

Figure S1: Distribution of delta K values in the STRUCTURE analysis.

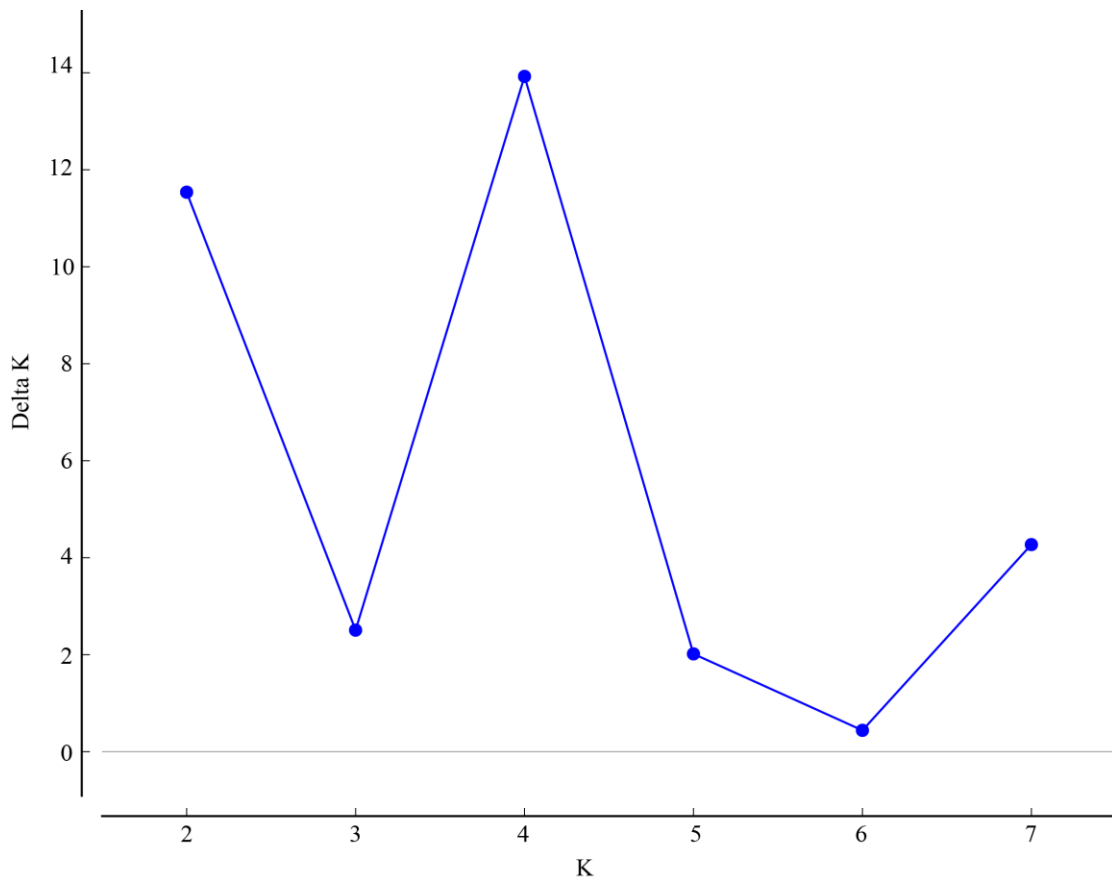


Figure S2. Bayesian cluster results of 188 *Quercus chungii* individuals for K as 2 (a) and 4 (b), respectively.

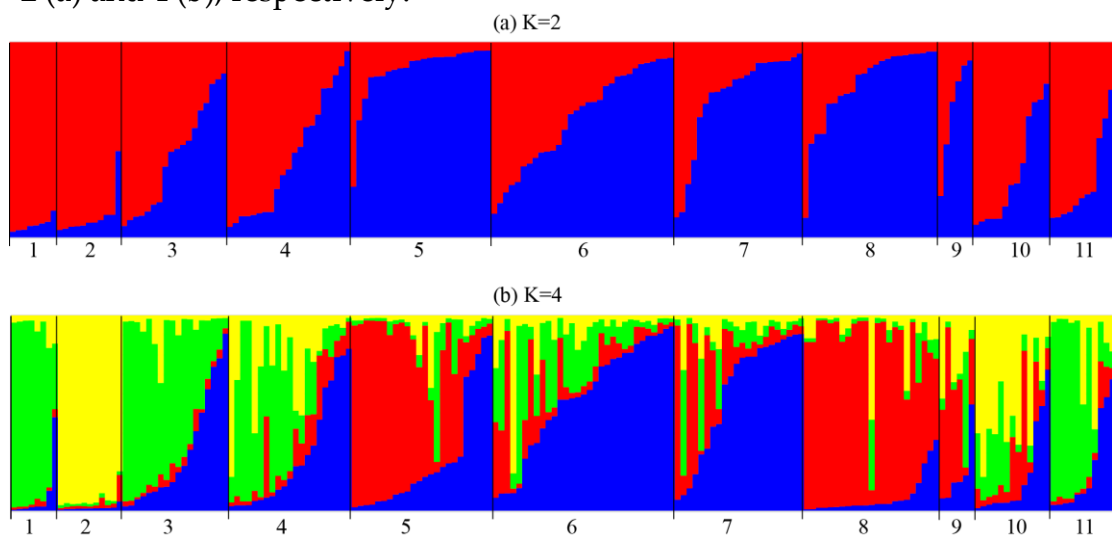


Figure 3. Spatial interpolation of expected heterozygosity of *Quercus chungii*.

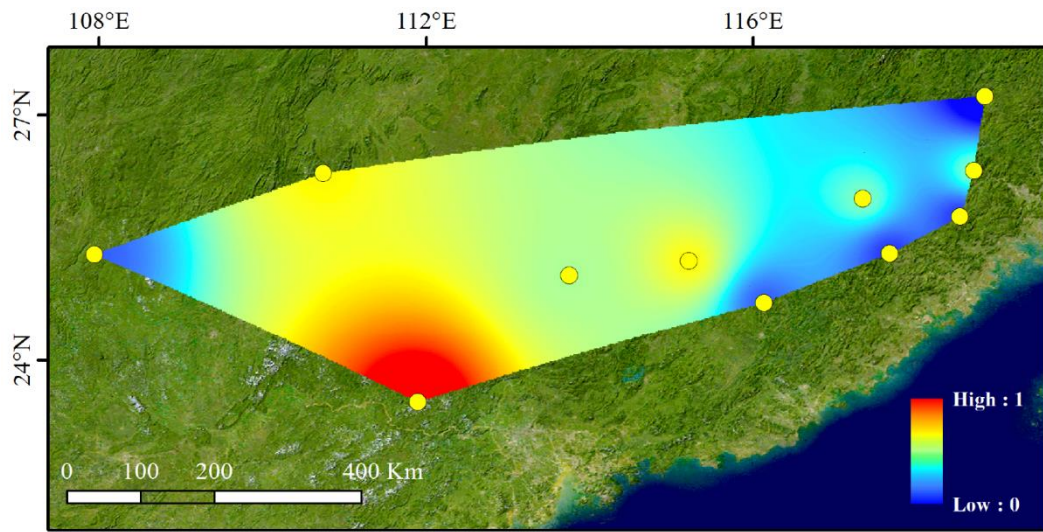


Table S1 Primer information of nSSR using in this study

Name	Forward Sequences	Reverse Sequences	No. Alleles
22314	TGGCAGAATCAAACACTTCAG	AAGCCAGATGCGCGATTTC	5
22316	CATCAGTGCAGCAAGGTCG	GCCTGTTTGGAAATGGGCTC	4
22773	TGAAGTCCGCGTTTGAATGTC	CTCTGGCCACTGCTAGTCC	11
25691	TGGGTTTGTGAGTGAAGC	ACGGGATTGATGTGAGCAAC	6
26493	ACTCTAAGGGCGCATCAGG	CAGTGCGTCGAGTCAAAGG	8
27739	GCGGTGTCATTGCCTACTC	AGTCCAAGTGGCGAACCTC	6
28833	GTTGAGGTTGCTTGAGGGAC	AGTTCAGGCCCAAATGCTG	6
30389	TGGAGAAGTCGTCGATCCC	AAACTCGAGGCCGAAGCTC	6
81016	GGCAGGGTGGGTATTGAAC	CCTCTCTTGACGCGTTTG	4

Table S2: Climatic variables and their percent contribution in constructing the potential distributions of *Quercus chungii*.

Variable	Definition	Percent contribution (SD)
bio_5	Max Temperature of Warmest Month	23.39 (1.65)
Bio_2	Mean Diurnal Range (Mean of monthly (max temp - min temp))	19.65 (1.85)
bio_14	Precipitation of Driest Month	16.31 (1.13)
bio_6	Min Temperature of Coldest Month	9.88 (2.27)
bio_15	Precipitation Seasonality (Coefficient of Variation)	8.89 (1.21)
bio_13	Precipitation of Wettest Month	6.03 (2.89)
bio_19	Precipitation of Coldest Quarter	5.31 (1.24)
bio_3	Isothermality (BIO2/BIO7) (* 100)	5.22 (1.36)
bio_7	Temperature Annual Range (BIO5-BIO6)	3.38 (1.58)
bio_18	Precipitation of Warmest Quarter	1.04 (0.93)
bio_8	Mean Temperature of Wettest Quarter	0.90 (0.37)

SD, Standard Deviation.

Table S3: Pairwise *Fst*-values between the studied localities of *Quercus chungii*. *Fst*-values are below the diagonal, while above indicate P-values.

	1	2	3	4	5	6	7	8	9	10	11
1	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
2	0.29	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
3	0.19	0.32	-	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.03
4	0.15	0.22	0.05	-	0.00	0.00	0.00	0.00	0.17	0.00	0.04
5	0.25	0.32	0.12	0.07	-	0.00	0.00	0.00	0.06	0.00	0.00
6	0.18	0.25	0.06	0.04	0.07	-	0.00	0.00	0.02	0.02	0.02
7	0.24	0.29	0.10	0.08	0.06	0.06	-	0.00	0.14	0.00	0.00
8	0.22	0.30	0.17	0.09	0.06	0.10	0.10	-	0.03	0.00	0.00
9	0.17	0.22	0.10	0.02	0.02	0.04	0.03	0.04	-	0.00	0.01
10	0.16	0.20	0.16	0.10	0.18	0.09	0.15	0.14	0.06	-	0.00
11	0.09	0.26	0.03	0.03	0.13	0.04	0.11	0.14	0.06	0.07	-

