

**Table S1.** The studied natural populations of *P.sylvestris* and *P. sibirica* used in ISSR analysis.

Population	Location	Coordinates
<i>Pinus sylvestris</i> L.		
<i>PS_GN</i>	Perm Krai, Gainy's forestry	N: 60.3149 E: 54.2869
<i>PS_KN</i>	Sverdlovsk Oblast, Verkhoturys's forestry	N: 58.4946 E: 59.3745
<i>PS_KR</i>	Perm Krai, Karagay's forestry	N: 58.3360 E: 54.9588
<i>PS_BS</i>	Perm Krai, Bolshesosnovsky's forestry	N: 57.5317 E: 54.4178
<i>PS_UK</i>	Perm Krai, Perm's forestry	N: 57.6816 E: 55.4670
<i>PS_AR</i>	Chelyabinsk Oblast, Vishnyovogorsk's forestry	N: 55.5942 E: 60.3003
<i>Pinus sibirica</i> Du Tour.		
<i>PSB_KV</i>	Perm Krai, Krasnovishersk's forestry	N: 60.3571 E: 56.7999
<i>PSB_KH</i>	Perm Krai, Kochyovo's forestry	N: 59.5781 E: 54.3317
<i>PSB_BG</i>	Perm Krai, Gornozavodsk's forestry	N: 58.9433 E: 58.4900
<i>PSB_PR</i>	Perm Krai, Kishert's forestry	N: 57.3550 E: 57.1672
<i>PSB_KG</i>	Perm Krai, Chusovoy's forestry	N: 58.7226 E: 57.6331
<i>PSB_KN</i>	Sverdlovsk Oblast, Verkhoturys's forestry	N: 58.7902 E: 59.3719

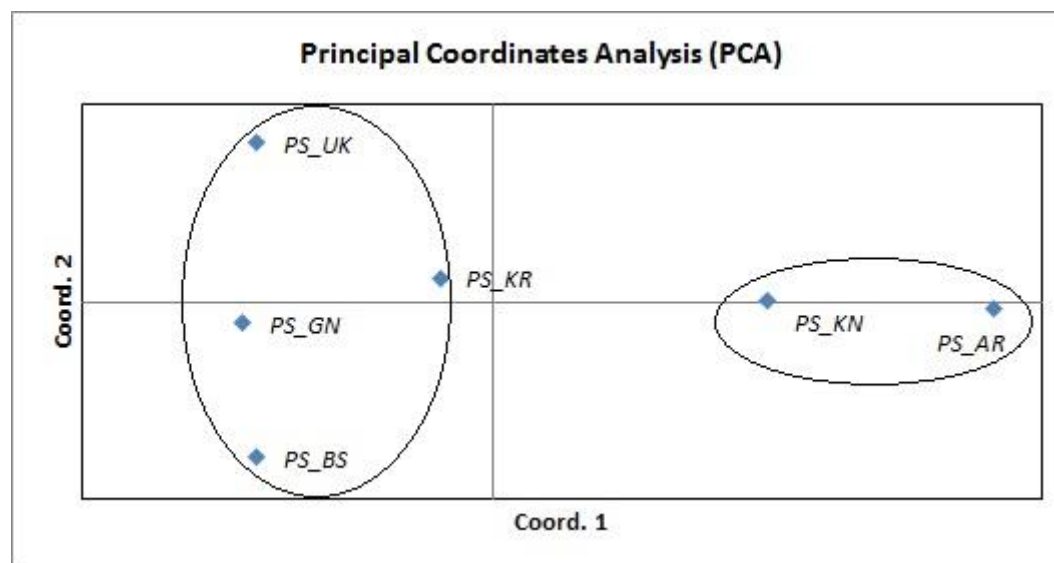
International geographical latitude designations: N - northern latitude; E - Eastern longitude

**Table S2.** Pairwise geographic distances (km) between the studied populations of *P. sylvestris*.

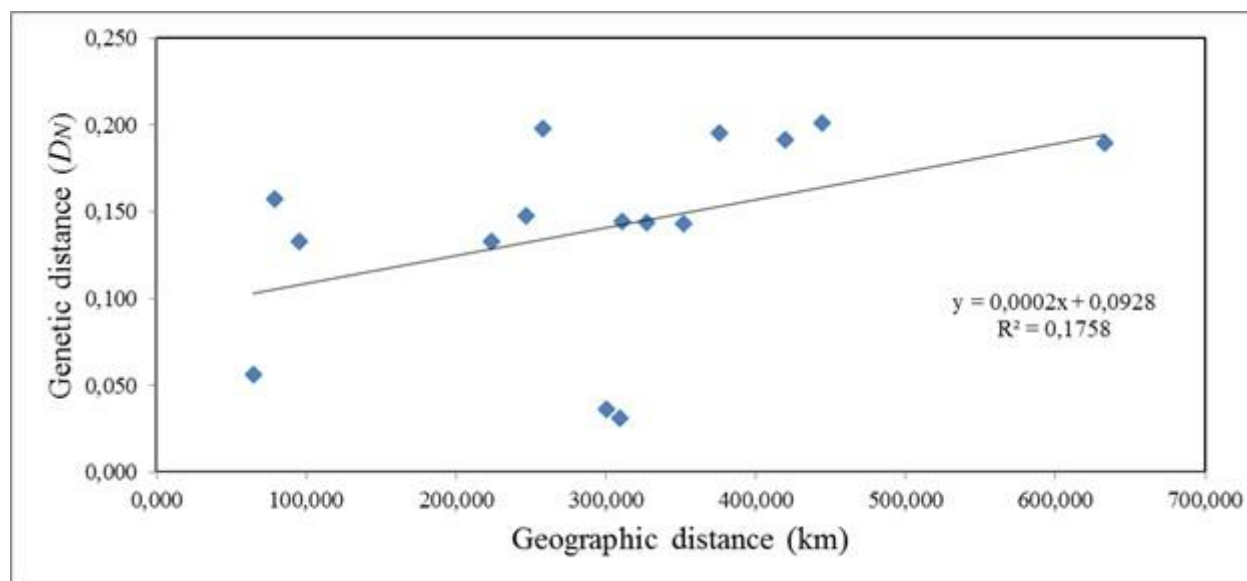
<i>PS_GN</i>	<i>PS_KN</i>	<i>PS_KR</i>	<i>PS_BS</i>	<i>PS_UK</i>	
343	-				<i>PS_KN</i>
223	276	-			<i>PS_KR</i>
309	337	95	-		<i>PS_BS</i>
300	274	78	64	-	<i>PS_UK</i>
602	319	423	408	358	<i>PS_AR</i>
<i>PS_GN, PS_KN, PS_KR, PS_BS, PS_UK, PS_AR</i> - population designations					

**Table S3.** Pairwise geographic distances (km) between the studied populations of *P. sibirica*.

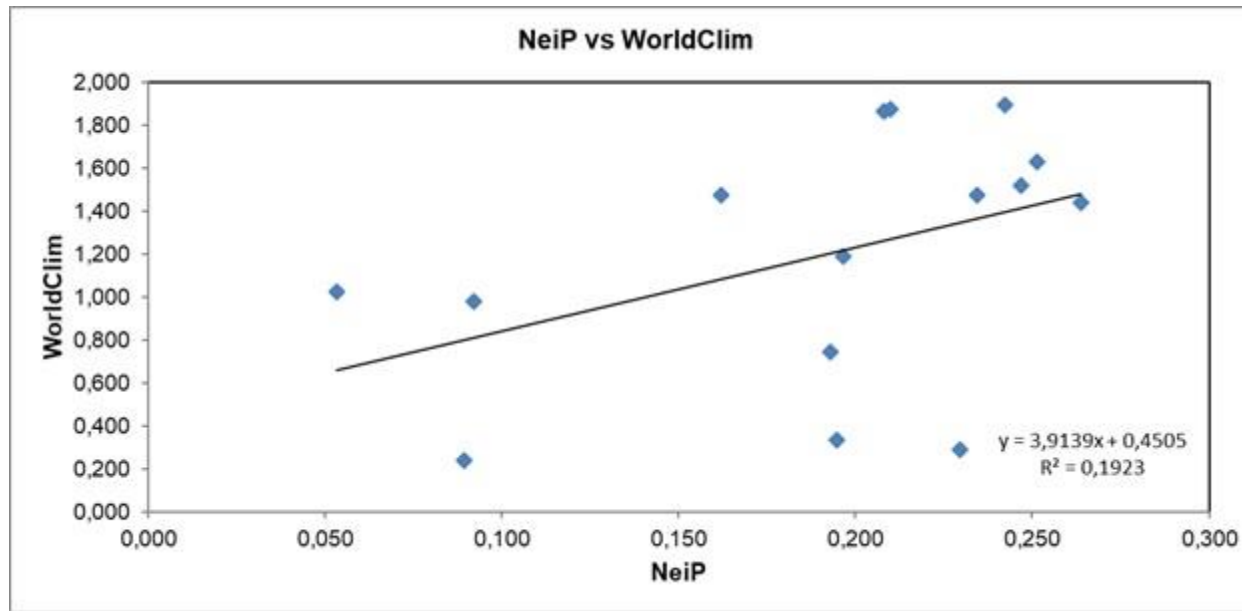
<i>PSB_KV</i>	<i>PSB_KH</i>	<i>PSB_BG</i>	<i>PSB_PR</i>	<i>PSB_KG</i>	
147	-				<i>PSB_KH</i>
232	181	-			<i>PSB_BG</i>
192	318	294	-		<i>PSB_PR</i>
54	164	199	154	-	<i>PSB_KG</i>
53	182	285	206	100	<i>PSB_KN</i>
<i>PSB_KV, PSB_KH, PSB_BG, PSB_PR, PSB_KG, PSB_KN</i> - population designations					



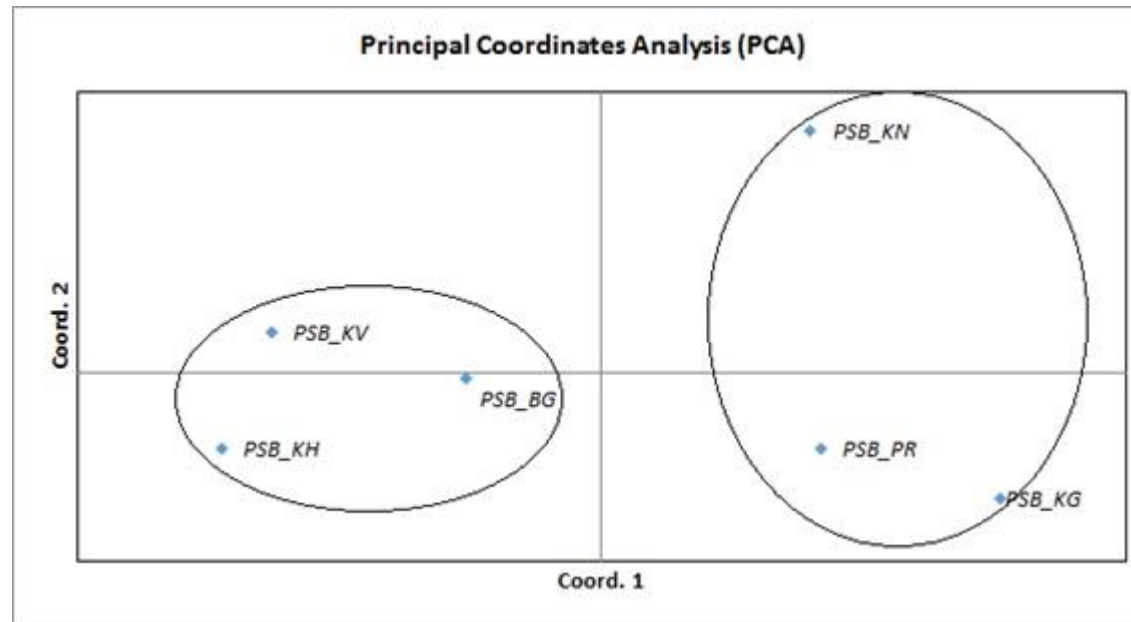
**Figure S1.** Ordination of the studied populations of *P. sylvestris* using PCA, obtained on the basis of PhiPT matrix of genetic distances.



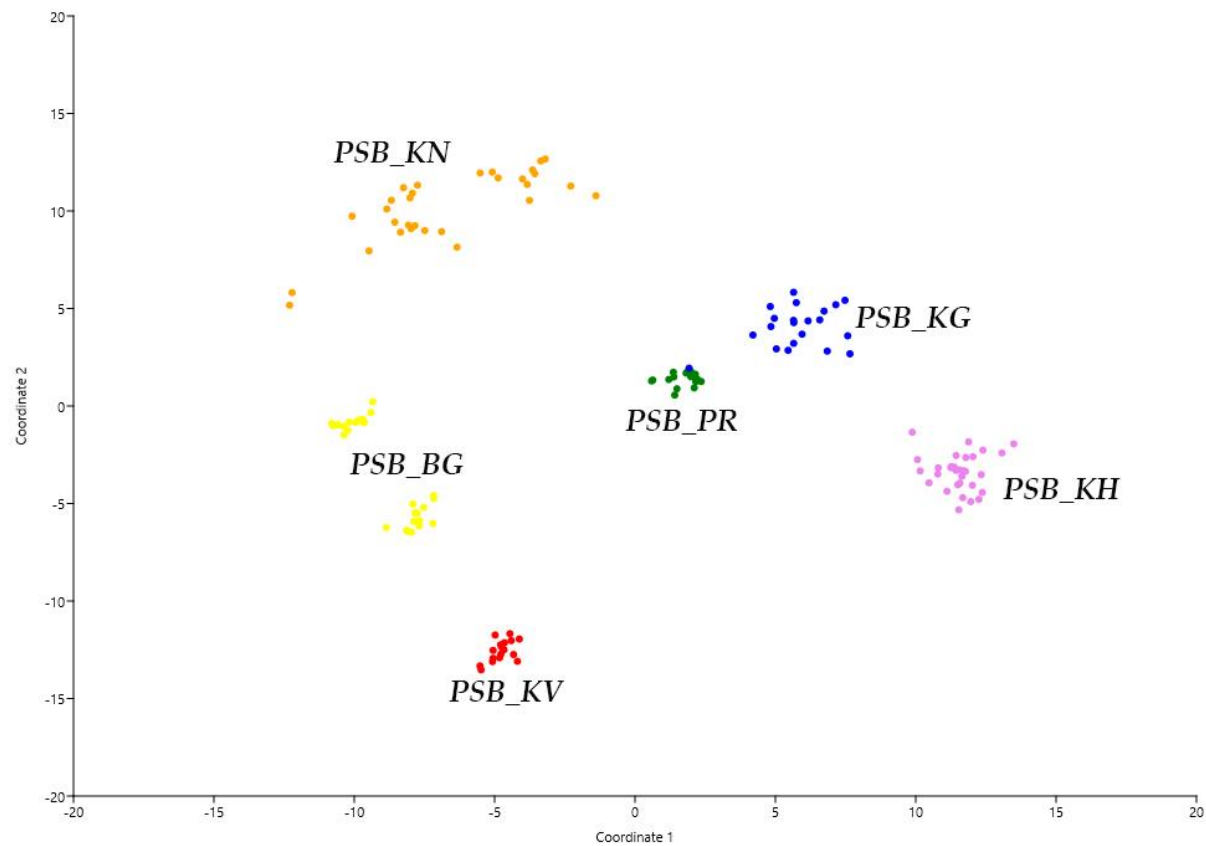
**Figure S2.** Graph of dependence of genetic ( $D_N$ ) and geographical distances of *P. sylvestris* populations.



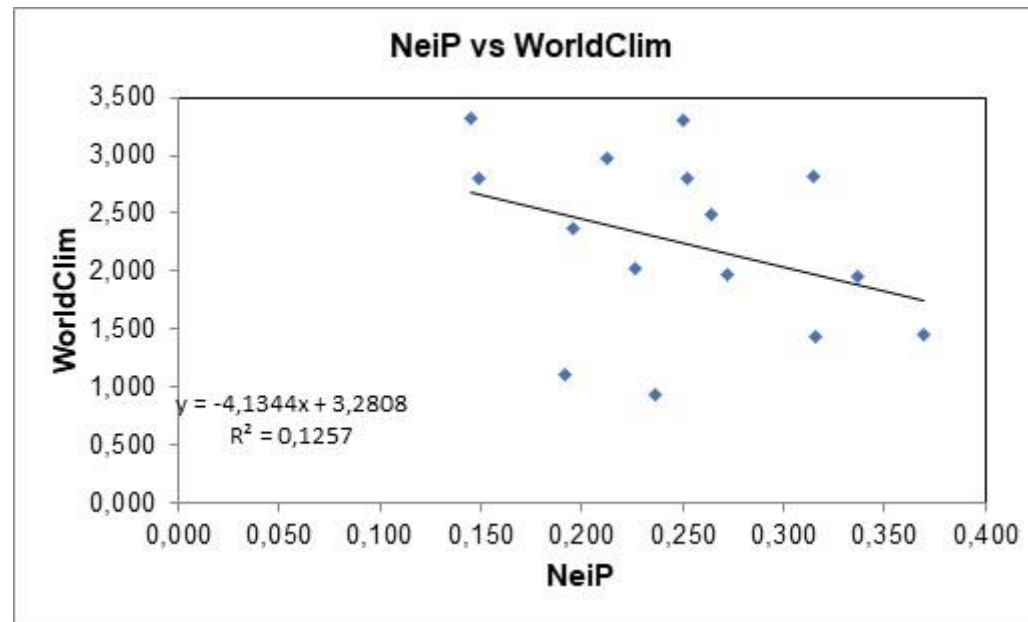
**Figure S3.** Mantel test for the WorldClim data and genetics distance of *P. sylvestris*.



**Figure S4.** Ordination of the studied populations of *P. sylvestris* using PCA, obtained on the basis of PhiPT matrix of genetic distances.



**Figure S5.** Distribution of individuals in the studied *Pinus sibirica* Du Tour. populations using UMAP. Population color labels: *PSB\_KV* - red, *PSB\_KN* - orange, *PSB\_BG* - yellow, *PSB\_PR* - green, *PSB\_KG* - blue, *PSB\_KH* - violet.



**Figure S6.** Mantel test for the WorldClim data and genetics distance of *P. sibirica*.





**Figure S7.** *Pinus sylvestris* L., Perm Krai, Gainy's forestry population.





**Figure S8.** *Pinus sylvestris* L., Perm Krai, Karagay's forestry population.





**Figure S9.** *Pinus sylvestris* L., Perm Krai, Perm's forestry population.





**Figure S10.** *Pinus sylvestris* L., Perm Krai, Bolshesosnovsky's forestry population.





**Figure S11.** *Pinus sylvestris* L., Sverdlovsk Oblast, Verkhoturys' forestry population.





**Figure S12.** *Pinus sylvestris* L., Chelyabinsk Oblast, Vishnyovogorsk's forestry population.





**Figure S13.** *Pinus sibirica* Du Tour, Perm Krai, Krasnovishersk's forestry forestry population.





**Figure S14.** *Pinus sibirica* Du Tour, Perm Krai, Kochyovo's forestry population.



**Figure S15.** *Pinus sibirica* Du Tour, Perm Krai, Gornozavodsk's forestry population.



**Figure S16.** *Pinus sibirica* Du Tour, Perm Krai, Kishert's forestry population.



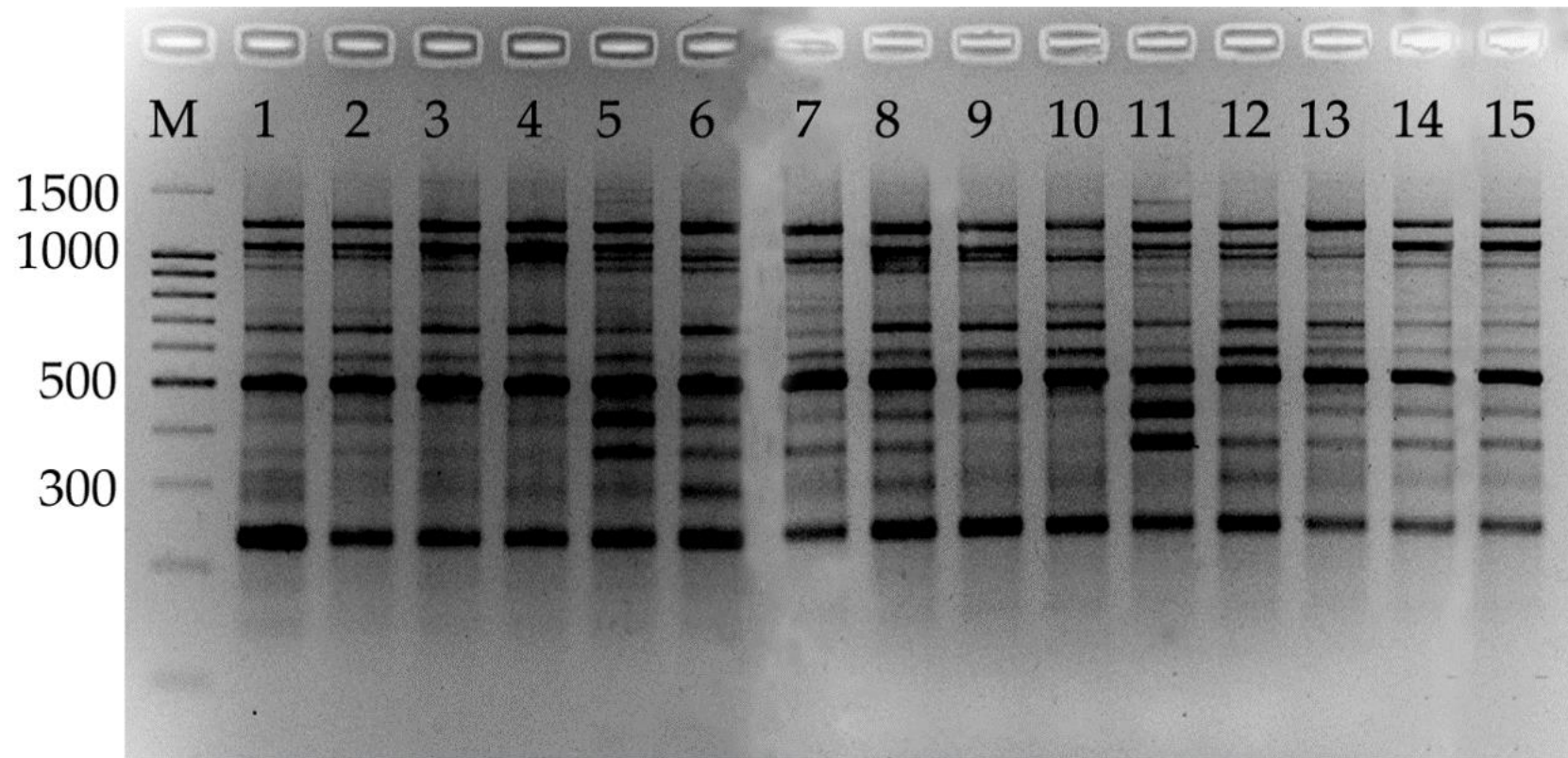


**Figure S17.** *Pinus sibirica* Du Tour, Perm Krai, Chusovoy's forestry population.



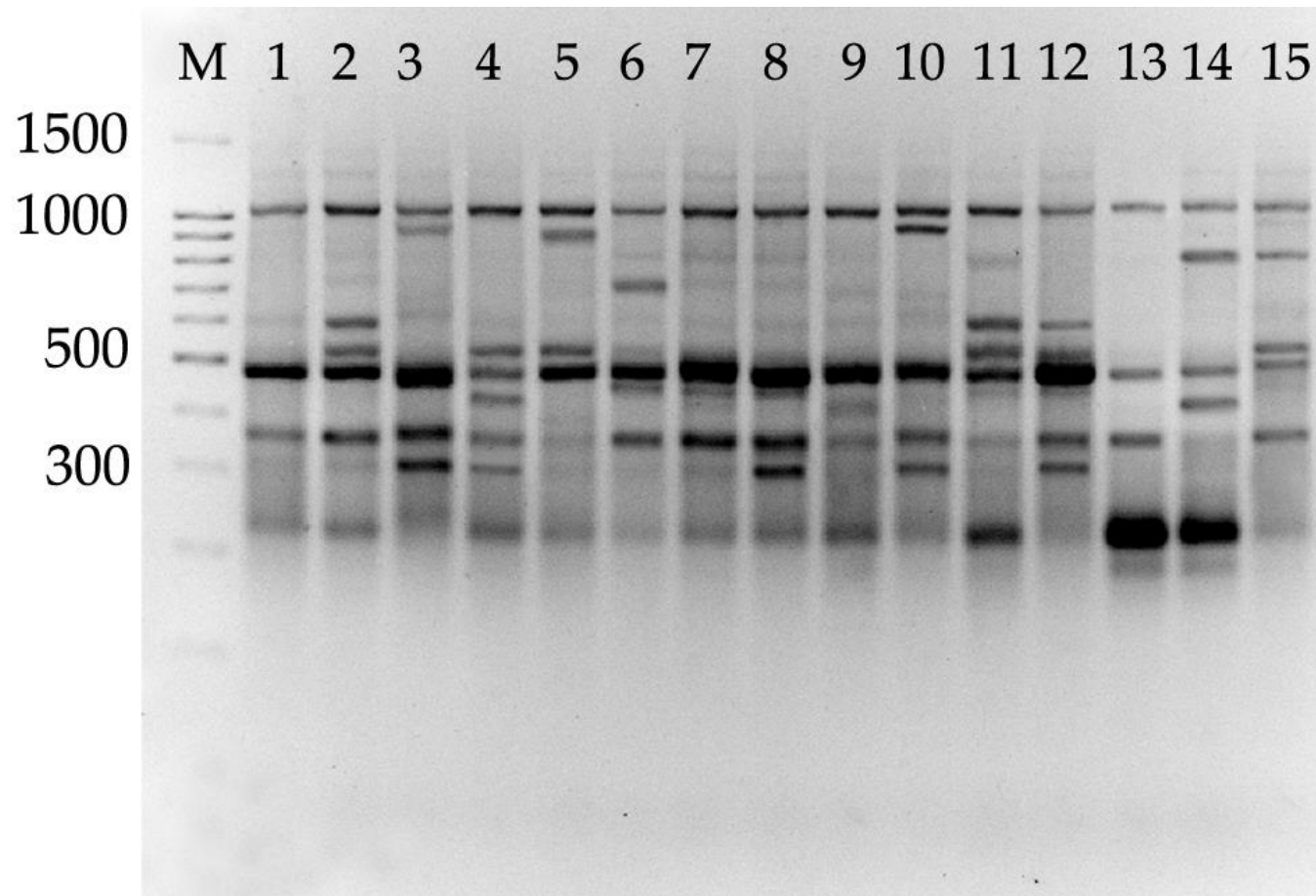
**Figure S18.** *Pinus sibirica* Du Tour, Sverdlovsk Oblast, Verkhoturys's forestry population.



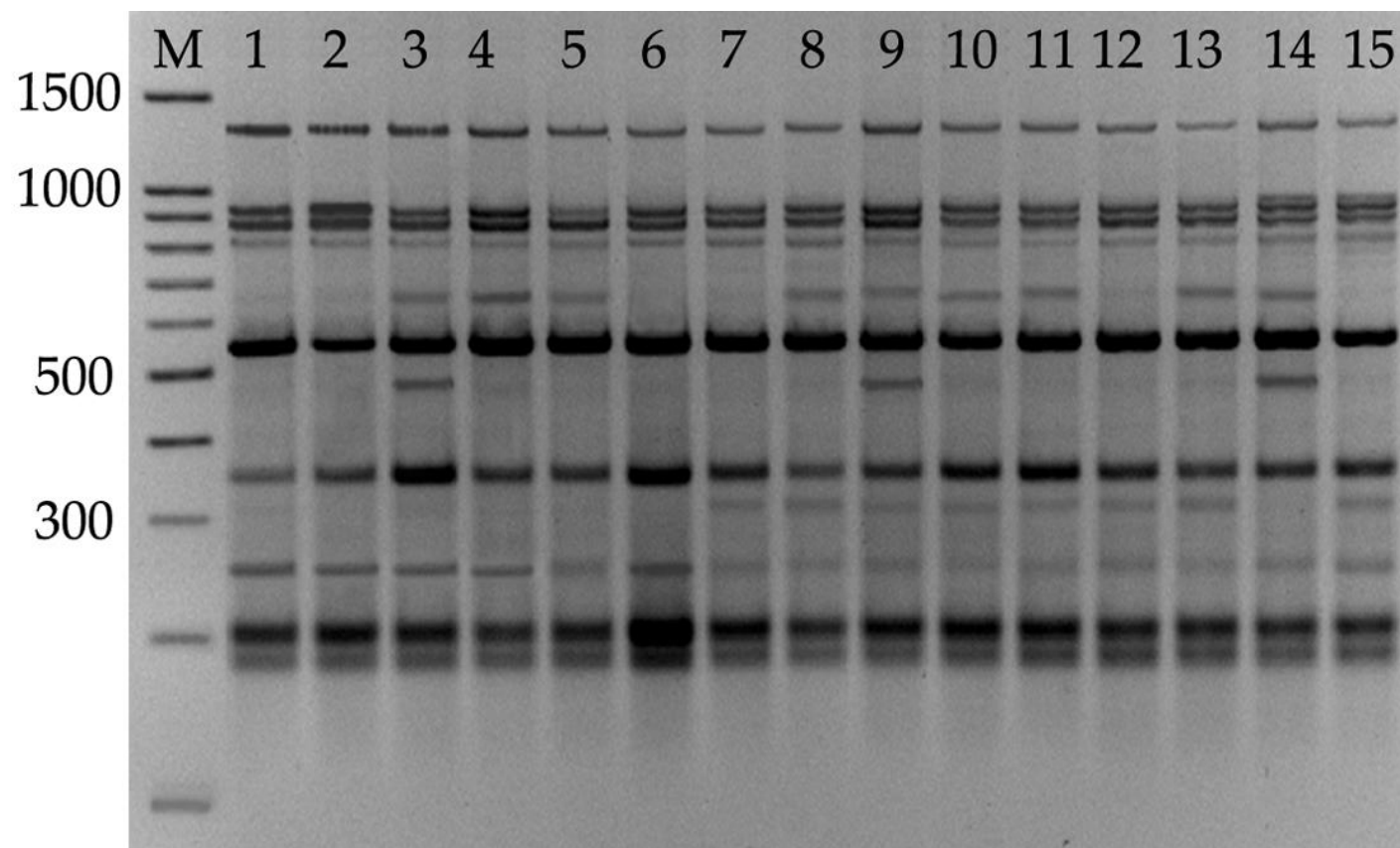


**Figure S19.** The band profiles with ISSR primer X11 (AGC)<sub>6</sub>G for the samples of *P. sibirica* from the population of Gornozavodsk's forestry (*PSB\_BG*). The numbers on the top indicate the sample numbers (1-15). Size marker (M): 100 bp DNA Ladder, marked on the left in bp (300 bp to 1500 bp).

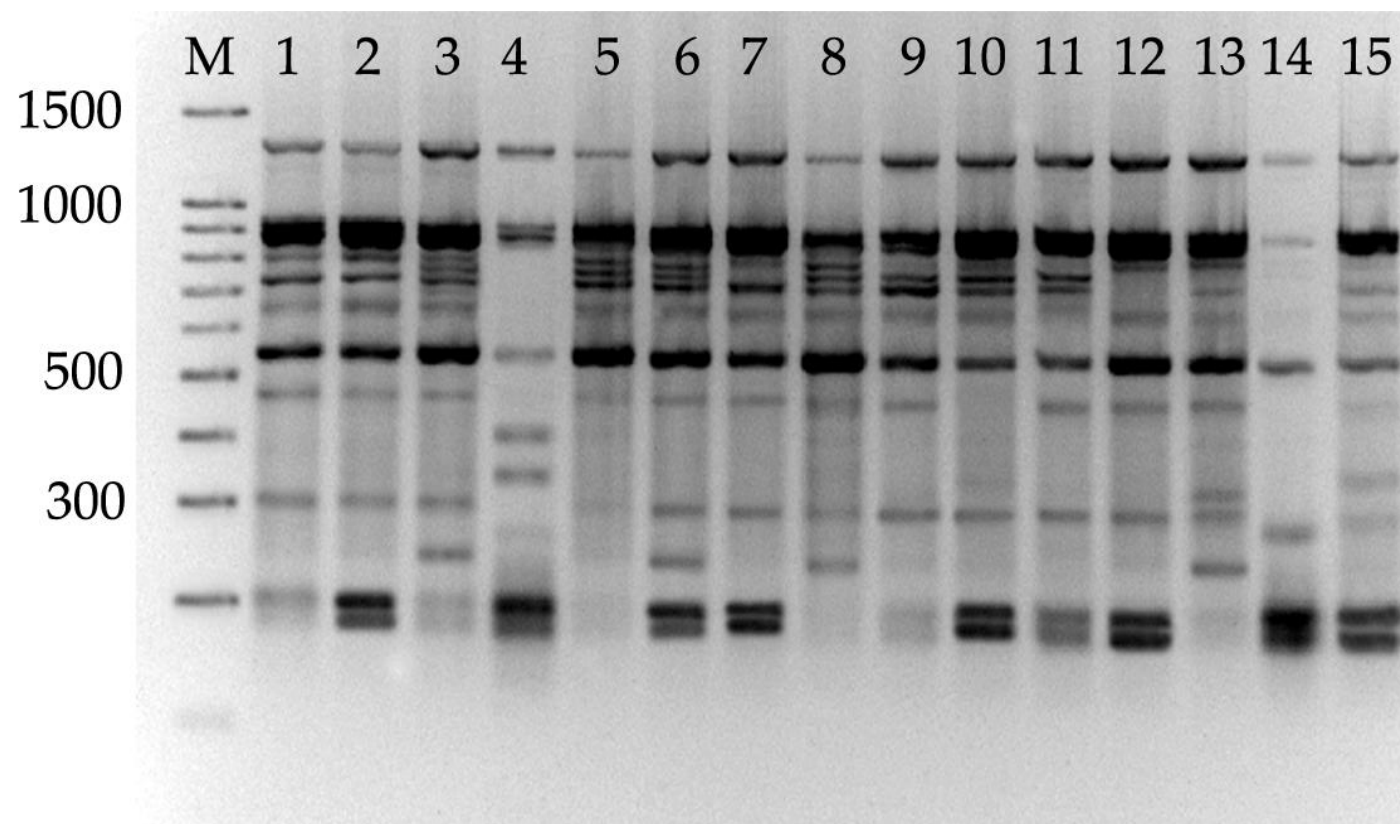




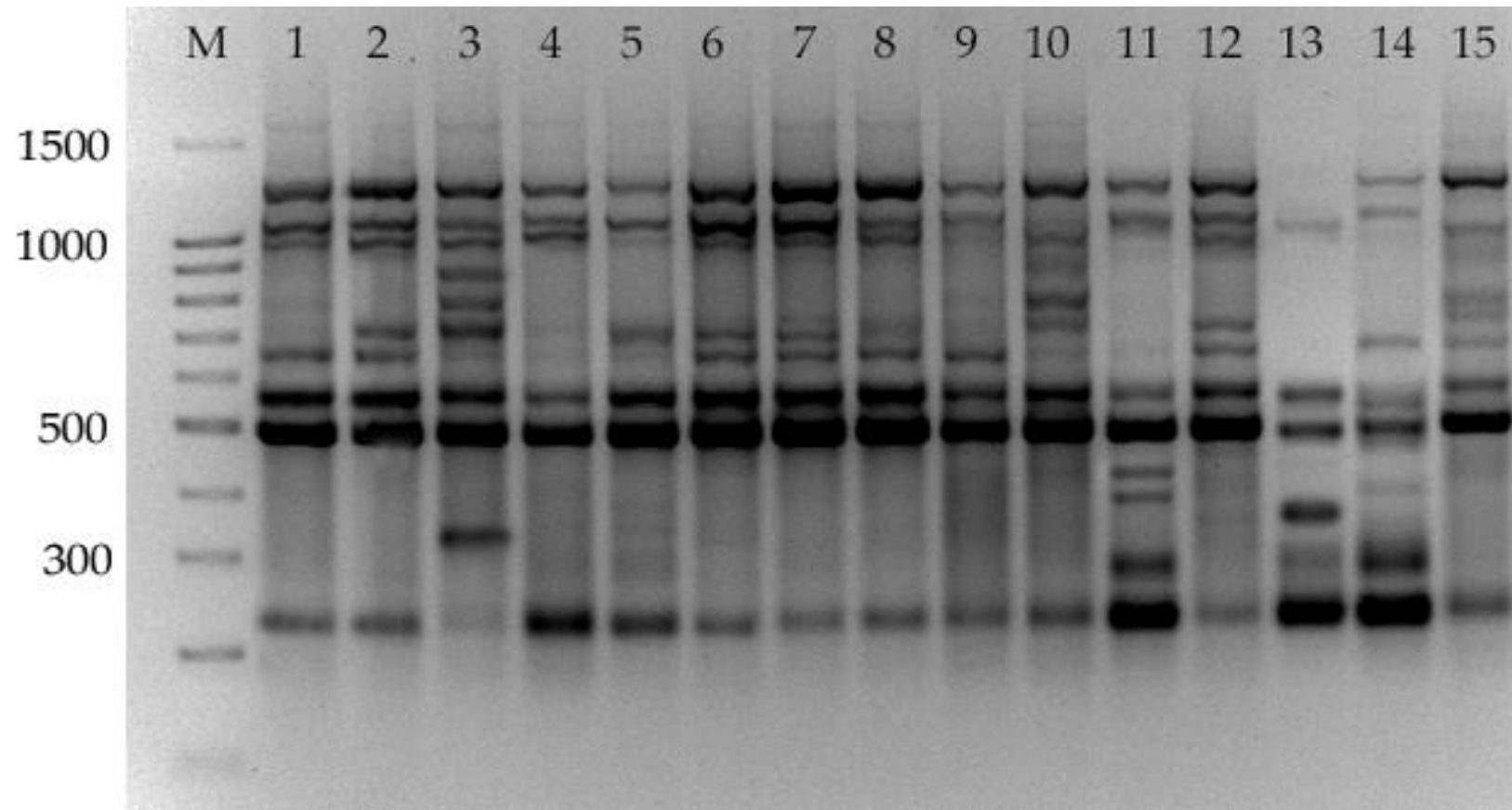
**Figure S20.** The band profiles with ISSR primer ISSR-9 ((ACG)<sub>7</sub>G) for the samples of *P. sibirica* from the population of Kochyovo's forestry (*PSB\_KH*). The numbers on the top indicate the sample numbers (1-15). Size marker (M): 100 bp DNA Ladder, marked on the left in bp (300 bp to 1500 bp).



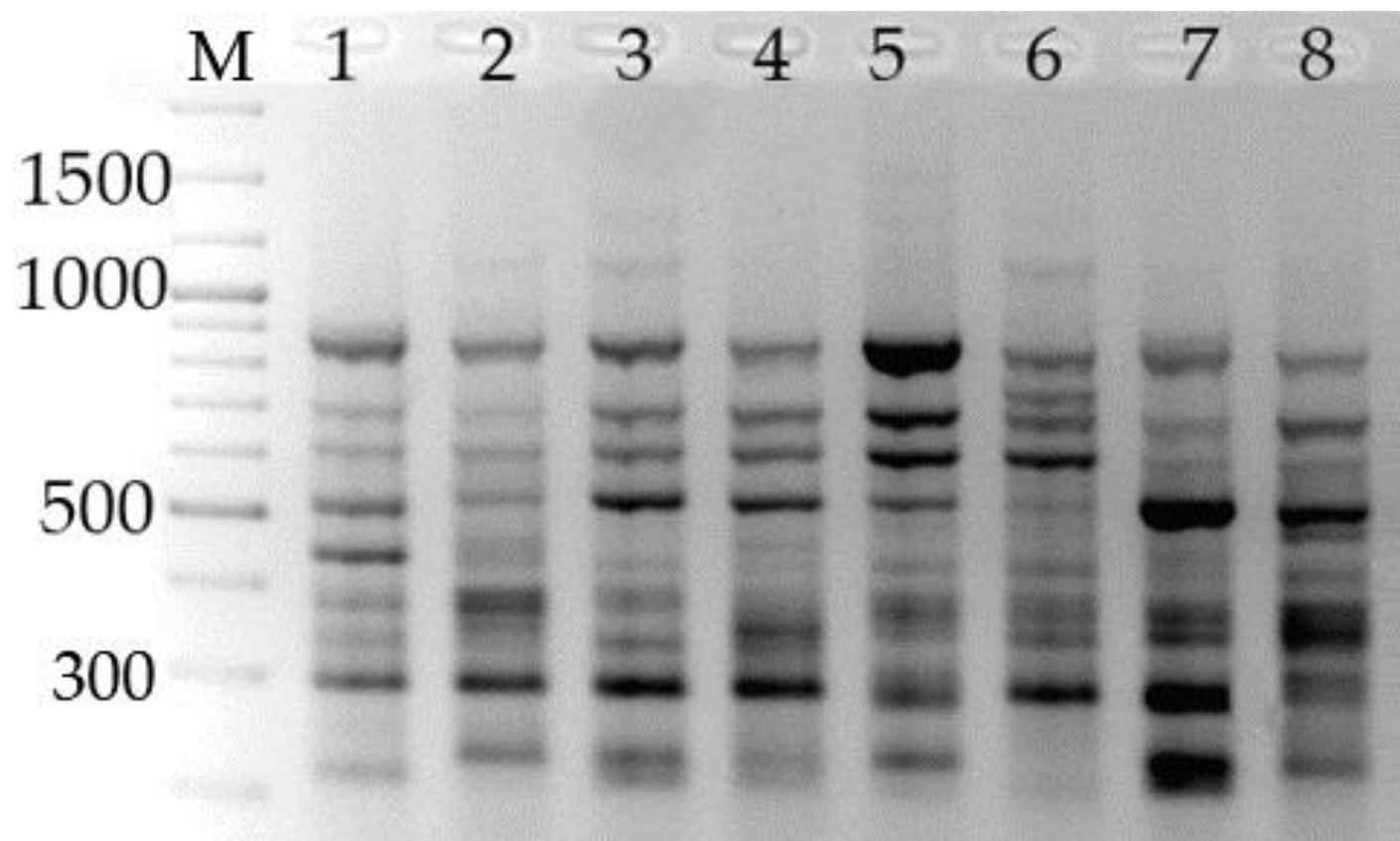
**Figure S21.** The band profiles with ISSR primer M1 ((AC)<sub>8</sub>CG) for the samples of *P. sibirica* from the population of Gornozavodsk's forestry (*PSB\_BG*). The numbers on the top indicate the sample numbers (1-15). Size marker (M): 100 bp DNA Ladder, marked on the left in bp (300 bp to 1500 bp).



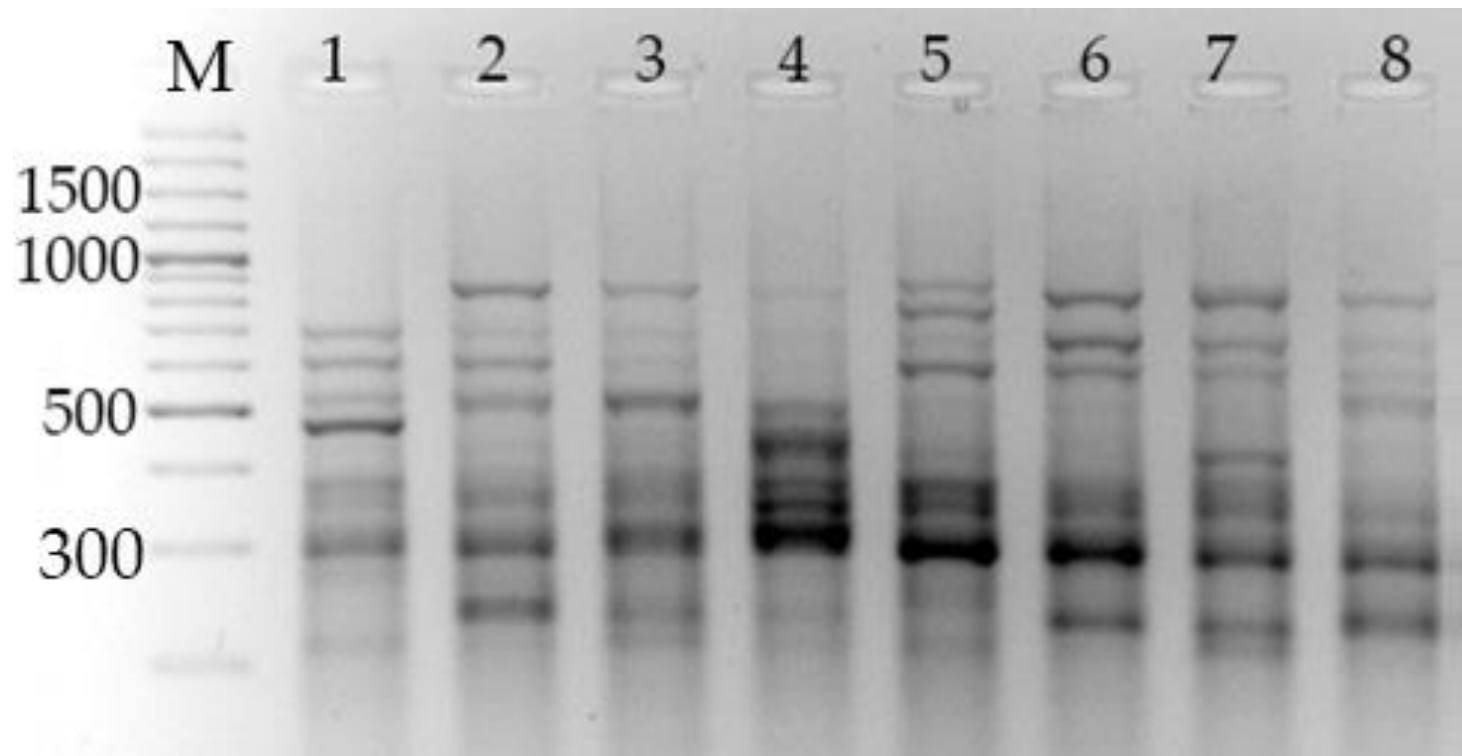
**Figure S22.** The band profiles with ISSR primer M1 ((AC)<sub>8</sub>CG) for the samples of *P. sibirica* from the population of Kochyovo's forestry (*PSB\_KH*). The numbers on the top indicate the sample numbers (1-15). Size marker (M): 100 bp DNA Ladder, marked on the left in bp (300 bp to 1500 bp).



**Figure S23.** The band profiles with ISSR primer X11 (AGC)<sub>6</sub>G for the samples of *P. sibirica* from the population of Krasnovishersk's forestry (PSB\_KV). The numbers on the top indicate the sample numbers (1-15). Size marker (M): 100 bp DNA Ladder, marked on the left in bp (300 bp to 1500 bp).

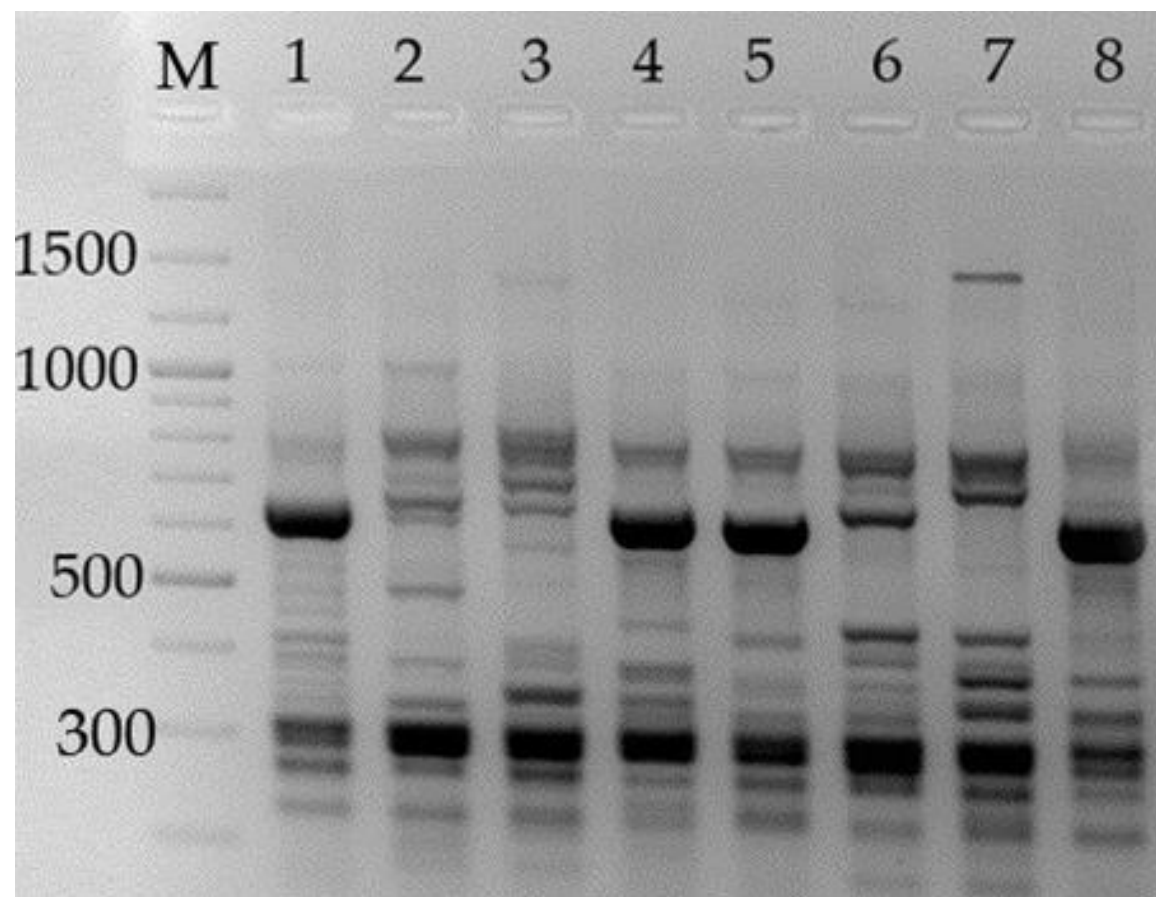


**Figure S24.** The band profiles with ISSR primer ISSR-1 ((AC)<sub>8</sub>T)) for the samples of *P. sylvestris* from the population of Perm's forestry (*Ps\_Uk*). The numbers on the top indicate the sample numbers (1-8). Size marker (M): 100 bp DNA Ladder, marked on the left in bp (300 bp to 1500 bp).

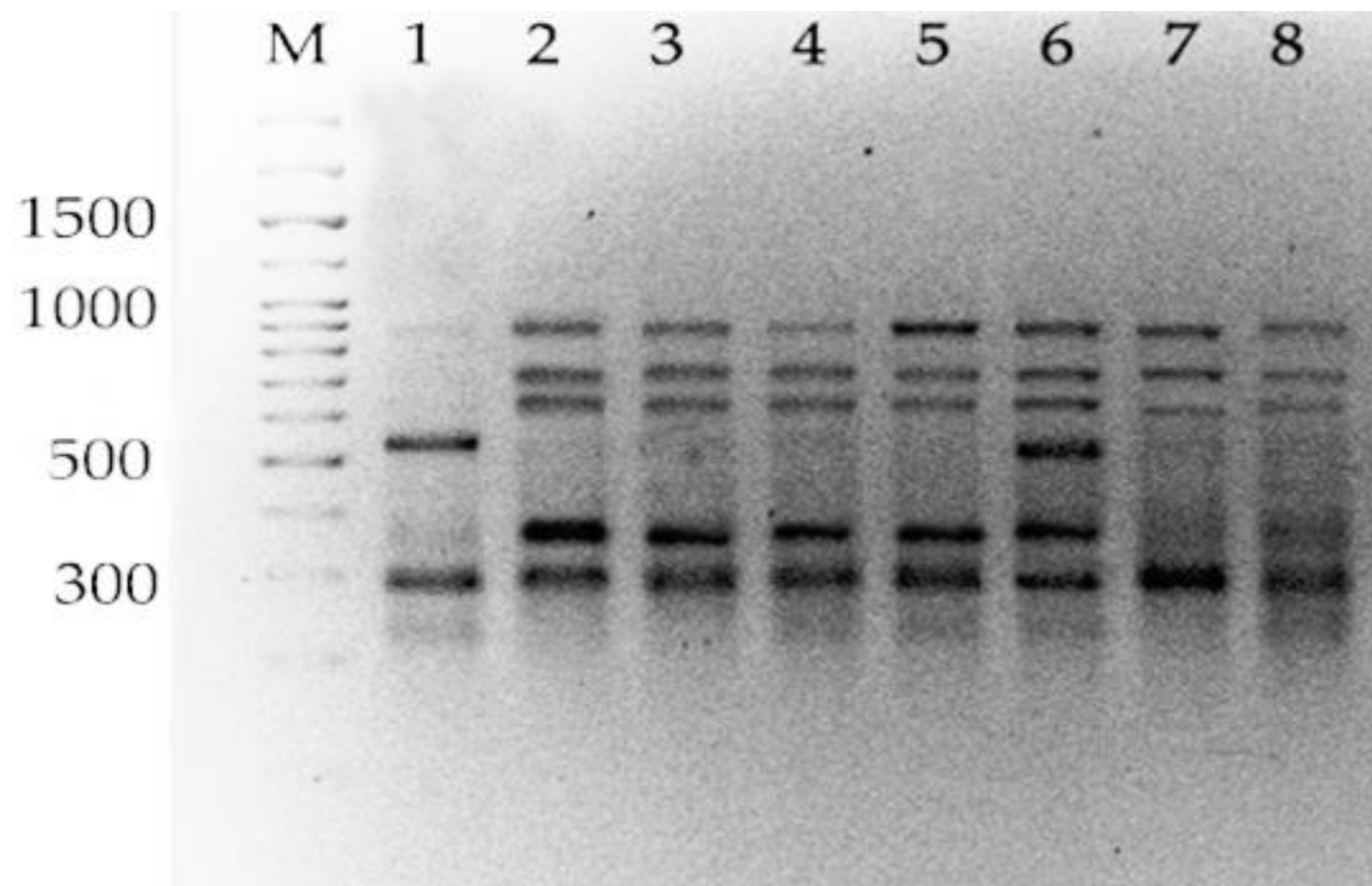


**Figure S25.** The band profiles with ISSR primer ISSR-1 ((AC)<sub>8</sub>T) for the samples of *P. sylvestris* from the population of Gainy's forestry (*Ps\_Gn*). The numbers on the top indicate the sample numbers (1-8). Size marker (M): 100 bp DNA Ladder, marked on the left in bp (300 bp to 1500 bp).

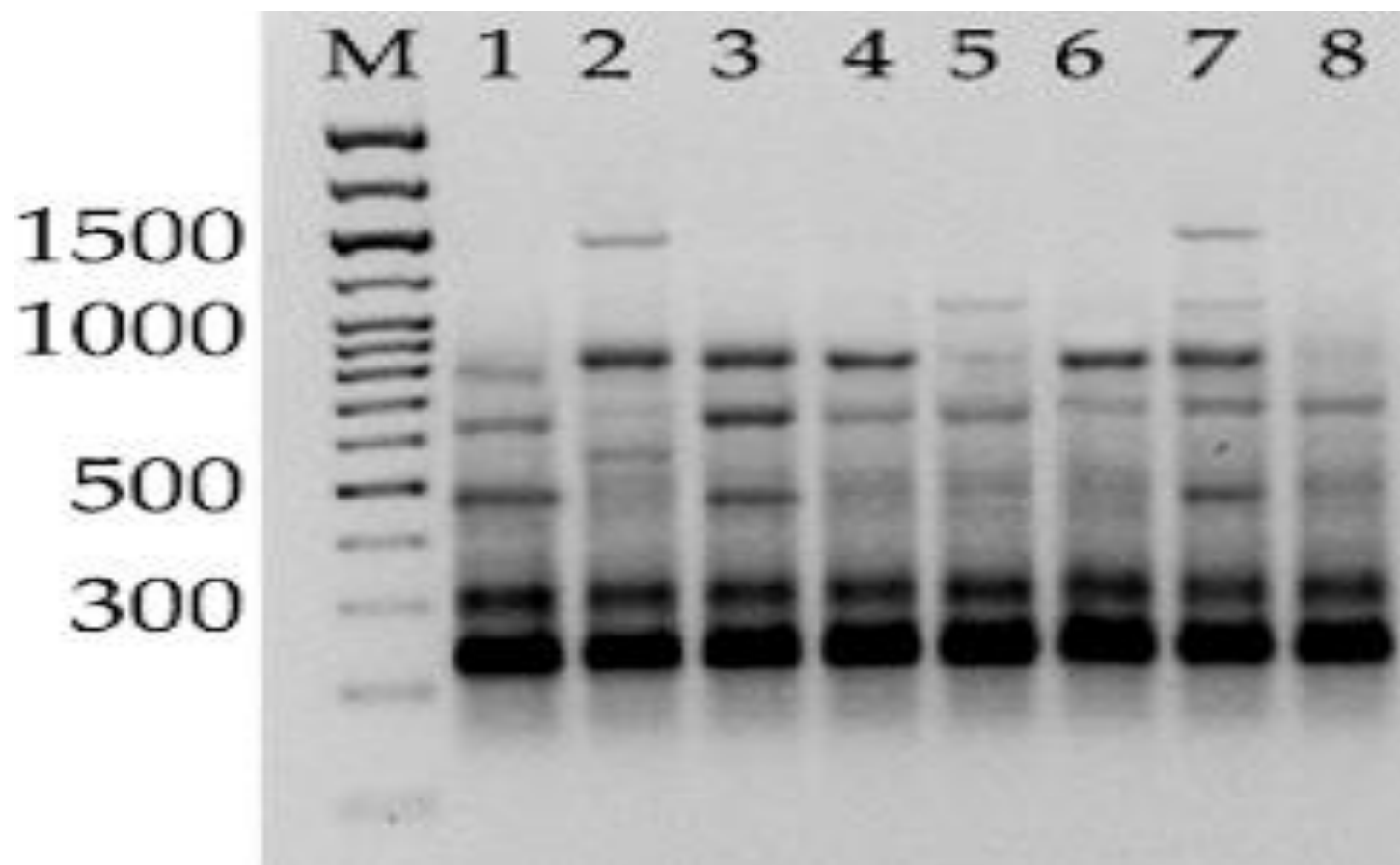




**Figure S26.** The band profiles with ISSR primer X10 ((AGC)<sub>6</sub>C) for the samples of *P. sylvestris* from the population of Karagay's forestry (*Ps\_Kg*). The numbers on the top indicate the sample numbers (1-8). Size marker (M): 100 bp DNA Ladder, marked on the left in bp (300 bp to 1500 bp).



**Figure S27.** The band profiles with ISSR primer ISSR-1 ((AC)<sub>8</sub>T) for the samples of *P. sylvestris* from the population of Verkhoturye's forestry (*PS\_KN*). The numbers on the top indicate the sample numbers (1-8). Size marker (M): Step100 Long, marked on the left in bp (300 bp to 1500 bp).



**Figure S28.** The band profiles with ISSR primer X10 ((AGC)<sub>6</sub>C) for the samples of *P. sylvestris* from the population of Vishnyovogorsk's forestry (*PS\_AR*). The numbers on the top indicate the sample numbers (1-8). Size marker (M): Step100 Long, marked on the left in bp (300 bp to 1500 bp).