

I-HEDGE: Determining the optimum complementary sets of taxa for conservation using evolutionary isolation

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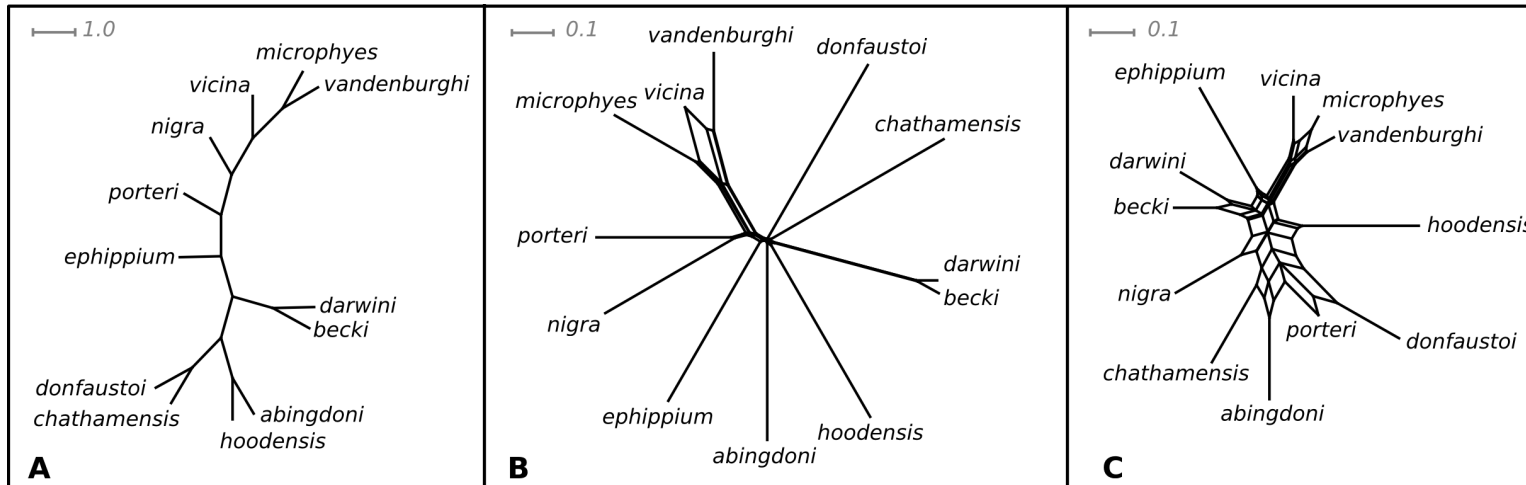


Figure S1

Depictions of (A) the relationships among Galápagos tortoise species resolved by previous studies (Beheregaray et al. 2004; Caccone et al. 2004; Russello et al. 2005; Poulakakis et al. 2008; Poulakakis et al. 2012) which are here presented as an unrooted equal-length tree, (B) the splits-network generated from pairwise ϕ_{ST} values calculated from mitochondrial control region sequences and (C) the splits-network generated from pairwise D_{est} (Jost 2008) values calculated from genotypes at 12 microsatellite loci. While A and B represent similar patterns, C depicts divergent relationships, particularly the placement of *hoodensis* away from *abingdoni*, *chathamensis* away from *donfaustoi*, and *nigra* away from *porteri*.

Supplementary References:

- Beheregaray LB, Gibbs JP, Havill N, Fritts TH, Powell JR, Caccone A (2004) Giant tortoises are not so slow: rapid diversification and biogeographic consensus in the Galápagos. *Proc Natl Acad Sci U S A* 101:6514-6519. doi:10.1073/pnas.0400393101
- Caccone A, Gentile G, Burns CE, Sezzi E, Bergman W, Ruelle M, Saltonstall K, Powell JR (2004) Extreme difference in rate of mitochondrial and nuclear DNA evolution in a large ectotherm, Galapagos tortoises. *Mol Phylogenet Evol* 31:794-798. doi:10.1016/j.ympev.2004.02.004
- Jost L (2008) GST and its relatives do not measure differentiation. *Mol Ecol* 17:4015-4026. doi:10.1111/j.1365-294X.2008.03887.x

- Poulakakis N, Glaberman S, Russello M, Beheregaray LB, Ciofi C, Powell JR, Caccone A (2008) Historical DNA analysis reveals living descendants of an extinct species of Galápagos tortoise. *Proc Natl Acad Sci U S A* 105:15464-15469. doi:10.1073/pnas.0805340105
- Poulakakis N, Russello M, Geist D, Caccone A (2012) Unravelling the peculiarities of island life: vicariance, dispersal and the diversification of the extinct and extant giant Galápagos tortoises. *Mol Ecol* 21:160-173. doi:10.1111/j.1365-294X.2011.05370.x
- Russello MA, Glaberman S, Gibbs JP, Marquez C, Powell JR, Caccone A (2005) A cryptic taxon of Galápagos tortoise in conservation peril. *Biol Lett* 1:287-290. doi:10.1098/rsbl.2005.0317