

Additional file 3 - Location and geographical coordinates of the extant Norway

spruce (*Picea abies*) samples and herbarium specimens used for cpDNA analysis

Sample name	Location	Haplo-type	Collection date	Latitude N	Longitude E	Altitude (m)
CP2	Retezat Mts, Romania	Ht 3	2008	45.431833	22.894850	1065
CP3	Retezat Mts, Romania	Ht 2	2008	45.430700	22.894533	1068
CP6	Retezat Mts, Romania	Ht 2	2008	45.422150	22.891783	1162
CP8	Retezat Mts, Romania	Ht 8	2008	45.412050	22.886950	1292
CP10	Retezat Mts, Romania	Ht 8	2008	45.407733	22.883617	1427
St2	Retezat Mts, Romania	Ht 5	2008	45.402117	22.872283	1584
St6	Retezat Mts, Romania	Ht 1	2008	45.397283	22.864783	1721
St10	Retezat Mts, Romania	Ht 3	2008	45.394667	22.863917	1762
St15	Retezat Mts, Romania	Ht 7	2008	45.395667	22.864017	1751
St19	Retezat Mts, Romania	Ht 3	2008	45.398967	22.866483	1705
P5	Retezat Mts, Romania	Ht 1	2008	45.398333	22.881111	1565
P9	Retezat Mts, Romania	Ht 6	2008	45.390833	22.880278	1702
P14	Retezat Mts, Romania	Ht 8	2008	45.388889	22.881111	1723
P16	Retezat Mts, Romania	Ht 2	2008	45.386944	22.880278	1774
P18	Retezat Mts, Romania	Ht 8	2008	45.386389	22.880556	1781
R3	Retezat Mts, Romania	Ht 1	2008	45.399617	22.883850	1535
R6	Retezat Mts, Romania	Ht 2	2008	45.397500	22.889250	1700
R9	Retezat Mts, Romania	Ht 3	2008	45.394867	22.889150	1811
R11	Retezat Mts, Romania	Ht 8	2008	45.394283	22.888250	1840
R12	Retezat Mts, Romania	Ht 6	2008	45.393917	22.887850	1851
Gtk4	Retezat Mts, Romania	Ht 8	2008	45.406440	22.890360	1740
Gtk8	Retezat Mts, Romania	Ht 8	2008	45.401770	22.900040	1740
Gtk9	Retezat Mts, Romania	Ht 2	2008	45.400590	22.901750	1740
Gt13	Retezat Mts, Romania	Ht 1	2008	45.397170	22.902590	1740
Gt14	Retezat Mts, Romania	Ht 8	2008	45.396660	22.901890	1740
Gt15	Retezat Mts, Romania	Ht 2	2008	45.396510	22.901820	1740
Gt17	Retezat Mts, Romania	Ht 2	2008	45.396410	22.901330	1740
Gt18	Retezat Mts, Romania	Ht 1	2008	45.396710	22.901150	1740
Gt20	Retezat Mts, Romania	Ht 2	2008	45.396900	22.901500	1740
Gtk22	Retezat Mts, Romania	Ht 1	2008	45.396906	22.905086	1740
Gtk24	Retezat Mts, Romania	Ht 4	2008	45.396470	22.905310	1740
B3	Retezat Mts, Romania	Ht 8	2008	45.306944	22.981111	1085
B11	Retezat Mts, Romania	Ht 1	2008	45.307778	22.948056	1163
B15	Retezat Mts, Romania	Ht 8	2008	45.311944	22.923889	1208
B21	Retezat Mts, Romania	Ht 8	2008	45.318333	22.914722	1342
B25	Retezat Mts, Romania	Ht 8	2008	45.323056	22.913611	1429
M2	Retezat Mts, Romania	Ht 8	2008	45.304200	22.978817	1132
M5	Retezat Mts, Romania	Ht 8	2008	45.317933	22.972367	1117
M15	Retezat Mts, Romania	Ht 8	2008	45.328533	22.953467	1443
M20	Retezat Mts, Romania	Ht 3	2008	45.333133	22.949683	1622
M25	Retezat Mts, Romania	Ht 8	2008	45.337767	22.948950	1792
Z1	Retezat Mts, Romania	Ht 2	2008	45.310000	22.983233	928
Z7	Retezat Mts, Romania	Ht 8	2008	45.317633	22.990067	1147
Z14	Retezat Mts, Romania	Ht 8	2008	45.326100	22.989933	1432

Z22	Retezat Mts, Romania	Ht 8	2008	45.341017	22.991600	1718
Z26	Retezat Mts, Romania	Ht 2	2008	45.348033	22.991267	1912
Buk9	Retezat Mts, Romania	Ht 2	2008	45.341731	22.889435	2041
Buk12-3	Retezat Mts, Romania	Ht 3	2008	45.347390	22.883125	2041
Buk14-1	Retezat Mts, Romania	Ht 8	2008	45.351734	22.879741	2041
KR6-1	Retezat Mts, Romania	Ht 8	2008	45.333150	22.897900	1792
KR8-2	Retezat Mts, Romania	Ht 5	2008	45.284117	22.846967	1921
H5	Jaszinya, Ukraine	Ht 2	1940	48.258889	24.355000	
H6	Bihor Mts, Romania	Ht 2	1882	46.657242	22.677084	
H9	Chotča, Slovakia	Ht 8	1981	49.241667	21.678611	
H10	Studená dolina, Vysoké Tatry, Slovakia	Ht 2	1890	49.138889	20.219444	
H11	Králova holá, Nízke Tatry, Slovakia	Ht 2	1906	49.106111	21.731944	
H12	Rožňava-Jasov, Slovakia	Ht 9	1976	48.604793	20.660660	
AF	Alps, Austria	Ht 3	2009	46.970343	12.960239	
