

Supplementary information

Population genetic structure of the great star coral, *Montastraea cavernosa*, across the Cuban archipelago with comparisons between microsatellite and SNP markers

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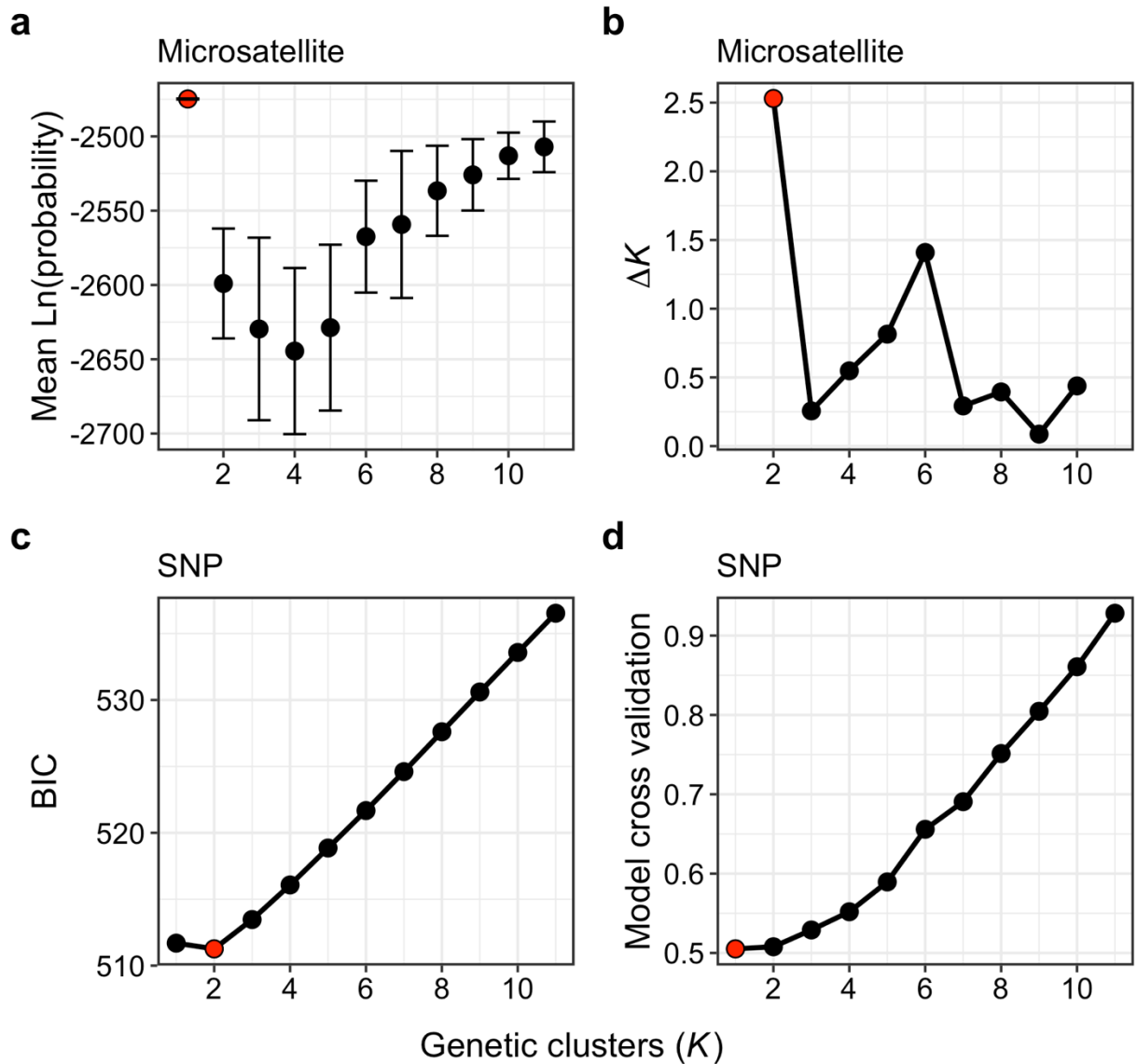
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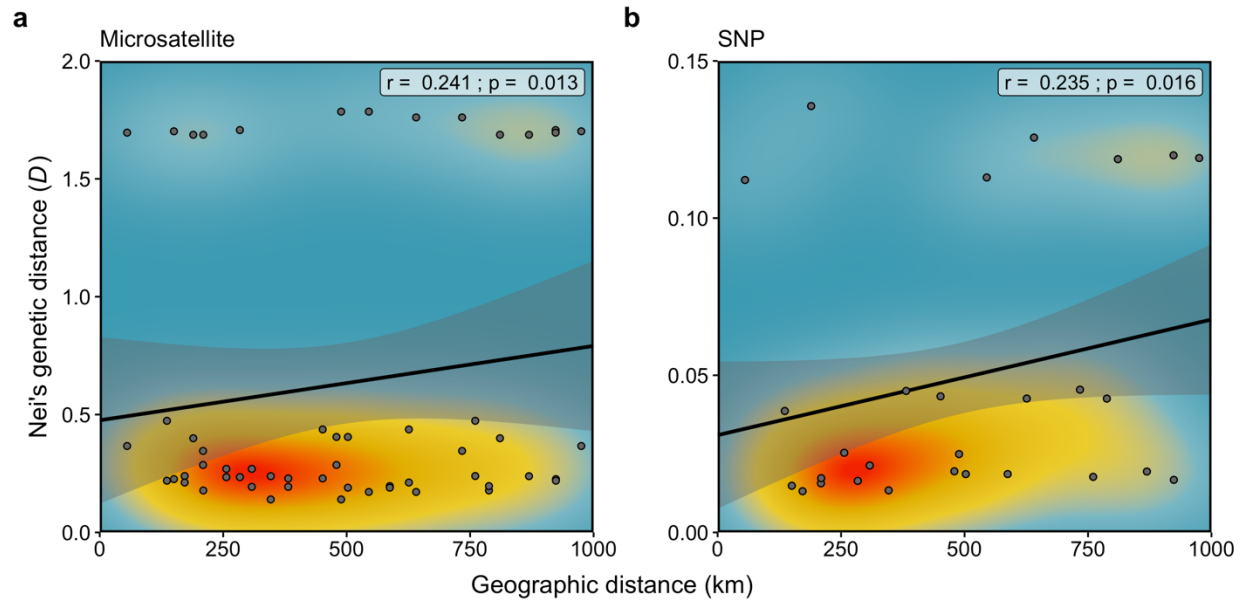
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Supplementary Table S1. Observed (H_O) and Expected (H_e) heterozygosity values $\pm$ SE for each population generated from the microsatellite and SNP dataset.

Population	Microsatellite		SNP	
	Observed	Expected	Observed	Expected
Banco De San Antonio	0.389 $\pm$ 0.111	0.389 $\pm$ 0.057	0.204 $\pm$ 0.003	0.161 $\pm$ 0.002
Guanahacabibes	0.676 $\pm$ 0.053	0.708 $\pm$ 0.059	0.250 $\pm$ 0.002	0.256 $\pm$ 0.002
Isla De Juventud	0.704 $\pm$ 0.117	0.543 $\pm$ 0.090	0.248 $\pm$ 0.003	0.235 $\pm$ 0.002
Cayo Anclitas	0.733 $\pm$ 0.068	0.697 $\pm$ 0.059	0.249 $\pm$ 0.002	0.249 $\pm$ 0.002
Chivirico	0.677 $\pm$ 0.051	0.675 $\pm$ 0.058	0.254 $\pm$ 0.002	0.256 $\pm$ 0.002
Cabo Lucrecia	0.711 $\pm$ 0.068	0.704 $\pm$ 0.064	0.239 $\pm$ 0.002	0.239 $\pm$ 0.002
Cayo Sabinal	0.737 $\pm$ 0.054	0.723 $\pm$ 0.050	0.243 $\pm$ 0.002	0.246 $\pm$ 0.002
Cayo Jutías	0.639 $\pm$ 0.067	0.680 $\pm$ 0.066	0.228 $\pm$ 0.002	0.221 $\pm$ 0.002



Supplementary Figure S1. Mean model simulations to determine the most likely value of genetic clusters (K , indicated by the red circle) using multiple population structure analysis methods for the **(a, b)** microsatellite and **(c, d)** SNP datasets. **(a)** $K = 1$ selection based on STRUCTURE log model likelihood ($L(K)$). **(b)** $K = 2$ selection based on STRUCTURE ΔK value generated using the Evanno method. **(c)** $K = 2$ selection based on Bayesian Information Criterion (BIC). **(d)** $K = 1$ selection based on ADMIXTURE model cross validation error.



Supplementary Figure S2. Plots visualizing isolation-by-distance correlating Nei's genetic distance matrices and linear distance between sites (km) based on site GPS coordinates for (a) microsatellites and (b) SNPs (Mantel test, 999 permutations). Warm colors indicate increased density of pairwise genetic/geographic distance comparisons. Linear regression with 95% confidence interval and significant correlation coefficients are shown in each plot ($p < 0.05$).