

Lovette, I. J., E. Bermingham, and R. E. Ricklefs. 1999. Mitochondrial DNA phylogeography and the conservation of endangered Lesser Antillean *Icterus* Orioles. *Conservation Biology*, 13, 1088-1096.

Abstract: Recent natural and anthropogenic disturbances have endangered two of the three oriole species endemic to single islands in the Lesser Antilles. The ongoing eruption of the Soufriere Hills volcano may have doomed the Montserrat Oriole (*Icterus oberi*), whereas high levels of nest parasitism by a cowbird threaten the Martinique Oriole (*I. bonana*). These orioles and related Antillean and Central American forms have been considered part of the *Icterus dominicensis* superspecies complex, but the taxonomic status of the different Antillean island populations has been long debated. To investigate levels of evolutionary differentiation among threatened Lesser Antillean orioles, we analyzed 2507 nucleotides of protein-coding mitochondrial DNA (mtDNA) sequence from orioles on Martinique, Montserrat, St. Lucia (*I. laudabilis*), Puerto Rico (*I. dominicensis dominicensis*), Mexico (*I. d. prothemelas*), and three *Icterus* outgroup species. Phylogenetic analyses of the mtDNA data supported the monophyly of Antillean members of the *I. dominicensis* complex and identified a star-like pattern of relationship among them. Mitochondrial distances between the Antillean populations were large (4.5-5.8% nucleotide divergence) and suggested that the Lesser Antillean orioles have been isolated evolutionarily from one another since the late Pliocene. The oriole taxa on Montserrat, Martinique, and St. Lucia meet species criteria under the phylogenetic species concept and represent evolutionarily significant units. The impending extinction of the phylogenetically unique Montserrat oriole highlights the vulnerability of island endemics to habitat degradation followed by rare and unpredictable natural catastrophes.