

Supplement 1. The area of relic *Pinus cembra* forests in the geographic parts of the Tatra Mountains.

Mountain range	Area [ha]	Share [%]
Western Tatras	75.01	8.18
High Tatras	819.85	89.41
Belianske Tatras	22.07	2.41

Supplement 2. The area of relic *Pinus cembra* forests in the main Tatra valleys and massifs.

Name of the valley/massif	Area [ha]	Name of the valley/massif	Area [ha]
Białka Valley	247.12	Sucha Woda Valley	4.12
Kôprová Valley	121.34	Białego Valley	3.93
Tichá Valley	88.38	Velická Valley	2.50
Studená Valley	74.46	Račková Valley	2.04
Mlynická Valley	60.57	Štos Valley	2.01
Mengusovská Valley	58.71	Bystrá Valley	0.78
Javorová Valley	53.39	Batizovská Valley	0.73
Važecká Valley	37.94	massif of Lomnický štít	0.72
Jamnická Valley	32.68	Veľký žľab (Kriváň)	0.58
Kežmarskej Bielej vody Valley	31.58	Žiarska Valley	0.57
Furkotská Valley	29.75	Kościeliska Valley	0.24
Belianske Tatras	22.07	Jalovecká Valley	0.18
Kamienistá Valley	16.84	Strážyska Valley	0.09
Bystrej Valley	17.48	sum:	916.93
massif of Slavkovský štít	6.12		

Supplement 3. Impact of the geology on the occurrence of Swiss stone pine forests in the Tatra Mountains.

Geology	Significance	p-value	Odds
amphibolites		0.983136	0.00000010
diorits	***	<2e-16	0.01035607
dolomites	***	<2e-16	0.18182980
flysch		0.982189	0.00002187
gneisses	***	<2e-16	0.17025130
claystones		0.953178	0.00000853
limburgites		0.987350	0.00000098
micaschists		0.988811	0.00000005
deluvial-fluvial sediments	***	4.19e-14	0.74930740
glacifluvial sediments		0.474722	0.92753750
glacigenous sediments	***	0.000989	0.86907890
deluvial-eluvial sediments	***	2.38e-08	3.19556400
quartzstones	**	0.001936	0.20001660
sandstones, shales, marls		0.902136	0.00000054
peats		0.982788	0.00000040
limestones	***	1.64e-14	0.41316880
conglomerates	***	<2e-16	0.15778830

Significance levels: *** - 0.001; ** - 0.01; - 0.1

Supplement 4. Impact of the soil type on the occurrence of Swiss stone pine forests in the Tatra Mountains.

Soil type	Significance	p-value	Odds
Haplic Cambisols (Dystric, Skeletic)	***	1.18e-10	0.00951416
Haplic Cambisols (Eutric)	***	1.35e-13	0.02404269
Gleysols	**	0.001768	0.04367242
Stagnic Luvisols		0.940970	0.00000052
Lithic Leptosols	***	1.38e-14	0.5202977
Fluvisols	*	0.033449	0.6564535
Entic Podzols, Leptic Podzols	***	<2e-16	0.4501305
Folic Leptosols	***	<2e-16	0.6479738
Regosols (Hyperskeletic)	***	<2e-16	0.2882915
Cambic Rendzic Leptosols	***	<2e-16	0.3437825
Folic Rendzic Leptosols	***	<2e-16	0.1467369
Rendzic Leptosols (Skeletic)	***	6.71e-14	0.3342702
Rendzic Leptosols	***	3.08e-12	0.2403914

Significance levels: *** - 0.001; ** - 0.01; * - 0.05; . - 0.1