

Tables

Table S1 New radiocarbon dates on samples from insecurely dated sites

Sample ID	Site	Age	Lab. ref
1305	Geitalemen	3555 ± 30	TRa-70
1311	Rundøyyno	2480 ± 25	TRa-68
1316	Rundøyyno	3615 ± 30	TRa-69
1322	Grimstadneset	2040 ± 55	TRa-66
1324	Grimstadneset	1940 ± 30	TRa-67
1332	Grønehelleren	1760 ± 30	TRa-72
1333	Grønehelleren	1650 ± 40	TRa-3066
1335	Grønehelleren	1470 ± 40	TRa-3067
1336	Grønehelleren	4065 ± 45	TRa-3068
1340	Grønehelleren	1560 ± 25	TRa-73
1342	Grønehelleren	1570 ± 40	TRa-3069
1343	Grønehelleren	3080 ± 40	TRa-3070
1344	Grønehelleren	3620 ± 45	TRa-3071
1345	Grønehelleren	1675 ± 40	TRa-3072
1348	Grønehelleren	3120 ± 40	TRa-3073

Table S2 References to red deer haplotypes from the western European lineage used to construct haplotype networks

Haplotype information		Sampling references*								
Haplotype	Countries present	This study	1	2	3	4	5	6	7	
NO1	Norway, Scotland, Czech Rep.	NO1	AC1, AD5		H2, H5, H8, H20, H32, H35, H48, H50, H59, H61, H62				HT02	HT10
NO2	Norway	NO2	AC3							
NO3	Norway	NO3	AC4							
NO4	Norway, Scotland, Spain, Germany, Czech Rep.	NO4	AA1, AD6, AD7		H4, H6, H63, H64				HT01	HT8
NO5	Norway, Scotland	NO5	AA7	AF291888	H56					HT7
NO6	Norway, Denmark	NO6				H1, H5				
NO7	Norway, Scotland	NO7			H39					
NO8	Norway	NO8								
NO9	Norway	NO9								
NO10	Norway	NO10								
SKA	Sweden, Denmark		AC2			H3				
De1	Denmark					H6				
De2	Denmark					H7				
Fr1	France		AA8							
Fr2	France		AA9							
Fr3	France		AD2							
Ge1	Germany		AB3							
Ge2	Germany		AC5							
Ge3	Germany		AC6							
Ge4	Germany		AC7							
Is1	Scotland, Ireland		AD8		H19, H68, H74			MY1		HT9

Isl2	Scotland, Ireland	AD9	H24, H25, H53		NW2	HT6
Isl3	Scotland, Ireland		H1, H3, H15, H29, H40		KNP1, KNP4	HT2
Isl4	Scotland, Ireland, England		H16		NW1	HT4
Isl5	Scotland, Ireland		H65		GY3	
WE1	Denmark, France, Scotland, Ireland	AD1	H9, H60	H2	NW3	
WE2	France, Scotland, Ireland, England	AA3	H18		GY2	HT3
WE3	Spain, Scotland	AA2	H38			
Ir1	Ireland				KNP2, KNP5, KNP7	
Ir2	Ireland				KNP3	
Ir3	Ireland				KNP6	
Ir4	Ireland				GY1	
Ir5	Ireland				GY4	
Ir6	Ireland				WK2	
Sc1	Scotland	AD10	H58			HT13
Sc2	Scotland	AD4	H66			HT11
Sc3	Scotland		H7			
Sc4	Scotland		H10			
Sc5	Scotland		H11			
Sc6	Scotland		H12			
Sc7	Scotland		H13			
Sc8	Scotland		H14			
Sc9	Scotland		H17			
Sc10	Scotland		H21			
Sc11	Scotland		H22			
Sc12	Scotland		H23			
Sc13	Scotland		H26			
Sc14	Scotland		H27			
Sc15	Scotland		H28			
Sc16	Scotland		H30			
Sc17	Scotland		H31			
Sc18	Scotland		H33			
Sc19	Scotland		H34			
Sc20	Scotland		H36, H49			
Sc21	Scotland		H37			
Sc22	Scotland		H41			
Sc23	Scotland		H42			
Sc24	Scotland		H43			
Sc25	Scotland		H44			
Sc26	Scotland		H45			
Sc27	Scotland		H46			
Sc28	Scotland		H47			
Sc29	Scotland		H52			
Sc30	Scotland		H54			
Sc31	Scotland		H55			

Sc32	Scotland		H57	
Sc33	Scotland		H67, H73	
Sc34	Scotland		H69	
Sc35	Scotland		H70	
Sc36	Scotland		H71	
Sc37	Scotland		H72	
Sc38	Scotland			HT5
Sc39	Scotland			HT12
Sp1	Spain		AF291889	
Sp2	Spain	AA4		
Sp3	Spain	AA5		
Sp4	Spain	AA10		
Sp5	Spain	AB1		
Sp6	Spain	AB4		
Sp7	Spain	AB5		
Sp8	Spain	AB6		
Sp9	Spain	AB7		
It1	Italy	AD3	AF291887	
It2	Italy	AA6		
It3	Italy	AB2		

* Haplotype name given by the respective authors

Table S3 Haplotypes of ancient Norwegian samples and modern samples from primer testing, with age used in BEAST analyses and reference to the dating of the site

Sample #	Site	Dating method	BEAST age*	NO Haplotype	Reference
A1194	Skipshelleren	dated layer	2000	4	8
A1197	Skipshelleren	dated layer	2000	5	8
A1199	Skipshelleren	dated layer	2000	4	8
A1201	Skipshelleren	dated layer	2000	4	8
A1202	Skipshelleren	dated layer	2000	9	8
A1208	Skipshelleren	dated layer	2000	8	8
A1209	Skipshelleren	dated layer	2000	6	8
A1211	Skipshelleren	dated layer	2000	8	8
A1212	Skipshelleren	dated layer	2000	8	8
A1213	Skipshelleren	dated layer	2000	8	8
A1214	Skipshelleren	dated layer	2000	5	8
A1215	Skipshelleren	dated layer	2000	1	8
A1216	Skipshelleren	dated layer	2000	4	8
A1218	Skipshelleren	dated layer	2000	9	8
A1222	Skipshelleren	dated layer	2000	6	8
A1223	Skipshelleren	dated layer	2000	1	8
A1229	Skipshelleren	dated layer	5500	4	8
A1236	Skipshelleren	dated layer	6500	4	8
A1237	Skipshelleren	dated layer	6500	4	8
A1238	Skipshelleren	dated layer	7000	4	8
A1239	Skipshelleren	dated layer	4500	4	8
A1292	Erkebispegården	dated site	NA	3	9
A1294	Erkebispegården	dated site	NA	5	9

A1295	Erkebispegården	dated site	NA	5	9
A1296	Dreggsalmenningen	dated site	500	2	10
A1305	Geitalemen	dated sample	4000	4	Supl. 1
A1311	Rundøyno	dated sample	2500	2	Supl. 1
A1316	Rundøyno	dated sample	4000	10	Supl. 1
A1322	Grimstadneset	dated sample	2000	4	Supl. 1
A1324	Grimstadneset	dated sample	2000	5	Supl. 1
A1332	Grønehelleren	dated sample	1500	2	Supl. 1
A1333	Grønehelleren	dated sample	1500	5	Supl. 1
A1335	Grønehelleren	dated sample	1500	2	Supl. 1
A1340	Grønehelleren	dated sample	1500	1	Supl. 1
A1342	Grønehelleren	dated sample	1500	2	Supl. 1
A1343	Grønehelleren	dated sample	3500	9	Supl. 1
A1344	Grønehelleren	dated sample	4000	4	Supl. 1
A1345	Grønehelleren	dated sample	1500	4	Supl. 1
A1346	Grønehelleren	dated layer	3500	4	Supl. 1
A1348	Grønehelleren	dated sample	3500	9	Supl. 1
A1939	Skipshelleren	dated layer	5500	4	8
A1942	Skipshelleren	dated layer	5000	4	8
A1943	Skipshelleren	dated layer	4500	4	8
A1944	Skipshelleren	dated layer	5500	4	8
A1945	Skipshelleren	dated layer	4500	4	8
A1946	Skipshelleren	dated layer	5500	7	8
A1948	Skipshelleren	dated layer	5000	4	8
A1949	Skipshelleren	dated layer	7000	4	8
A1950	Skipshelleren	dated layer	6500	1	8
A1952	Skipshelleren	dated layer	5500	4	8
A1954	Skipshelleren	dated layer	4500	4	8
A1956	Skipshelleren	dated layer	6500	4	8
A1957	Skipshelleren	dated layer	7000	4	8
A1959	Skipshelleren	dated layer	7000	4	8
A2054	Rosenkrantzgate	dated site	500	4	11
A2055	Rosenkrantzgate	dated site	500	4	11
A2056	Rosenkrantzgate	dated site	500	4	11
A2057	Rosenkrantzgate	dated site	500	2	11
A2059	Rosenkrantzgate	dated site	500	4	11
A2060	Rosenkrantzgate	dated site	500	1	11
A2061	Rosenkrantzgate	dated site	500	4	11
A2062	Rosenkrantzgate	dated site	500	3	11
A2063	Rosenkrantzgate	dated site	500	4	11
A2064	Rosenkrantzgate	dated site	500	2	11
A2065	Rosenkrantzgate	dated site	500	4	11
A2066	Rosenkrantzgate	dated site	500	1	11
A2067	Rosenkrantzgate	dated site	500	1	11
A2068	Rosenkrantzgate	dated site	500	5	11
A2069	Rosenkrantzgate	dated site	500	4	11
A2070	Rosenkrantzgate	dated site	500	4	11
A2071	Rosenkrantzgate	dated site	500	2	11
A2072	Rosenkrantzgate	dated site	500	4	11
A2073	Rosenkrantzgate	dated site	500	1	11
M1422	Hitra	contemporary	0	4	
M1690	Mongstad	contemporary	0	1	
M1691	Mongstad	contemporary	0	1	
M1692	Mongstad	contemporary	0	3	

M1693	Mongstad	contemporary	0	1
M1727	Ølve	contemporary	0	2
M1728	Ølve	contemporary	0	1
M1729	Ølve	contemporary	0	2
M1730	Ølve	contemporary	0	2

* Age used in the Bayesian skyline plot analysis

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