

Supplementary material

Holocene fire in Fennoscandia and Denmark

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Table S1. Additional site information for charcoal

SIEV, sieve; NOTK, not known; POLS, pollen slides

Site number	Name	Reference	Easting	Northing	Depositional environment	Elevation (m)	Radiocarbon dates	Char method	Char size	Temp. (start)	Temp. (end)	Temp. (extent)	Digitisation method
<i>Denmark</i>													
1a	Suserup Skov	Hannon <i>et al.</i> 2000	11.565361	55.362682	Forest hollow	22	6	SIEV	>200 µm	3	6109	6106	Digitised against age
1b	Suserup Skov	Hannon <i>et al.</i> 2000	11.565361	55.362682	Forest hollow	22	6	SIEV	<200 µm	-24	6029	6053	Digitised against age
2	Solsø	Odgaard 1992	8.633333	56.133333	Lake	NOTK	27	POLS	NOTK	0	8319	8319	Age/depth calculated
3	Skånsø	Odgaard 1992	8.828889	56.509722	Lake	NOTK	23	POLS	NOTK	0	6423	6423	Age/depth calculated
4	Dallund Sø	Bradshaw <i>et al.</i> 2005	10.266593	55.482924	Lake	12	20	SIEV	>500 µm	-12	6836	6848	Digitised against age
5	Kragsø	Odgaard 1994	9.022755	56.212673	Lake	NOTK	13	POLS	NOTK	13	9361	9348	Digitised against age
6	Gribskov	Overballe-Petersen <i>et al.</i> 2013	12.333333	56.000000	Forest hollow	NOTK	10	SIEV	>125 µm	-56	7109	7165	Digitised against age
<i>Norway</i>													
7a	Grostjørna	Eide <i>et al.</i> 2006	7.733333	58.533333	Lake	180	7	SIEV	Macro	0	11492	11492	Age/depth calculated
7b	Grostjørna	Eide <i>et al.</i> 2006	7.733333	58.533333	Lake	180	7	POLS	Micro	0	11737	11737	Age/depth calculated
8	Kilden	Jensen 2004	23.600000	70.700000	Mire	15	5	POLS	>20 µm	0	9927	9927	Age/depth calculated
9	Nor-Mon	Jensen 2004	23.600000	70.700000	Mire	13	3	POLS	>20 µm	1212	4168	2956	Age/depth calculated
10	Sundm	Jensen 2004	23.600000	70.700000	Peat	19	4	POLS	>20 µm	-40	6577	6617	Age/depth calculated
11a	Kapteinstjørn	Molinari <i>et al.</i> 2005	9.669575	59.332593	Forest hollow	590	9	SIEV	>250 µm	-55	9867	9922	Age/depth calculated
11b	Kapteinstjørn	Molinari <i>et al.</i> 2005	9.669575	59.332593	Forest hollow	590	9	SIEV	>63 µm	-55	10517	10572	Age/depth calculated
12	Pau1	Tryterud 2003	7.950000	58.333333	Bog	260	1	SIEV	>500 µm	0	3140	3140	Age/depth calculated
13	Jom1	Tryterud 2003	8.616667	58.633333	Swamp	370	14	SIEV	>500 µm	0	3385	3385	Age/depth calculated
14	Soll	Tryterud 2003	8.816667	58.950000	Swamp	400	2	SIEV	>500 µm	0	1045	1045	Age/depth calculated

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<i>Norway (Cont.)</i>													
15	Sol2	Tryterud 2003	8.833333	58.950000	Bog	380	2	SIEV	>500 µm	0	3990	3990	Age/depth calculated
16	Sol3	Tryterud 2003	8.833333	58.950000	Swamp	390	2	SIEV	>500 µm	0	1220	1220	Age/depth calculated
17	Lun1	Tryterud 2003	11.716667	59.066667	Swamp	230	1	SIEV	>500 µm	0	2363	2363	Age/depth calculated
18	Lun2	Tryterud 2003	11.716667	59.040000	Swamp	220	3	SIEV	>500 µm	0	5345	5345	Age/depth calculated
19	Øst1	Tryterud 2003	11.033333	59.816667	Swamp	240	1	SIEV	>500 µm	0	3005	3005	Age/depth calculated
20	Øst2	Tryterud 2003	11.033333	59.816667	Swamp	270	2	SIEV	>500 µm	0	3595	3595	Age/depth calculated
21	Sko1	Tryterud 2003	10.783333	60.233333	Swamp	610	2	SIEV	>500 µm	0	3595	3595	Age/depth calculated
22	Gul2	Tryterud 2003	10.800000	60.350000	Bog	740	2	SIEV	>500 µm	0	3122	3122	Age/depth calculated
23	Ott1	Tryterud 2003	5.766667	60.816667	Bog	280	1	SIEV	>500 µm	0	1544	1544	Age/depth calculated
24a	Årum	Bjune <i>et al.</i> 2009	5.616667	59.483333	Forest hollow	445	4	POLS	>60 µm	37	9519	9482	Digitised against age
24b	Årum	Bjune <i>et al.</i> 2009	5.616667	59.483333	Forest hollow	445	4	POLS	<60 µm	0	9673	9673	Digitised against age
25	Barheivatn	Bjune <i>et al.</i> 2004	19.850000	69.700000	Lake	317	Cross-correlation 11	POLS	NOTK	250	9603	9353	Age/depth calculated
26	Dalmutladdo	Bjune <i>et al.</i> 2004	20.716667	69.166667	Lake	355		POLS	NOTK	0	10644	10644	Age/depth calculated
27	Brurskardtjorni	Bjune 2005	8.666667	61.416667	Lake	1309		POLS	NOTK	0	12125	12125	Age/depth calculated
28	Trettetjorn	Bjune 2005	7.000000	60.716667	Lake	810	9	POLS	NOTK	0	13240	13240	Age/depth calculated
29	Vestre Oykjamyrtorn	Bjune 2005	6.000000	59.816667	Lake	570	11	POLS	NOTK	0	13101	13101	Age/depth calculated
30	Tømmerholt	Hafsten 1992	10.400000	63.440000	Bog	200	3	POLS	NOTK	0	1400	1400	Age/depth calculated
31	Oppkuven	Ohlson and Tryterud 1999	10.516667	60.083333	Peat	600	2	SIEV	>500 µm	28	4676	4648	Age/depth calculated
32	Fitjar (basin)	Overland and Hjelle 2009	5.319167	59.918889	Lake	NOTK	7	POLS	Micro	0	7047	7047	Age/depth calculated

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<i>Norway</i>													
<i>(Cont.)</i>													
33	Fitjar (infield)	Overland and Hjelle 2009	5.317778	59.918889	Meadow	NOTK	2	POLS	Micro	785	3356	2571	Age/depth calculated
34	Vatnan 5	Vorren <i>et al.</i> 2005	22.900000	70.533333	Mire	31	3	POLS	NOTK	225	5387	5162	Age/depth calculated
35	Gåshopen	Vorren <i>et al.</i> 2005	22.900000	70.533333	Mire	12	1	POLS	NOTK	1360	5893	4533	Age/depth calculated
36	Husfjord	Vorren <i>et al.</i> 2005	22.900000	70.533333	Mire	30	1	POLS	NOTK	7741	10506	2765	Age/depth calculated
<i>Sweden</i>													
37a	Kuusivaara	Hornberg <i>et al.</i> 2011	23.300000	66.666667	Swamp forest	230	6	SIEV	>1000 µm	-55	6640	6695	Age/depth calculated
37b	Kuusivaara	Hornberg <i>et al.</i> 2011	23.300000	66.666667	Swamp forest	230	6	SIEV	500–1000 µm	-55	6640	6695	Age/depth calculated
37c	Kuusivaara	Hornberg <i>et al.</i> 2011	23.300000	66.666667	Swamp forest	230	6	SIEV	250–500 µm	-55	6640	6695	Age/depth calculated
38a	Kuusivaara	Segerström <i>et al.</i> 2008	23.296055	66.614145	Swamp forest	240	7	SIEV	>1000 µm	-55	7893	7948	Age/depth calculated
38b	Kuusivaara	Segerström <i>et al.</i> 2008	23.296055	66.614145	Swamp forest	240	7	SIEV	500–1000 µm	-55	7893	7948	Age/depth calculated
38c	Kuusivaara	Segerström <i>et al.</i> 2008	23.296055	66.614145	Swamp forest	240	7	SIEV	100–500 µm	-55	7893	7948	Age/depth calculated
38d	Kuusivaara	Segerström <i>et al.</i> 2008	23.296055	66.614145	Swamp forest	240	7	SIEV	10–50 µm	-55	7893	7948	Age/depth calculated
39a	Makkassjön	Korsman and Segerström 1998	20.578338	66.675901	Lake	415	SCP, Pb, Pollen	POLS	>250 µm	-55	10198	10253	Age/depth calculated
39b	Makkassjön	Korsman and Segerström 1998	20.578338	66.675901	Lake	415	SCP, Pb, Pollen	POLS	100–250 µm	-18	10198	10216	Age/depth calculated
40	Lattok	Carcaillet <i>et al.</i> 2007	18.344972	65.956938	Lake	480	8	SIEV	>160 µm	0	10134	10134	Digitised against age
41	Raigejegge	Carcaillet <i>et al.</i> 2007	18.213335	66.156943	Lake	480	8	SIEV	>160 µm	67	9101	9034	Digitised against age
42	Lövnäs	Carcaillet <i>et al.</i> 2007	17.900836	66.310834	Lake	515	5	SIEV	>160 µm	10	9436	9426	Digitised against age
43	Abborrtjärnen	Giesecke 2005	14.376959	63.809822	Lake	387	6	POLS	NOTK	0	10230	10230	Digitised against age
44	Styggjtjärnen	Giesecke 2005	13.565717	62.316410	Lake	715	6	POLS	NOTK	10	9970	9960	Digitised against age
45	Trälhultet	Lindbladh <i>et al.</i> 2008	12.900000	56.800000	Forest hollow	100	4	SIEV	>250 µm	59	2575	2516	Digitised against age

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<i>Sweden (Cont.)</i>													
46	Holkåsen	Lindbladh <i>et al.</i> 2008	12.900000	56.800000	Forest hollow	100	6	SIEV	>250 µm	15	3671	3656	Raw data
47	Kalvaberget	Lindbladh <i>et al.</i> 2008	12.906262	56.817065	Forest hollow	100	7	SIEV	>280 µm	-21	2511	2532	Digitised against age
48	Nynäs	Cousins <i>et al.</i> 2002	17.380813	58.840554	Fen	NOTK	3	POLS	NOTK	385	4048	3663	Age/depth calculated
49	Hunnemara	Yu <i>et al.</i> 2005	14.893692	56.168568	Lake	3	10	SIEV	NOTK	3101	12148	9047	Age/depth calculated
50	Smygen Bay	Yu <i>et al.</i> 2005	15.117140	56.152276	Lake	-1	12	SIEV	NOTK	1561	10908	9347	Age/depth calculated
51	Sjudjijaure	Rosén <i>et al.</i> 2001	18.066667	67.366667	Lake	826	11	POLS	NOTK	131	9660	9529	Age/depth calculated
52a	Skärsgölarna	Lindbladh <i>et al.</i> 2003	16.103234	56.997101	Wetland	NOTK	7	SIEV	>200 µm	-23	7466	7489	Age/depth calculated
52b	Skärsgölarna	Lindbladh <i>et al.</i> 2003	16.103234	56.997101	Wetland	NOTK	7	SIEV	100–200 µm	-23	7466	7489	Age/depth calculated
52c	Skärsgölarna	Lindbladh <i>et al.</i> 2003	16.103234	56.997101	Wetland	NOTK	7	SIEV	50–100 µm	-23	7466	7489	Age/depth calculated
52d	Skärsgölarna	Lindbladh <i>et al.</i> 2003	16.103234	56.997101	Wetland	NOTK	7	SIEV	25–50 µm	-23	7466	7489	Age/depth calculated
52e	Skärsgölarna	Lindbladh <i>et al.</i> 2003	16.103234	56.997101	Wetland	NOTK	7	SIEV	>50 µm	-23	7466	7489	Age/depth calculated
53a	Makkassjön	Rosén and Hammarlund 2007	20.578338	66.675901	Lake	415	SCP, Pb, Pollen	SIEV	>250 µm	-17	8916	8933	Digitised against age
53b	Makkassjön	Rosén and Hammarlund 2007	20.578338	66.675901	Lake	415	SCP, Pb, Pollen	SIEV	100–250 µm	-17	8916	8933	Digitised against age
54	TrygåsenS	Segerström <i>et al.</i> 1996	13.300000	61.770000	Forest hollow	565	3	SIEV	>500 µm	-55	9462	9517	Age/depth calculated
55	TrygåsenO	Segerström <i>et al.</i> 1996	13.300000	61.770000	Mire	565	6	SIEV	>500 µm	-21	3423	3444	Age/depth calculated
56	Bråtamossen	Lagerås <i>et al.</i> 1995	14.525097	57.675307	Bog	300	9	POLS	25–250 µm	-50	6922	6972	Age/depth calculated
57a	Bökeberg	Regnell <i>et al.</i> 1995	13.250317	55.544369	Lake	50	12	SIEV	Macro	5485	7623	2138	Age/depth calculated
57b	Bökeberg	Regnell <i>et al.</i> 1995	13.250317	55.544369	Lake	50	12	SIEV	10–25 µm	5485	7623	2138	Age/depth calculated
57c	Bökeberg	Regnell <i>et al.</i> 1995	13.250317	55.544369	Lake	50	12	SIEV	>25 µm	5485	7623	2138	Age/depth calculated

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<i>Sweden</i>													
<i>(Cont.)</i>													
58a	Siggaboda	Bjorkman and Bradshaw 1996	14.570851	56.468442	Forest hollow	NOTK	5	SIEV	>250 µm	27	2767	2740	Digitised against age
58b	Siggaboda	Bjorkman and Bradshaw 1996	14.570851	56.468442	Forest hollow	NOTK	5	SIEV	>25 µm	23	2863	2840	Digitised against age
59	Fiby Forest	Bradshaw and Hannon 1992	17.364341	59.879486	Peat	NOTK	3	SIEV	NOTK	31	3992	3961	Digitised against age
60	Råshult (in field)	Lindbladh and Bradshaw 1998	14.200000	56.616667	Wetland	NOTK	7	SIEV	NOTK	32	4452	4420	Digitised against age
61	Råshult (out field)	Lindbladh and Bradshaw 1998	14.200000	56.616667	Wetland	NOTK	2	SIEV	NOTK	22	5548	5526	Digitised against age
62	Djäknabygd	Lindbladh and Bradshaw 1998	14.200000	56.616667	Wetland	NOTK	5	SIEV	NOTK	86	5930	5844	Raw data
63	Penningholm	Bradshaw and Zackrisson 1990	17.430913	61.989376	Peat	425	5	SIEV	NOTK	11	2561	2550	Digitised against age
64	Skallskog large	Segerström and Emanuelsson 2002	14.867622	60.640172	Mire	300	5	POLS	>40 µm	-51	1449	1500	Age/depth calculated
65a	Skallskog small	Segerström and Emanuelsson 2002	14.867622	60.640172	Mire	370	2	POLS	50–200 µm	17	1045	1028	Age/depth calculated
65b	Skallskog small	Segerström and Emanuelsson 2002	14.867622	60.640172	Mire	370	2	POLS	>200 µm	17	1045	1028	Age/depth calculated
66a	Eriksberg	Hannon <i>et al.</i> 2000	15.000000	56.183333	Forest hollow	NOTK	4	SIEV	<200 µm	119	7414	7295	Raw data
66b	Eriksberg	Hannon <i>et al.</i> 2000	15.000000	56.183333	Forest hollow	NOTK	4	SIEV	<200 µm	43	6246	6203	Digitised against age
67	Sörevik	Berglund <i>et al.</i> 2005	15.763067	56.117600	Meadow	NOTK	12	SIEV	NOTK	7374	10771	3397	Age/depth calculated
68	Kalvöviken	Berglund <i>et al.</i> 2005	15.109873	56.166183	Meadow	NOTK	8	SIEV	NOTK	3251	10739	7488	Age/depth calculated
69	Storasjö	Olsson <i>et al.</i> 2010	15.292108	56.928264	Bog	255	9	POLS	Micro	50	10862	10812	Digitised against age
70a	Kalven	Bindler <i>et al.</i> 2011	12.670000	57.470000	Lake	150	Varve counts	POLS	>100 µm	-41	1019	1060	Digitised against age
70b	Kalven	Bindler <i>et al.</i> 2011	12.670000	57.470000	Lake	150	Varve counts	POLS	50–100 µm	-41	1019	1060	Digitised against age
71a	Stavsåkra	Greisman and Gaillard 2009	14.900000	56.916667	Bog	187	9	POLS	>25 µm	1204	8352	7148	Digitised against age

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<i>Sweden</i>													
<i>(Cont.)</i>													
71b	Stavsåkra	Greisman and Gaillard 2009	14.900000	56.916667	Bog	187	9	POLS	10–25 µm	1204	8352	7148	Digitised against age
72a	Low impact area	Josefsson <i>et al.</i> 2009	17.816667	66.616667	Mire	510	3	POLS	>150 µm	–36	2172	2208	Age/depth calculated
72b	Low impact area	Josefsson <i>et al.</i> 2009	17.816667	66.616667	Mire	510	3	POLS	50–150 µm	–36	2172	2208	Age/depth calculated
73a	Munka	Josefsson <i>et al.</i> 2009	17.783333	66.550000	Mire	460	3	POLS	>150 µm	–36	4126	4162	Age/depth calculated
73b	Munka	Josefsson <i>et al.</i> 2009	17.783333	66.550000	Mire	460	3	POLS	50–150 µm	–36	4126	4162	Age/depth calculated
74a	Akkapakte	Josefsson <i>et al.</i> 2009	17.683333	66.633333	Mire	480	9	POLS	>150 µm	–18	2667	2685	Age/depth calculated
74b	Akkapakte	Josefsson <i>et al.</i> 2009	17.683333	66.633333	Mire	480	9	POLS	50–150 µm	–18	2667	2685	Age/depth calculated
75	Ängersjötjärn	Karlsson <i>et al.</i> 2010	14.866667	61.999722	Mire	400	4	POLS	50–150 µm	160	1516	1356	Age/depth calculated
76a	Gammelvallen Frosktjärnsberget	Karlsson <i>et al.</i> 2010	14.816667	61.983333	Mire	490	4	POLS	>150 µm	–7	2666	2673	Age/depth calculated
76b	Gammelvallen Frosktjärnsberget	Karlsson <i>et al.</i> 2010	14.816667	61.983333	Mire	490	4	POLS	50–150 µm	–7	2666	2673	Age/depth calculated
77a	Öjingsvallen	Karlsson <i>et al.</i> 2010	14.933333	61.916667	Mire	430	4	POLS	>150 µm	–50	3151	3201	Age/depth calculated
77b	Öjingsvallen	Karlsson <i>et al.</i> 2010	14.933333	61.916667	Mire	430	4	POLS	50–150 µm	–50	3151	3201	Age/depth calculated
78a	Gieddeålge	Staland <i>et al.</i> 2011	15.687056	66.224861	Mire	710	3	POLS	>50 µm	–50	1216	1266	Age/depth calculated
78b	Gieddeålge	Staland <i>et al.</i> 2011	15.687056	66.224861	Mire	710	3	POLS	25–50 µm	–50	1216	1266	Age/depth calculated
79a	Varenodjukke	Staland <i>et al.</i> 2011	15.668806	66.202622	Mire	680	4	POLS	>50 µm	–50	2415	2465	Age/depth calculated
79b	Varenodjukke	Staland <i>et al.</i> 2011	15.668806	66.202622	Mire	680	4	POLS	25–50 µm	–50	2415	2465	Age/depth calculated
80	Reference area	Staland <i>et al.</i> 2011	15.668806	66.223389	Mire	670	4	POLS	>50 µm	–50	4903	4953	Age/depth calculated
81	Holtjärnen	Giesecke 2005	15.930134	60.650005	Lake	232	7	SIEV	NOTK	–53	10406	10459	Digitised against age
82	Koltjärnen	Giesecke 2005	16.529959	61.819888	Lake	715	6	POLS	NOTK	68	9205	9137	Digitised against age
83	Bocksten A	Bjorkman 1997	12.566667	57.116667	Mire	NOTK	6	SIEV	25–250 µm	–29	2564	2593	Age/depth calculated

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<i>Sweden (Cont.)</i>													
84	Bocksten B	Bjorkman 1997	12.566667	57.116667	Mire	NOTK	3	SIEV	25–250 µm	–27	4536	4563	Age/depth calculated
85	Killeröd	Hannon and Gustafsson 2004	12.816667	56.383333	Medow	NOTK	5	SIEV	>280 µm	25	2207	2182	Raw data
86	Kåremosse	Hannon <i>et al.</i> 2008	12.783333	56.416667	Fen	130	5	SIEV	NOTK	650	9017	8367	Raw data
87	Osaby (in field)	Lindbladh 1999	14.783333	56.766667	Peat	165	8	SIEV	NOTK	4	4102	4098	Digitised against age
88	Osaby (out field)	Lindbladh 1999	14.783333	56.766667	Wetland	165	6	SIEV	NOTK	21	3869	3848	Digitised against age
89	Stor-Flen I	Segerström 1997	14.583333	60.300000	Swamp forest	270	4	POLS	NOTK	1195	6853	5658	Age/depth calculated
90	Stor-Flen II	Segerström 1997	14.583333	60.300000	Swamp forest	270	4	POLS	NOTK	160	9481	9321	Age/depth calculated
91	Torup	Hultberg <i>et al.</i> 2010	13.205533	55.563111	Wetland	50	6	SIEV	NOTK	8	5887	5879	Raw data
92	Island A	Hornberg <i>et al.</i> 2004	17.853300	65.958100	Lake	4	3	SIEV	NOTK	23	6874	6851	Age/depth calculated
93	Island B	Hornberg <i>et al.</i> 2004	17.853300	65.958100	Lake	6	5	SIEV	NOTK	30	7682	7652	Age/depth calculated
94	Nissatorp	Lindbladh and Bradshaw 1998	14.200000	56.616667	Wetland	NOTK	2	NOTK	NOTK	72	2088	2016	Raw data
95	Bohult	Bradshaw <i>et al.</i> 1997	16.166667	57.233330	Mire	NOTK	NOTK	SIEV	NOTK	99	7167	7068	Raw data
96	Dömostorp	Hannon 2002	12.985833	56.400000	Wetland	NOTK	4	SIEV	NOTK	17	2508	2491	Raw data
97	Häggenäs	G. E. Hannon (unpubl. data)	13.600000	55.883333	?	NOTK	NOTK	NOTK	NOTK	6	1711	1705	Raw data
98	Kalvaberget	Hannon 2002	12.850000	56.783333	?	NOTK	NOTK	NOTK	NOTK	9	2633	2624	Raw data
99	Vasahus	G. E. Hannon (unpubl. data)	13.633333	55.900000	?	NOTK	NOTK	NOTK	NOTK	58	3318	3260	Raw data
100	Hälledam	G. E. Hannon (unpubl. data)	12.566667	56.433333	?	NOTK	NOTK	NOTK	NOTK	16	2962	2946	Raw data
101	Ekenäs	G. E. Hannon (unpubl. data)	16.016667	56.950000	?	NOTK	NOTK	NOTK	NOTK	8	3554	3546	Raw data
102	Ryfors	G. E. Hannon (unpubl. data)	13.833333	57.916667	?	NOTK	NOTK	NOTK	NOTK	61	1689	1628	Raw data
103	Kölksjänen	K. Brown (unpubl. data)	16.533333	61.816667	Lake	715	NOTK	NOTK	NOTK	–60	9431	9491	Raw data
104	Holtjarnen	K. Brown (unpubl. data)	15.933333	60.650000	Lake	232	NOTK	NOTK	NOTK	15	10019	10004	Raw data

Site number	Name	Reference	Easting	Northing	Depositional environment	Elevation (m)	Radiocarbon dates	Char method	Char size	Temp. (start)	Temp. (end)	Temp. (extent)	Digitisation method
<i>Finland</i>													
105	Laukunlampi	Tolonen 1983	29.166667	62.666667	Lake	NOTK	Varve counts	NOTK	NOTK	339	949	610	Digitised
106	Ahvenainen	Tolonen 1978	25.116667	61.033333	Lake	122	Varve counts	POLS	NOTK	-26	6131	6157	Digitised
107	Salo Pukkila	Tolonen 1983	23.166667	60.333333	Mire	29	4	POLS	NOTK	190	5300	5110	Age & depth
108	Palomäki	Tolonen 1985	22.716667	60.416667	Mire	NOTK	Cross-correlation	POLS	NOTK	-33	3899	3932	Calculated
109	Pönttölampi	Pitkänen and Huttunen 1999	30.966670	63.166667	Lake	173	Varve counts	POLS	NOTK	4	1247	1243	Calculated
110	Laukunlampi	Pitkänen 2000	29.167744	62.667117	Lake	84	Varve counts	POLS	NOTK	851	1515	664	Digitised
111	Ristijärvi	Pitkänen and Grönlund 2001	28.950000	63.616667	Lake	106	Varve counts	POLS	NOTK	1450	2045	595	Digitised
112	Iso Lehmälampi	Sarmaja-Korjonen 1998	24.600000	60.350000	Lake	NOTK	4	POLS	NOTK	0	9143	9143	Age & depth
113	Etu-Mustajärvi	Sarmaja-Korjonen 1998	25.005384	60.984835	Lake	NOTK	3	POLS	NOTK	0	9400	9400	Calculated
114	Ylimmäinen Kuivajärvi	Sarmaja-Korjonen 1998	29.619048	66.362787	Lake	NOTK	Cross-correlation	POLS	NOTK	0	9158	9158	Age & depth
115	Putaanlampi	Sarmaja-Korjonen 1998	29.415423	66.381107	Lake	NOTK	Cross-correlation	POLS	NOTK	0	9667	9667	Calculated
116	Jierstivaara	Sarmaja-Korjonen 1998	23.733300	68.666700	Lake	NOTK	3	POLS	NOTK	4333	8056	3723	Age & depth
117	Storträsk	Sarmaja-Korjonen 2003	25.166667	60.266667	Lake	NOTK	3	POLS	NOTK	0	6281	6281	Calculated
118	Hältingträsk	Sarmaja-Korjonen 2003	25.233333	60.266667	Lake	NOTK	NOTK	POLS	NOTK	0	4900	4900	Age & depth
119	Hämträsk	Sarmaja-Korjonen 2003	25.261179	60.285049	Lake	NOTK	5	POLS	NOTK	0	5334	5334	Calculated
120	Vesijako	J. L. Clear (unpubl. data)	25.100000	61.350000	Forest hollow	NOTK	8	SIEV	>250 µm	-55	5438	5493	Age & depth
121	Lake Orijärvi	Alenius <i>et al.</i> 2008	27.234285	61.666743	Lake	89.7	5	SIEV	NOTK	44	9624	9580	Calculated
122a	Kontolanrahka	Väliranta <i>et al.</i> 2007	22.775927	60.798551	Bog	NOTK	40	SIEV	>100 µm	11	5015	5004	Digitised
122b	Kontolanrahka	Väliranta <i>et al.</i> 2007	22.775927	60.798551	Bog	NOTK	40	POLS	<100 µm	11	5015	5004	Age & depth
123a	Einehiemmet	Hicks 1993	27.533333	68.666667	Mire	NOTK	2	POLS	<40 µm	-39	530	569	Calculated

Site number	Name	Reference	Easting	Northing	Depositional environment	Elevation (m)	Radiocarbon dates	Char method	Char size	Temp. (start)	Temp. (end)	Temp. (extent)	Digitisation method
<i>Finland</i>													
<i>(Cont.)</i>													
123b	Einehiemmet	Hicks 1993	27.533333	68.666667	Mire	NOTK	2	POLS	>40 µm	-39	530	569	Age & depth Calculated
124	Sudenpesä	J. L. Clear (unpubl. data)	25.152639	61.192306	Forest hollow	NOTK	8	SIEV	>250 µm	165	9861	9696	Age & depth Calculated
125	Konilampi	Jauhiainen <i>et al.</i> 2004	24.283300	61.800000	Fen	155	5	POLS	NOTK	859	9410	8551	Digitised againts Age
126	Viheriaisenneva	Jauhiainen <i>et al.</i> 2004	24.233300	61.250000	Bog	160	9	POLS	NOTK	98	10305	10207	Age & depth Calculated
127	Maajärvi	Kuoppamaa <i>et al.</i> 2009	28.329639	68.844472	Mire	NOTK	8	POLS	NOTK	-52	71	123	Digitised againts Age
128	Njargajavri	Väliranta <i>et al.</i> 2005	27.166667	69.866667	Lake	355	8	SIEV	>125 µm	-50	5145	5195	Age & depth Calculated
<i>Russia</i>													
129a	Kirjavalampi	Alenius <i>et al.</i> 2004	30.761000	61.730000	Lake	17	3	POLS	10–50 µm	-39	3287	3326	Age/depth calculated
129b	Kirjavalampi	Alenius <i>et al.</i> 2004	30.761000	61.730000	Lake	17	3	POLS	>50 µm	-39	3287	3326	Age/depth calculated
130a	Ilponlampi	Huttunen <i>et al.</i> 1994	30.249167	60.123333	Lake	285	4	POLS	<25 µm	0	12082	12082	Age/depth calculated
130b	Ilponlampi	Huttunen <i>et al.</i> 1994	30.249167	60.123333	Lake	285	4	POLS	>25 µm	0	12082	12082	Age/depth calculated
131	Paanajarvi Picea	Wallenius <i>et al.</i> 2005	30.000000	66.000000	Mire	NOTK	1	SIEV	>200 µm	-4	1106	1110	Age/depth calculated
132	Kukka Hollow	J. L. Clear (unpubl. data)	32.744167	61.650000	Forest hollow	NOTK	1	SIEV	>250 µm	93	11067	10974	Age/depth calculated
133a	Pieni-Kuuppalanlampi	Miettinen <i>et al.</i> 2002	29.916667	61.283333	Lake	27	6	POLS	10–25 µm	-16	6572	6588	Age/depth calculated
133b	Pieni-Kuuppalanlampi	Miettinen <i>et al.</i> 2002	29.916667	61.283333	Lake	27	6	POLS	26–50 µm	-16	6572	6588	Age/depth calculated
133c	Pieni-Kuuppalanlampi	Miettinen <i>et al.</i> 2002	29.916667	61.283333	Lake	27	6	POLS	51–100 µm	-16	6572	6588	Age/depth calculated
133d	Pieni-Kuuppalanlampi	Miettinen <i>et al.</i> 2002	29.916667	61.283333	Lake	27	6	POLS	>100 µm	-16	6572	6588	Age/depth calculated
133e	Pieni-Kuuppalanlampi	Miettinen <i>et al.</i> 2002	29.916667	61.283333	Lake	27	6	POLS	NOTK	-16	6572	6588	Age/depth calculated

Table S2. Additional site information for fire scar records

Site number	Name	Reference	Easting	Northing	Temp. (start)	Temp. (end)	Temp. (extent)
<i>Norway</i>							
134	Eldferdalen	Groven and Niklasson 2005	9.316667	59.650000	-50	1200	1250
<i>Sweden</i>							
135	Muddus	Engelmark 1984	20.250000	66.150000	-33	537	570
136	Norra Kvills	Niklasson and Drakenberg 2001	15.600000	57.500000	-50	550	600
137	Linsell	Hellberg <i>et al.</i> 2004	13.866667	62.133333	-50	800	850
138	Grimsjön	Hellberg <i>et al.</i> 2004	14.033333	61.950000	-50	700	750
139	Vindelälven	Zackrisson 1977	18.100000	64.150000	-25	399	424
140	Lödge	Niklasson and Granstrom 2000	18.800000	63.933333	-50	850	900
<i>Finland</i>							
141	Lammi & Padasjoki	Wallenius <i>et al.</i> 2007	25.016667	61.050000	-50	511	561
142	Autiovaara, Patvinsuo	Lehtonen <i>et al.</i> 1996	30.666667	63.116667	-44	538	582
143	Kitsi	Lehtonen and Huttunen 1997	30.750000	63.266667	-44	547	591
144	Ahvenjarvi	Lehtonen and Huttunen 1997	30.950000	62.850000	-44	591	635
145	Pippokangas	Matthews <i>et al.</i> 2005	24.000000	68.000000	514	7800	7286
<i>Russia</i>							
146	Paanajarvi Picea	Wallenius <i>et al.</i> 2005	30.000000	66.000000	-51	565	616
147	Viena	Lehtonen and Kolstrom 2000	30.083333	65.000000	-48	550	598
148	Vienansalo	Wallenius <i>et al.</i> 2004	30.183333	64.966667	-50	600	650