Olsson S, Giovannelli G, Roig A, Spanu I, Vendramin GG, Fady B (2022). **Chloroplast DNA barcoding genes and are not suitable for species identification and phylogenetic analyses in closely related pines**
iForest – Biogeosciences and Forestry – doi: 10.3832/ifor3913-015

Supplementary Material

Tab. S1 - Accession numbers of sequences used in this study. Newly generated sequences are underlined. Only the sequences included in the alignments were considered in the grouping into haplotypes. The reference for each sequence was obtained from GenBank and updated with already published articles when possible.

haplotype	Species	Accession	Reference
matK			
halepensis	*P. halepensis*	AB081089	Geada Lopez G, Kamiya K and Harada K. Phylogeny of the North American Pines
	P. halepensis	JN854197	Parks M, Cronn R and Liston A (2012) Separating the wheat from the chaff: mitigating the effects of noise in a plastome phylogenomic data set from *Pinus* L. (Pinaceae). BMC Evol Biol: 12(1): 100
	P. halepensis	MH981953	This study
	P. halepensis	MH981954	This study
	P. halepensis	MH981955	This study
	P. halepensis	MH981956	This study
	P. halepensis	MH981957	This study
	P. halepensis	MH981958	This study
	P. halepensis	MH981959	This study
	P. halepensis	MH981960	This study
	P. halepensis	MH981961	This study
	P. halepensis	MH981962	This study
	P. halepensis	MH981963	This study
	P. halepensis	MH981964	This study
densiflora-sylvestris	*P. densiflora*	HQ849853	Ren G and Liu J. DNA barcoding in closely related *Pinus* species in China
	P. densiflora	JF955495	China Plant BOL Group, Li DZ, Gao LM, Li HT et al. (2011) Comparative analysis of a large dataset indicates that internal transcribed spacer (ITS) should be incorporated into the core barcode for seed plants. Proc Natl Acad Sci USA 108 (49): 19641-19646
	P. densiflora	JF955496	China Plant BOL Group, Li DZ, Gao LM, Li HT et al. (2011) Comparative analysis of a large dataset indicates that internal transcribed spacer (ITS) should be incorporated into the core barcode for seed plants. Proc Natl Acad Sci USA 108 (49): 19641-19646
	P. densiflora	JF955497	China Plant BOL Group, Li DZ, Gao LM, Li HT et al. (2011) Comparative analysis of a large dataset indicates that internal transcribed spacer (ITS) should be incorporated into the core barcode for seed plants. Proc Natl Acad Sci USA 108 (49): 19641-19646

haplotype	Species	Accession	Reference
	P. densiflora	JF955498	China Plant BOL Group, Li DZ, Gao LM, Li HT et al. (2011) Comparative analysis of a large dataset indicates that internal transcribed spacer (ITS) should be incorporated into the core barcode for seed plants. Proc Natl Acad Sci USA 108 (49): 19641-19646
	P. densiflora	JF955499	China Plant BOL Group, Li DZ, Gao LM, Li HT et al. (2011) Comparative analysis of a large dataset indicates that internal transcribed spacer (ITS) should be incorporated into the core barcode for seed plants. Proc Natl Acad Sci USA 108 (49): 19641-19646
	P. sylvestris var. mongolica	JF955485	China Plant BOL Group, Li DZ, Gao LM, Li HT et al. (2011) Comparative analysis of a large dataset indicates that internal transcribed spacer (ITS) should be incorporated into the core barcode for seed plants. Proc Natl Acad Sci USA 108 (49): 19641-19646
densiflora-mugo-uncinata-sylvestris nigra-resinosa	*P. densiflora*	AB084497	Geada Lopez G, Kamiya K and Harada K. Phylogeny of *Diploxylon Pinus*
	P. densiflora	DQ353715	Gernandt DS. Absolute age estimates for *Pinus* and Pinaceae
	P. densiflora	JN854210	Parks M, Cronn R and Liston A (2012) Separating the wheat from the chaff: mitigating the effects of noise in a plastome phylogenomic data set from *Pinus* L. (Pinaceae). BMC Evol Biol: 12(1): 100
	P. densiflora	JQ512450	Shin HW and Kim KJ. Unpublished
	P. densiflora	JQ512451	Shin HW and Kim KJ. Unpublished
	P. densiflora	JQ512452	Shin HW and Kim KJ. Unpublished
	P. densiflora	JQ512453	Shin HW and Kim KJ. Unpublished
	P. densiflora	KP089192	Dong W, Xu C, Li C, Sun J, Zuo Y, Shi S, Cheng T, Guo J and Zhou S (2015) *ycf1*, the most promising plastid DNA barcode of land plants. Sci Rep 5: 8348
	P. densiflora	MF990371	Kim S-C, Lee J-W, Baek S-H, Ahn J-Y and Hong K-N (2018) Identification of DNA molecular markers by comparison of *Pinus densiflora* and *Pinus sylvestris* chloroplast genomes. PeerJ Preprints 6:e26506v1
	P. densiflora	MK285358	Shim D, Kang H-I, Lee HO, Park TS, Kim IS and Lee SW (2019) Complete chloroplast genome of (*Pinus densiflora*) Siebold & Zucc. And comparative analysis with five pine trees. Forests 10(7): 600
	P. densiflora	NC_042394	Shim D, Kang H-I, Lee HO, Park TS, Kim IS and Lee SW. Complete Chloroplast Genome of Korean Red Pine (*Pinus densiflora*) using Oxford Nanopore Technology and Illumina MiSeq
	P. mugo	AB063504	Geada López G, Kamiya K, Harada, K (2002) Phylogenetic relationships of *Diploxylon* pines (Subgenus *Pinus*) based on plastid sequence data. Int J Plant Sci 163(5) : 737-747
	P. mugo	AB081087	Geada Lopez G, Kamiya K and Harada K. Phylogeny of the North American Pines

haplotype	Species	Accession	Reference
	P. mugo	JN854181	Parks M, Cronn R and Liston A (2012) Separating the wheat from the chaff: mitigating the effects of noise in a plastome phylogenomic data set from Pinus L. (Pinaceae). BMC Evol Biol: 12(1): 100
	P. mugo	MF193353	Celiński K, Kijak H, Wojnicka-Półtorak A, Buczkowska-Chmielewska K, Sokołowska J, Chudzińska E (2017) Effectiveness of the DNA barcoding approach for closely related conifers discrimination: A case study of the *Pinus mugo* complex. C R Biol 340(6-7): 339-348
	P. mugo	MF193354	Celiński K, Kijak H, Wojnicka-Półtorak A, Buczkowska-Chmielewska K, Sokołowska J, Chudzińska E (2017) Effectiveness of the DNA barcoding approach for closely related conifers discrimination: A case study of the *Pinus mugo* complex. C R Biol 340(6-7): 339-348
	P. mugo	MF193355	Celiński K, Kijak H, Wojnicka-Półtorak A, Buczkowska-Chmielewska K, Sokołowska J, Chudzińska E (2017) Effectiveness of the DNA barcoding approach for closely related conifers discrimination: A case study of the *Pinus mugo* complex. C R Biol 340(6-7): 339-348
	P. mugo	MF193359	Celiński K, Kijak H, Wojnicka-Półtorak A, Buczkowska-Chmielewska K, Sokołowska J, Chudzińska E (2017) Effectiveness of the DNA barcoding approach for closely related conifers discrimination: A case study of the *Pinus mugo* complex. C R Biol 340(6-7): 339-348
	P. mugo	MF193360	Celiński K, Kijak H, Wojnicka-Półtorak A, Buczkowska-Chmielewska K, Sokołowska J, Chudzińska E (2017) Effectiveness of the DNA barcoding approach for closely related conifers discrimination: A case study of the *Pinus mugo* complex. C R Biol 340(6-7): 339-348
	P. mugo	MF193361	Celiński K, Kijak H, Wojnicka-Półtorak A, Buczkowska-Chmielewska K, Sokołowska J, Chudzińska E (2017) Effectiveness of the DNA barcoding approach for closely related conifers discrimination: A case study of the *Pinus mugo* complex. C R Biol 340(6-7): 339-348
	P. mugo var. rotundata	KX833097	Celiński K, Kijak H, Barylski J, Grabsztunowicz M, Wojnicka-Półtorak A and Chudzińska E (2017) Characterization of the complete chloroplast genome of Pinus uliginosa (Neumann) from the *Pinus mugo* complex. Cons Gen Resour 9: 209-212
	P. uncinata	MK046739	This study
	P. uncinata	MK046740	This study
	P. uncinata	MK046741	This study
	P. sylvestris	AB019846	Wang XR, Tsumura Y, Yoshimaru H, Nagasaka K and Szmidt AE (1999) Phylogenetic relationships of Eurasian pines (*Pinus*, Pinaceae) based on chloroplast rbcL, MATK, RPL20-RPS18 spacer, and TRNV intron sequences. Am J Bot 86 (12): 1742-1753
	P. sylvestris	AB084492	Geada Lopez G, Kamiya K and Harada K. Phylogeny of *Diploxylon Pinus*

haplotype	Species	Accession	Reference
	P. sylvestris	KR476379	Wu Z, Arvestad L and Thompson SL. Five gymnosperm plastomes reveal rampant rearrangements in Cupressophytes and the retention of ndh pseudogenes in *Abies sibirica* and *Pinus sylvestris*
	P. sylvestris	MK036238	This study
	P. sylvestris	MK036239	This study
	P. sylvestris	MK036241	This study
	P. sylvestris	MK036242	This study
	P. sylvestris	MK036243	This study
	P. sylvestris	MK036244	This study
	P. sylvestris	MT787466	Leerhoei F. DNAmark Project
	P. sylvestris	KP089957	Dong W, Xu C, Li C, Sun J, Zuo Y, Shi S, Cheng T, Guo J and Zhou S (2015) *ycf1*, the most promising plastid DNA barcode of land plants. Sci Rep 5: 8348
	P. sylvestris	KX229946	Dyer RJ, Tosh J and Hopkins D. Is DNA barcoding child's play? Science education and the utility of DNA barcoding for the discrimination of UK tree species
	P. nigra	AB019854	Wang XR, Tsumura Y, Yoshimaru H, Nagasaka K and Szmidt AE (1999) Phylogenetic relationships of Eurasian pines (*Pinus*, Pinaceae) based on chloroplast rbcL, MATK, RPL20-RPS18 spacer, and TRNV intron sequences. Am J Bot 86 (12): 1742-1753
	P. nigra	AB084498	Geada Lopez G, Kamiya K and Harada K. Phylogeny of Diploxylon *Pinus*
	P. nigra	DQ353717	Gernandt DS. Absolute age estimates for *Pinus* and Pinaceae
	P. nigra	JQ512469	Shi HW and Kim KJ. Unpublished
	P. nigra	MK028114	This study
	P. nigra	MK028115	This study
	P. nigra	MK028116	This study
	P. nigra	MK028117	This study
	P. nigra	MK028118	This study
	P. nigra	MK028119	This study
	P. nigra	MK028120	This study
	P. nigra	MK028121	This study
	P. nigra	MK028122	This study
	P. nigra	MK028123	This study
	P. nigra	MK028124	This study
	P. nigra	MK028125	This study
	P. nigra	MK028126	This study
	P. nigra	MK028127	This study
	P. nigra	MK028128	This study
	P. resinosa	AB063516	Geada López G, Kamiya K, Harada, K (2002) Phylogenetic relationships of *Diploxylon* pines (Subgenus *Pinus*) based on plastid sequence data. Int J Plant Sci 163(5) : 737-747
	P. resinosa	AB080945	Geada Lopez G, Kamiya K and Harada K. Phylogeny of the North American Pines

haplotype	Species	Accession	Reference
	P. nigra	KP089195	Dong W, Xu C, Li C, Sun J, Zuo Y, Shi S, Cheng T, Guo J and Zhou S (2015). *ycf1*, the most promising plastid DNA barcode of land plants. Sci Rep 5: 8348
	P. nigra	MT247330	Monnet AC, Cilleros K, Leriche A, et al (2021). WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 89
	P. nigra	MT247331	Monnet AC, Cilleros K, Leriche A, et al (2021). WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 89
	P. nigra	MT247332	Monnet AC, Cilleros K, Leriche A, et al (2021). WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 89
	P. nigra	MT247333	Monnet AC, Cilleros K, Leriche A, et al (2021). WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 89
	P. nigra	MT247334	Monnet AC, Cilleros K, Leriche A, et al (2021). WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 89
	P. nigra	MT247335	Monnet AC, Cilleros K, Leriche A, et al (2021). WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 89
	P. nigra	MT247336	Monnet AC, Cilleros K, Leriche A, et al (2021). WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 89
	P. nigra	MT247337	Monnet AC, Cilleros K, Leriche A, et al (2021). WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 89
	P. nigra	MT247338	Monnet AC, Cilleros K, Leriche A, et al (2021). WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 89
	P. nigra	MT247339	Monnet AC, Cilleros K, Leriche A, et al (2021). WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 89
	P. nigra	MT247340	Monnet AC, Cilleros K, Leriche A, et al (2021). WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 89
	P. nigra	MT247341	Monnet AC, Cilleros K, Leriche A, et al (2021). WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 89
	P. nigra	MT247342	Monnet AC, Cilleros K, Leriche A, et al (2021). WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 89
	P. nigra	MT247343	Monnet AC, Cilleros K, Leriche A, et al (2021). WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 89
	P. nigra	MT247344	Monnet AC, Cilleros K, Leriche A, et al (2021). WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 89

haplotype	Species	Accession	Reference
nigra_1	*P. nigra*	JN854179	Parks M, Cronn R and Liston A (2012) Separating the wheat from the chaff: mitigating the effects of noise in a plastome phylogenomic data set from Pinus L. (Pinaceae). BMC Evol Biol: 12(1): 100
resinosa_1	*P. resinosa*	AY497288	Gernandt DS, Geada LopezG, Ortiz Garcia S and Liston A (2005). Phylogeny and classification of *Pinus*. Taxon 54: 29-42
	P. resinosa	FJ899556	Parks M, Cronn R and Liston A (2012) Separating the wheat from the chaff: mitigating the effects of noise in a plastome phylogenomic data set from Pinus L. (Pinaceae). BMC Evol Biol: 12(1): 100
	P. resinosa	KP210411	Elliott TL and Davies JT (2014) Challenges to barcoding an entire flora. Mol Ecol Resour 14(5): 883-891
sylvestris_1	*P. sylvestris*	JN854158	Parks M, Cronn R and Liston A (2012) Separating the wheat from the chaff: mitigating the effects of noise in a plastome phylogenomic data set from Pinus L. (Pinaceae). BMC Evol Biol: 12(1): 100
sylvestris_2	*P. sylvestris*	MK036240	This study
uncinata_1	*P. uncinata*	AB097778	Geada Lopez G, Kamiya K and Harada K. Evolutionary Relationships in Pines
psbA-trnH			
Halepensis_1	*P. halepensis*	EU531714	Kruger AE, de Boer H and Kool A. DNA-Barcoding identification of medicinal roots from Morocco
	P. halepensis	FR832529	Armenise L, Simeone MC, Piredda R and Schirone B (2012) Validation of DNA barcoding as an efficient tool for taxon identification and detection of species diversity in Italian conifers. Eur J Forest Res 131: 1337–1353
	P. halepensis	LR590634	This study
	P. halepensis	LR590635	This study
	P. halepensis	LR590636	This study
	P. halepensis	LR590637	This study
	P. halepensis	LR590638	This study
	P. halepensis	LR590639	This study
	P. halepensis	LR590640	This study
	P. halepensis	LR590641	This study
	P. halepensis	LR590642	This study
	P. halepensis	LR590643	This study
	P. halepensis	LR590644	This study
	P. halepensis	LR590645	This study
	P. halepensis	MT311780	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 89
	P. halepensis	MT311781	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 90

haplotype	Species	Accession	Reference
	P. halepensis	MT311782	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 91
	P. halepensis	MT311783	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 92
	P. halepensis	MT311784	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 93
	P. halepensis	MT311785	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 94
	P. halepensis	MT311786	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 95
	P. halepensis	MT311787	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 96
	P. halepensis	MT311788	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 97
	P. halepensis	MT311789	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 98
	P. halepensis	MT311790	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 99
halepensis_2	*P. halepensis*	JN854197	Parks M, Cronn R and Liston A (2012) Separating the wheat from the chaff: mitigating the effects of noise in a plastome phylogenomic data set from Pinus L. (Pinaceae). BMC Evol Biol: 12(1): 100
halepensis_3	*P. halepensis*	FN689388	Piredda R, Attimonelli M, Bellarosa R, Schirone B and Simeone MC (2010) Prospects of barcoding the Italian wild dendroflora: lights and shadows
densiflora_1	*P. densiflora*	JQ512332	Shin HW and Kim KJ. Unpublished
	P. densiflora	MK285358	Shim D, Kang H-I, Lee HO, Park TS, Kim IS and Lee SW (2019) Complete chloroplast genome of (*Pinus densiflora*) Siebold & Zucc. And comparative analysis with five pine trees. Forests 10(7): 600
	P. densiflora	NC_042394	Shim D, Kang H-I, Lee HO, Park TS, Kim IS and Lee SW. Complete Chloroplast Genome of Korean Red Pine (*Pinus densiflora*) using Oxford Nanopore Technology and Illumina MiSeq
densiflora-sylvestris	*P. densiflora*	HQ849861	Ren G and Liu J. DNA barcoding in closely related *Pinus* species in China
	P. densiflora	HQ849862	Ren G and Liu J. DNA barcoding in closely related *Pinus* species in China

haplotype	Species	Accession	Reference
	P. densiflora	JN046325	China Plant BOL Group, Li DZ, Gao LM, Li HT et al. (2011) Comparative analysis of a large dataset indicates that internal transcribed spacer (ITS) should be incorporated into the core barcode for seed plants. Proc Natl Acad Sci USA 108 (49): 19641-19646
	P. densiflora	JN046326	China Plant BOL Group, Li DZ, Gao LM, Li HT et al. (2011) Comparative analysis of a large dataset indicates that internal transcribed spacer (ITS) should be incorporated into the core barcode for seed plants. Proc Natl Acad Sci USA 108 (49): 19641-19646
	P. densiflora	JN046327	China Plant BOL Group, Li DZ, Gao LM, Li HT et al. (2011) Comparative analysis of a large dataset indicates that internal transcribed spacer (ITS) should be incorporated into the core barcode for seed plants. Proc Natl Acad Sci USA 108 (49): 19641-19646
	P. densiflora	JN046328	China Plant BOL Group, Li DZ, Gao LM, Li HT et al. (2011) Comparative analysis of a large dataset indicates that internal transcribed spacer (ITS) should be incorporated into the core barcode for seed plants. Proc Natl Acad Sci USA 108 (49): 19641-19646
	P. densiflora	JN046329	China Plant BOL Group, Li DZ, Gao LM, Li HT et al. (2011) Comparative analysis of a large dataset indicates that internal transcribed spacer (ITS) should be incorporated into the core barcode for seed plants. Proc Natl Acad Sci USA 108 (49): 19641-19646
	P. densiflora	JN854210	Parks M, Cronn R and Liston A (2012) Separating the wheat from the chaff: mitigating the effects of noise in a plastome phylogenomic data set from Pinus L. (Pinaceae). BMC Evol Biol: 12(1): 100
	P. densiflora	JQ512329	Shin HW and Kim KJ. Unpublished
	P. densiflora	JQ512330	Shin HW and Kim KJ. Unpublished
	P. densiflora	JQ512331	Shin HW and Kim KJ. Unpublished
	P. densiflora	KJ661365	Hong JK, Yang JC, Lee YM and Kim JH (2014) Molecular phylogenetic study of *Pinus* in Korea based on chloroplast DNA *psbA-trnH* and *atpF-H* sequences data. Sigmul Bunryu Hag-hoeji 44 (2): 111-118
	P. densiflora	KJ661373	Hong JK, Yang JC, Lee YM and Kim JH (2014) Molecular phylogenetic study of *Pinus* in Korea based on chloroplast DNA *psbA-trnH* and *atpF-H* sequences data. Sigmul Bunryu Hag-hoeji 44 (2): 111-118
	P. densiflora	KJ661374	Hong JK, Yang JC, Lee YM and Kim JH (2014) Molecular phylogenetic study of *Pinus* in Korea based on chloroplast DNA *psbA-trnH* and *atpF-H* sequences data. Sigmul Bunryu Hag-hoeji 44 (2): 111-118
	P. densiflora	KJ661375	Hong JK, Yang JC, Lee YM and Kim JH (2014) Molecular phylogenetic study of *Pinus* in Korea based on chloroplast DNA *psbA-trnH* and *atpF-H* sequences data. Sigmul Bunryu Hag-hoeji 44 (2): 111-118

haplotype	Species	Accession	Reference
	P. densiflora	MF990371	Kim S-C, Lee J-W, Baek S-H, Ahn J-Y and Hong K-N (2018) Identification of DNA molecular markers by comparison of *Pinus densiflora* and *Pinus sylvestris* chloroplast genomes. PeerJ Preprints 6:e26506v1
	P. sylvestris	EU750632	Fazekas AJ, Burgess KS, Kesanakurti PR, Graham SW, Newmaster SG, Husband BC, Percy DM, Hajibabaei M and Barrett SC (2008) Multiple multilocus DNA barcodes from the plastid genome discriminate plant species equally well. PLoS ONE 3 (7): E2802
	P. sylvestris	FR832541	Armenise L, Simeone MC, Piredda R and Schirone B (2012) Validation of DNA barcoding as an efficient tool for taxon identification and detection of species diversity in Italian conifers. Eur J Forest Res 131: 1337–1353
	P. sylvestris	JN854158	Parks M, Cronn R and Liston A (2012) Separating the wheat from the chaff: mitigating the effects of noise in a plastome phylogenomic data set from Pinus L. (Pinaceae). BMC Evol Biol: 12(1): 100
	P. sylvestris	KR476379	Wu Z, Arvestad L and Thompson SL. Five gymnosperm plastomes reveal rampant rearrangements in Cupressophytes and the retention of *ndh* pseudogenes in *Abies sibirica* and *Pinus sylvestris*
	P. sylvestris	LR590657	This study
	P. sylvestris	LR590658	This study
	P. sylvestris	LR590659	This study
	P. sylvestris	LR590660	This study
	P. sylvestris	LR590661	This study
	P. sylvestris	MT311822	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 92
	P. sylvestris	MT311823	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 92
	P. sylvestris	MT311824	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 92
	P. sylvestris	MT311825	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 92
	P. sylvestris	MT311826	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 92
mugo_1	*P. mugo*	JN854181	Parks M, Cronn R and Liston A (2012) Separating the wheat from the chaff: mitigating the effects of noise in a plastome phylogenomic data set from Pinus L. (Pinaceae). BMC Evol Biol: 12(1): 100
mugo-sylvestris-uncinata	*P. mugo*	FR832532	Armenise L, Simeone MC, Piredda R and Schirone B (2012) Validation of DNA barcoding as an efficient tool for taxon identification and detection of species diversity in Italian conifers. Eur J Forest Res 131: 1337–1353

haplotype	Species	Accession	Reference
	P. mugo	MF193380	Celiński K, Kijak H, Wojnicka-Półtorak A, Buczkowska-Chmielewska K, Sokołowska J, Chudzińska E (2017) Effectiveness of the DNA barcoding approach for closely related conifers discrimination: A case study of the *Pinus mugo* complex. C R Biol 340(6-7): 339-348
	P. mugo	MF193381	Celiński K, Kijak H, Wojnicka-Półtorak A, Buczkowska-Chmielewska K, Sokołowska J, Chudzińska E (2017) Effectiveness of the DNA barcoding approach for closely related conifers discrimination: A case study of the *Pinus mugo* complex. C R Biol 340(6-7): 339-348
	P. mugo	MF193382	Celiński K, Kijak H, Wojnicka-Półtorak A, Buczkowska-Chmielewska K, Sokołowska J, Chudzińska E (2017) Effectiveness of the DNA barcoding approach for closely related conifers discrimination: A case study of the *Pinus mugo* complex. C R Biol 340(6-7): 339-348
	P. mugo	MT311793	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 92
	P. mugo subsp. uncinata	KX833097	Celiński, K., Kijak, H., Barylski, J. Grabsztunowicz M, Wojnicka-Półtorak A, Chudzińska E (2017) Characterization of the complete chloroplast genome of Pinus uliginosa (Neumann) from the *Pinus mugo* complex
	P. mugo subsp. uncinata	MF193386	Celiński K, Kijak H, Wojnicka-Półtorak A, Buczkowska-Chmielewska K, Sokołowska J, Chudzińska E (2017) Effectiveness of the DNA barcoding approach for closely related conifers discrimination: A case study of the *Pinus mugo* complex. C R Biol 340(6-7): 339-348
	P. mugo subsp. uncinata	MF193387	Celiński K, Kijak H, Wojnicka-Półtorak A, Buczkowska-Chmielewska K, Sokołowska J, Chudzińska E (2017) Effectiveness of the DNA barcoding approach for closely related conifers discrimination: A case study of the *Pinus mugo* complex. C R Biol 340(6-7): 339-348
	P. mugo subsp. uncinata	MF193388	Celiński K, Kijak H, Wojnicka-Półtorak A, Buczkowska-Chmielewska K, Sokołowska J, Chudzińska E (2017) Effectiveness of the DNA barcoding approach for closely related conifers discrimination: A case study of the *Pinus mugo* complex. C R Biol 340(6-7): 339-348
	P. mugo subsp. uncinata	MT311827	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 92
	P. sylvestris	FJ493296	Ferri G, Alu M and Corradini B (2009) Forensic Botany: species identification of botanical trace evidence by using a multigene barcoding approach Int J Legal Med 123(5): 395-401
	P. uncinata	LR590662	This study
	P. uncinata	LR590663	This study
nigra_1	*P. nigra*	FN689385	Piredda R, Attimonelli M, Bellarosa R, Schirone B and Simeone MC (2010) Prospects of barcoding the Italian wild dendroflora: lights and shadows

haplotype	Species	Accession	Reference
	P. nigra	FR832549	Armenise L, Simeone MC, Piredda R and Schirone B (2012) Validation of DNA barcoding as an efficient tool for taxon identification and detection of species diversity in Italian conifers. Eur J Forest Res 131: 1337–1353
	P. nigra	HE966738	Bruni I, De Mattia F, Martellos S, Galimberti A, Savadori P, Casiraghi M, Nimis PL and Labra M (2012) DNA barcoding as an effective tool in improving a digital plant identification system: a case study for the area of Mt. Valerio, Trieste (NE Italy). PLoS ONE 7 (9): E43256
	P. nigra	JN854179	Parks M, Cronn R and Liston A (2012) Separating the wheat from the chaff: mitigating the effects of noise in a plastome phylogenomic data set from *Pinus* L. (Pinaceae). BMC Evol Biol: 12(1): 100
	P. nigra	JQ512348	Shin HW and Kim KJ. Unpublished
	P. nigra	LR590646	This study
	P. nigra	LR590647	This study
	P. nigra	LR590648	This study
	P. nigra	LR590649	This study
	P. nigra	LR590650	This study
	P. nigra	LR590651	This study
	P. nigra	LR590652	This study
	P. nigra	LR590653	This study
	P. nigra	LR590654	This study
	P. nigra	LR590655	This study
	P. nigra	LR590656	This study
	P. nigra	MT311794	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 92
	P. nigra	MT311795	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 93
	P. nigra	MT311796	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 94
	P. nigra	MT311797	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 95
	P. nigra	MT311798	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 96
	P. nigra	MT311799	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 97
	P. nigra	MT311800	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 98

haplotype	Species	Accession	Reference
	P. nigra	MT311801	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 99
	P. nigra	MT311802	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 100
	P. nigra	MT311803	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 101
	P. nigra	MT311804	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 102
nigra_2	*P. nigra*	FJ493295	Ferri G, Alu M and Corradini B (2009) Forensic Botany: species identification of botanical trace evidence by using a multigene barcoding approach Int J Legal Med 123(5): 395-401
nigra_3	*P. nigra*	FR832546	Armenise L, Simeone MC, Piredda R and Schirone B (2012) Validation of DNA barcoding as an efficient tool for taxon identification and detection of species diversity in Italian conifers. Eur J Forest Res 131: 1337–1353
nigra_4	*P. nigra*	EU531715	Kruger AE, de Boer H and Kool A. DNA-Barcoding identification of medicinal roots from Morocco
resinosa_1	*P. resinosa*	HQ596790	Burgess KS, Fazekas AJ, Kesanakurti PR et al (2011) Discriminating plant species in a local temperate flora using the rbcL+matK DNA barcode. Methods Ecol Evol 2(4): 333-340
resinosa_2	*P. resinosa*	KC157208	Hernandez-Leon S, Gernandt DS, Perez de la Rosa JA and Jardon-Barbolla L (2013) Phylogenetic relationships and species delimitation in Pinus section Trifoliae inferred from plastid DNA. PLoS ONE 8 (7): E70501
sylvestris_1	*P. sylvestris*	FR832543	Armenise L, Simeone MC, Piredda R and Schirone B (2012) Validation of DNA barcoding as an efficient tool for taxon identification and detection of species diversity in Italian conifers. Eur J Forest Res 131: 1337–1353
	P. sylvestris	MT311822	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 100
	P. sylvestris	MT311823	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 100
	P. sylvestris	MT311824	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 100
	P. sylvestris	MT311825	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 100
	P. sylvestris	MT311826	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 100

haplotype	**Species**	**Accession**	**Reference**
sylvestris_2	*P. sylvestris*	KM224618	Schneider S, Steeves RAD, Newmaster SG and Macdougall AS (2017) Selective plant foraging and the top-down suppression of native diversity in a restored prairie. J Appl Ecol 54(5): 1496-1504

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P. halepensis	JN854197	Parks M, Cronn R and Liston A (2012) Separating the wheat from the chaff: mitigating the effects of noise in a plastome phylogenomic data set from *Pinus* L. (Pinaceae). BMC Evol Biol: 12(1): 100
P. halepensis	MK073122	This study
P. halepensis	MK073123	This study
P. halepensis	MK073124	This study
P. halepensis	MK073125	This study
P. halepensis	MK073126	This study
P. halepensis	MK073127	This study
P. halepensis	MK073128	This study
P. halepensis	MK073129	This study
P. halepensis	MK073130	This study
P. halepensis	MK073131	This study
P. halepensis	MK073132	This study
P. halepensis	MK073133	This study
P. halepensis	MK073134	This study
P. resinosa	AY497252	Gernandt DS, Geada LopezG, Ortiz Garcia S and Liston A (2005) Phylogeny and classification of *Pinus*. Taxon 54: 29-42
P. resinosa	FJ899556	Parks M, Cronn R and Liston A (2009) Increasing phylogenetic resolution at low taxonomic levels using massively parallel sequencing of chloroplast genomes. BMC Biol 7: 84
P. resinosa	KC156711	Hernandez-Leon S, Gernandt DS, Perez de la Rosa JA and Jardon-Barbolla L (2013) Phylogenetic relationships and species delimitation in Pinus section Trifoliae inferred from plastid DNA. PLoS ONE 8 (7): E70501
P. resinosa	KJ593610	Wolf A, Howe R, Parker J, Erickson D and Kress J. Differential distributions of community phylogenetic diversity among life history forms in tropical and temperate plant species
P. resinosa	KJ593611	Wolf A, Howe R, Parker J, Erickson D and Kress J. Differential distributions of community phylogenetic diversity among life history forms in tropical and temperate plant species
P. resinosa	KJ841472	Elliott TL and Davies JT (2014) Challenges to barcoding an entire flora. Mol Ecol Resour 14(5): 883-891
P. densiflora	AB019814	Wang XR, Tsumura Y, Yoshimaru H, Nagasaka K and Szmidt AE (1999) Phylogenetic relationships of Eurasian pines (*Pinus*, Pinaceae) based on chloroplast rbcL, MATK, RPL20-RPS18 spacer, and TRNV intron sequences. Am J Bot 86 (12): 1742-1753
P. densiflora	DQ353731	Gernandt DS. Absolute age estimates for *Pinus* and Pinaceae
P. densiflora	HQ849861	Ren G and Liu J. DNA barcoding in closely related *Pinus* species in China
P. densiflora	JF701590	Ren GP, Abbott RJ, Zhou YF, Zhang LR, Peng YL and Liu JQ (2012) Genetic divergence, range expansion and possible homoploid hybrid speciation among pine species in Northeast China. Heredity 108(5): 552-562

haplotype	Species	Accession Reference
P. densiflora	JF701591	Ren GP, Abbott RJ, Zhou YF, Zhang LR, Peng YL and Liu JQ (2012) Genetic divergence, range expansion and possible homoploid hybrid speciation among pine species in Northeast China. Heredity 108(5): 552-562
P. densiflora	JF943400	China Plant BOL Group, Li DZ, Gao LM, Li HT et al. (2011) Comparative analysis of a large dataset indicates that internal transcribed spacer (ITS) should be incorporated into the core barcode for seed plants. Proc Natl Acad Sci USA 108 (49): 19641-19646
P. densiflora	JF943401	China Plant BOL Group, Li DZ, Gao LM, Li HT et al. (2011) Comparative analysis of a large dataset indicates that internal transcribed spacer (ITS) should be incorporated into the core barcode for seed plants. Proc Natl Acad Sci USA 108 (49): 19641-19646
P. densiflora	JF943402	China Plant BOL Group, Li DZ, Gao LM, Li HT et al. (2011) Comparative analysis of a large dataset indicates that internal transcribed spacer (ITS) should be incorporated into the core barcode for seed plants. Proc Natl Acad Sci USA 108 (49): 19641-19646
P. densiflora	JF943403	China Plant BOL Group, Li DZ, Gao LM, Li HT et al. (2011) Comparative analysis of a large dataset indicates that internal transcribed spacer (ITS) should be incorporated into the core barcode for seed plants. Proc Natl Acad Sci USA 108 (49): 19641-19646
P. densiflora	JF943404	China Plant BOL Group, Li DZ, Gao LM, Li HT et al. (2011) Comparative analysis of a large dataset indicates that internal transcribed spacer (ITS) should be incorporated into the core barcode for seed plants. Proc Natl Acad Sci USA 108 (49): 19641-19646
P. densiflora	JN854210	Parks M, Cronn R and Liston A (2012) Separating the wheat from the chaff: mitigating the effects of noise in a plastome phylogenomic data set from *Pinus* L. (Pinaceae). BMC Evol Biol: 12(1): 100
P. densiflora	KP088732	Dong W, Xu C, Li C, Sun J, Zuo Y, Shi S, Cheng T, Guo J and Zhou S (2015) *ycf1*, the most promising plastid DNA barcode of land plants. Sci Rep 5: 8348
P. densiflora	MF990371	Kim S-C, Lee J-W, Baek S-H, Ahn J-Y and Hong K-N (2018) Identification of DNA molecular markers by comparison of *Pinus densiflora* and *Pinus sylvestris* chloroplast genomes. PeerJ Preprints 6:e26506v1
P. densiflora	MF990371	Kim S-C, Lee J-W, Baek S-H, Ahn J-Y and Hong K-N (2018) Identification of DNA molecular markers by comparison of *Pinus densiflora* and *Pinus sylvestris* chloroplast genomes. PeerJ Preprints 6:e26506v1
P. densiflora	MK285358	Shim D, Kang H-I, Lee HO, Park TS, Kim IS and Lee SW (2019) Complete chloroplast genome of (*Pinus densiflora*) Siebold & Zucc. And comparative analysis with five pine trees. Forests 10(7): 600
P. densiflora	NC_042394	Shim D, Kang H-I, Lee HO, Park TS, Kim IS and Lee SW. Complete Chloroplast Genome of Korean Red Pine (*Pinus densiflora*) using Oxford Nanopore Technology and Illumina MiSeq
P. nigra	AB019817	Wang XR, Tsumura Y, Yoshimaru H, Nagasaka K and Szmidt AE (1999) Phylogenetic relationships of Eurasian pines (*Pinus*, Pinaceae) based on chloroplast rbcL, MATK, RPL20-RPS18 spacer, and TRNV intron sequences. Am J Bot 86 (12): 1742-1753
P. nigra	DQ353733	Gernandt DS. Absolute age estimates for *Pinus* and Pinaceae
P. nigra	FN689380	Piredda R, Attimonelli M, Bellarosa R, Schirone B and Simeone MC (2010) Prospects of barcoding the Italian wild dendroflora: lights and shadows

haplotype	Species	Accession	Reference
P. nigra	JN854179	Parks M, Cronn R and Liston A (2012) Separating the wheat from the chaff: mitigating the effects of noise in a plastome phylogenomic data set from *Pinus* L. (Pinaceae). BMC Evol Biol: 12(1): 100	
P. resinosa	AB063384	Geada López G, Kamiya K, Harada, K (2002) Phylogenetic relationships of *Diploxylon* pines (Subgenus *Pinus*) based on plastid sequence data. Int J Plant Sci 163(5) : 737-747	
P. sylvestris	AB097775	Geada Lopez G and Harada K. Evolutionary Relationships in Pines	
P. sylvestris	AB019809	Wang XR, Tsumura Y, Yoshimaru H, Nagasaka K and Szmidt AE (1999) Phylogenetic relationships of Eurasian pines (*Pinus*, Pinaceae) based on chloroplast rbcL, MATK, RPL20-RPS18 spacer, and TRNV intron sequences. Am J Bot 86 (12):1742-1753	
P. sylvestris	EU677091	Fazekas AJ, Burgess KS, Kesanakurti PR, Graham SW, Newmaster SG, Husband BC, Percy DM, Hajibabaei M and Barrett SC (2008) Multiple multilocus DNA barcodes from the plastid genome discriminate plant species equally well. PLoS ONE 3 (7): E2802	
P. sylvestris	EU750632	Fazekas AJ, Burgess KS, Kesanakurti PR, Graham SW, Newmaster SG, Husband BC, Percy DM, Hajibabaei M and Barrett SC (2008) Multiple multilocus DNA barcodes from the plastid genome discriminate plant species equally well. PLoS ONE 3 (7): E2802	
P. sylvestris	FR831916	Armenise L, Simeone MC, Piredda R and Schirone B (2012) Validation of DNA barcoding as an efficient tool for taxon identification and detection of species diversity in Italian conifers. Eur J Forest Res 131: 1337–1353	
P. sylvestris	FR832541	Armenise L, Simeone MC, Piredda R and Schirone B (2012) Validation of DNA barcoding as an efficient tool for taxon identification and detection of species diversity in Italian conifers. Eur J Forest Res 131: 1337–1353	
P. sylvestris	HQ849870	Ren G and Liu J. DNA barcoding in closely related *Pinus* species in China	
P. sylvestris	JF701588	Ren GP, Abbott RJ, Zhou YF, Zhang LR, Peng YL and Liu JQ (2012) Genetic divergence, range expansion and possible homoploid hybrid speciation among pine species in Northeast China. Heredity 108(5): 552-562	
P. sylvestris	JF701589	Ren GP, Abbott RJ, Zhou YF, Zhang LR, Peng YL and Liu JQ (2012) Genetic divergence, range expansion and possible homoploid hybrid speciation among pine species in Northeast China. Heredity 108(5): 552-562	
P. sylvestris	JN854158	Parks M, Cronn R and Liston A (2012) Separating the wheat from the chaff: mitigating the effects of noise in a plastome phylogenomic data set from Pinus L. (Pinaceae). BMC Evol Biol: 12(1): 100	
P. sylvestris	KR476379	Wu Z, Arvestad L and Thompson SL. Five gymnosperm plastomes reveal rampant rearrangements in Cupressophytes and the retention of ndh pseudogenes in *Abies sibirica* and *Pinus sylvestris*	
P. sylvestris	MT311822	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 99	
P. sylvestris	MT311823	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 99	
P. sylvestris	MT311824	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 99	

haplotype	Species	Accession	Reference
P. sylvestris	MT311825	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 99	
P. sylvestris	MT311826	Monnet AC, Cilleros K, Leriche A, et al (2021) WOODIV, a database of occurrences, functional traits, and phylogenetic data for all Euro-Mediterranean trees. Sci Data 8(1): 99	
P. sylvestris	MT787466	Leerhoei F. DNAmark Project	
P. sylvestris var. mongolica	JF943390	China Plant BOL Group, Li DZ, Gao LM, Li HT et al. CPBOL Group (2011) Comparative analysis of a large dataset indicates that internal transcribed spacer (ITS) should be incorporated into the core barcode for seed plants. Proc Natl Acad Sci USA 108 (49): 19641-19646	
P. densiflora	JQ512574	Shin HW and Kim KJ. Unpublished	
P. densiflora	JQ512575	Shin HW and Kim KJ. Unpublished	
P. densiflora	JQ512576	Shin HW and Kim KJ. Unpublished	
P. densiflora	JQ512577	Shin HW and Kim KJ. Unpublished	
P. nigra	JQ512593	Shin HW and Kim KJ. Unpublished	
P. mugo	JN854181	Parks M, Cronn R and Liston A (2012) Separating the wheat from the chaff: mitigating the effects of noise in a plastome phylogenomic data set from Pinus L. (Pinaceae). BMC Evol Biol: 12(1): 100	
P. mugo subsp. rotundata	KX833097	Celiński K, Kijak H, Barylski J, Grabsztunowicz M, Wojnicka-Półtorak A and Chudzińska E (2017). Characterization of the complete chloroplast genome of Pinus uliginosa (Neumann) from the *Pinus mugo* complex. Cons Gen Resour 9: 209-212	
P. nigra	MK092816	This study	
P. nigra	MK092817	This study	
P. nigra	MK092818	This study	
P. nigra	MK092819	This study	
P. nigra	MK092821	This study	
P. nigra	MK092822	This study	
P. nigra	MK092823	This study	
P. nigra	MK092824	This study	
P. nigra	MK092825	This study	
P. nigra	MK092826	This study	
P. nigra	MK092827	This study	
P. nigra	MK092828	This study	
P. nigra	MK092829	This study	
P. nigra	MK092830	This study	
P. nigra	MK092831	This study	
P. nigra	MK092832	This study	
P. nigra	MK092833	This study	
P. nigra	MK092834	This study	
P. nigra	MK092835	This study	
P. nigra	MK092820	This study	
P. sylvestris	LR590619	This study	

haplotype	Species	Accession	Reference
P. sylvestris	LR590620	This study	
P. sylvestris	LR590621	This study	
P. sylvestris	LR590622	This study	
P. uncinata	LR590623	This study	
P. uncinata	LR590624	This study	