

Table S5. AMOVA hierarchical molecular variance distribution (difference between more and less high-altitude groups).

Source of variation	d.f. (degrees of freedom)	Variance component	Variance (%)	Fixation index	<i>P-value</i>
Between united groups ¹	1	0.13958 Va ²	5.71	F _{CT} = 0.05711	0.33822 ± 0.01681
Between groups within a priori formed united groups	1	0.04407 Vb ²	1.80	F _{SC} = 0.01912	0.09971 ± 0.00834
Within groups	125	2.26056 Vc ²	92.49	F _{ST} = 0.07514	0.00684 ± 0.00271

¹United group 1 — Kosh-Agach group, united group 2 — Ulagan groups (“mixed” + gene pool).

²Variance component name.

“F_{CT}” — Va/(Va+Vb+Vc), the proportion of variation among groups.

“F_{SC}” — Vb/(Vb+Vc), the proportion of variation among groups within a priori formed united groups.

“F_{ST}” — Va+Vb/(Va+Vb+Vc), the proportion of variation within groups.

Table S6. AMOVA hierarchical molecular variance distribution (difference between gene pool and “mixed” groups).

Source of variation	d.f. (degrees of freedom)	Variance component	Variance (%)	Fixation index	<i>P-value</i>
Between united groups ¹	1	- 0.13427 Va ²	- 5.71	F _{CT} = - 0.05708	1.00000 ± 0.00000
Between groups within a priori formed united groups	1	0.22599 Vb ²	9.61	F _{SC} = 0.09088	0.01857 ± 0.00437
Within groups	125	2.26056 Vc ²	96.10	F _{ST} = 0.03899	0.00978 ± 0.00326

¹United group 1 — gene pool Ulagan group, united group 2 — “mixed” Ulagan group + “mixed” Kosh-Agach group.

²Variance component name.

“F_{CT}” — Va/(Va+Vb+Vc), the proportion of variation among groups.

“F_{SC}” — Vb/(Vb+Vc), the proportion of variation among groups within a priori formed united groups.

“F_{ST}” — Va+Vb/(Va+Vb+Vc), the proportion of variation within groups.

Table S7. Hierarchical molecular variance distribution according to AMOVA results (difference between the “mixed” Ulagan group and other studied groups).

Source of variation	d.f. (degrees of freedom)	Variance component	Variance (%)	Fixation index	<i>P-value</i>
Between united groups ¹	1	- 0.09135 Va ²	- 3.91	F _{CT} = - 0.03907	0.66080 ± 0.01542
Between groups within a priori formed united groups	1	0.16849 Vb ²	7.21	F _{SC} = 0.06936	0.01466 ± 0.00340

Within groups	125	2.26056 V_c^2	96.70	$F_{ST} = 0.03300$	0.00587 ± 0.00219
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¹United group 1 — “mixed” Ulagan group, united group 2 — gene pool Ulagan group + “mixed” Kosh-Agach group.

²Variance component name.

“ F_{CT} ” — $V_a/(V_a+V_b+V_c)$, the proportion of variation among groups.

“ F_{SC} ” — $V_b/(V_b+V_c)$, the proportion of variation among groups within a priori formed united groups.

“ F_{ST} ” — $V_a+V_b/(V_a+V_b+V_c)$, the proportion of variation within groups.