±61	6415-6735	6575
AWI 9194.1.1	Bbg 19_5.8-5.9m	5.8-5.10	6.0	moss stems and leaves, small twig and woody root fragments	5797±52	6485-6736	6611
AWI 9195.1.1	Bbg 19_6.0-6.2m	6.0-6.3	6.2	plant fragments	5780±93	6392-6792	6592
IGAN 5195	GD 1	0.07-0.17	0.1	bulk	275±30	283-443	363
IGAN 5196	GD 1	0.17-0.35	0.3	bulk	140±30	50-279	165
IGAN 5197	GD 1	0.50-0.58	0.5	bulk	920±40	768-916	842
IGAN 5198	GD 1	0.58-0.66	0.6	bulk	1990±80	1721-2122	1922
IGAN 5180	GD 1	0.66-0.67	0.7	bulk	4160±60	4527-4837	4682
IGAN 5182	GD 1	1.10-1.15	1.3	bulk	4600±60	5214-5471	5343
IGAN _{AMS} *5183	GD 1	3.15-3.20	3.2	bulk	13995±40	16880-17129	17005
IGAN _{AMS} *5184	GD 1	3.20-3.45	3.3	bulk	14520±40	17460-17912	17686
IGAN 5185	GD 1	3.45-3.70	3.6	bulk	5440±280	5596-6797	6197
AWI 2560.1.1	Bbg 9/2	22.65-22.8	22.7	moss leaves, chiton remains	12665±130	14784-15512	15148
AWI 2561.1.1	Bbg 9/4	23.8-24.0	23.9	moss leaves and stems	10814±121	12615-13069	12842
AWI 2633.1.1	Bbg 10/14C	0.35-0.39	0.4	vascular plant roots and rootlets	modern		modern
AWI 5589.1.1	Bbg 10/5	0.77-0.8	0.8	bulk	28494±223		
AWI 5590.1.1	Bbg 10/9	1.55-1.75	1.6	bulk	37262±614		
AWI 2634.1.1	Bbg 10/13	2.8-3.0	2.9	moss stems with leaves. Cyperaceae/sedge leaf fragments, 2 larger vascular plant fragments	10133±58	11597-11940	11,769
AWI 2635.1.1	Bbg 10/18	4.1-4.5	4.3	plant fragments, moss stems	19,510±220	22,987-23879	23,433
AWI 2636.1.1	Bbg 10/29b	9.75-10.0	9.9	plant fragments, moss stems	16,616±172	19,602-20459	20,031
AWI 2637.1.1	Bbg 10/34	11.9-12.0	12.0	moss leaves fragments, vascular plant remains, rootlets	5353±120	5902-6355	6129
AWI 2561.1.1	Bbg 16_0.3-0.5m	0.3-0.6	0.4	small twig and woody root fragments	218±51	132-327	230

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AWI 9887.1.1	Bbg 16_4.2-4.3m	4.2-4.4	4.3	moss stems with leaves, unidentified terrestrial vascular plant remains	9626±109	10678-11235	10957
AWI 2560.1.1	Bbg 16_4.8-5.0m	4.8-5.1	4.9	dwarf shrub leaf fragments, fine root fragments, moss leaves, Graminae root fragments	5043±90	5596-5984	5790
AWI 5573.1.1	Bbg 13/3	0.3-0.5	0.4	bulk	36242±351		
AWI 5574.1.1	Bbg 13/5	0.8-1.0	0.9	bulk	29402±169		
AWI 5575.1.1	Bbg 13/7	3.3-3.4	3.4	bulk	33631±397		
AWI 5576.1.1	Bbg 13/10	17.0-17.2	17.1	bulk	37778±669		
AWI 5577.1.1	Bbg 13/12	21.0-21.2	21.1	bulk	35662±196		
AWI 5578.1.1	Bbg 13/15	21.7-21.8	21.75	bulk	36604±563		
AWI 5579.1.1	Bbg 14/2	0.6-0.8	0.7	bulk	18420±61		
AWI 5580.1.1	Bbg 14/3	1.0-1.1	1.1	bulk	22179±82		
AWI 5581.1.1	Bbg 15/1	0.5-0.6	0.6	bulk	33280±249		
AWI 5582.1.1	Bbg 15/4	2.0-2.2	2.1	bulk	36551±361		
AWI 5583.1.1	Bbg 15/6	4.2-4.3	4.3	bulk	29369±164		
AWI 5584.1.1	Bbg 15/9	5.7-5.9	5.8	bulk	29074±158		
AWI 9888.1.3	Bbg 15/9	5.7-5.9	5.8	moss stems with leaves, graminoid leaves, and root fragments	9583±103	10,653-11198	10,926
AWI 5585.1.1	Bbg 15/12	9.3-9.5	9.4	bulk	34395±284		
AWI 5586.1.2	Bbg 15/15	11.2-11.5	11.4	bulk	33612±260		
AWI 5587.1.1	Bbg 15/18	12.9-13.0	13.0	bulk	32932±241		