

File S1. The analysis of isolation by distance.

MATERIALS AND METHODS

Pairwise genetic distance was measured by Rogers' distance (Rogers 1972). Geographic distance was calculated by the R package geosphere (Hijmans 2016). The significance of the correlation between pairwise genetic distance and geographic distance was examined by the Mantel test in the R package adegenet with 1,000 permutations (Jombart 2008).

RESULTS

For the analysis of isolation by distance using all pairs of samples, the correlation coefficient between the genetic distance and geographic distance was 0.34, and this correlation was statistically significant ($p\text{-value} < 0.001$) (Figure S5).

LITERATURE CITED

- Hijmans, R. J., 2016 geosphere: Spherical Trigonometry. R package version 1.5-5.
- Jombart, T., 2008 Adegnet: A R package for the multivariate analysis of genetic markers. *Bioinformatics* 24: 1403–1405.
- Rogers, J. S., 1972 Measures of similarity and genetic distance, pp. 145–153 in *In Studies in Genetics VII*, University of Texas Publication 7213., Austin, Texas.