

Lovette, I. J., E. Bermingham, G. Seutin, and R. E. Ricklefs. 1998. Range disjunction and evolutionary differentiation in West Indian *Dendroica* warblers. *Auk* 115, 890-903.

**Abstract:** We explored the evolution of geographic distributions in archipelagos by comparing mitochondrial DNA (mtDNA) sequences and morphometric characters within and among conspecific populations of Adelaide's Warbler (*Dendroica adelaidae*), Plumbeous Warbler (*D. plumbea*), and Olive-capped Warbler (*D. pityophila*). Phylogenetic reconstructions were based upon 1,455 nucleotides of protein-coding mtDNA sequence from 53 individual warblers; morphological analyses employed three external measurements from a larger number of museum specimens. Of the three taxa studied, Adelaide's Warbler occupied the broadest and most fragmented geographical distribution and exhibited the greatest interpopulation differentiation in both mtDNA and morphology. Phylogenetic analyses demonstrated that the three Adelaide's Warbler populations are each reciprocally monophyletic with the Puerto Rican lineage basal to sister clades on Barbuda and St. Lucia. Genetic distances among these populations were comparable with those between some continental species. In contrast to the mtDNA pattern, the Puerto Rican and Barbudan Adelaide's Warbler populations were most similar in morphometry. We observed considerably less mtDNA and morphometric differentiation among populations of the two species with more restricted and less fragmented distributions, the Plumbeous Warbler of Dominica and Guadeloupe and the Olive-capped Warbler of the Bahamas and Cuba. High levels of molecular and morphological differentiation among the geographically disjunct Adelaide's Warbler populations and low differentiation in the two species with less fragmented ranges suggest that range disjunctions indicate the long-term evolutionary independence of geographically isolated island populations.