Biodiversity of Birds of the Americas

Rufous Antpitta *Grallaria rufula*.
Photo credit:
http://www.kolibriexpeditions.com

- **The Challenge:** Accurate taxonomic delineation of species and subspecies provides the biological and legal foundation for effective conservation action, whether by domestic resource management agencies or by other countries throughout the hemisphere that may be involved through international treaties or common conservation threats. Although birds are among the most well-known groups of organisms, much remains to be learned about their systematics, taxonomy, and biodiversity. This is particularly true in regions of high species diversity such as the Neotropics.

Rainforest understory

- **The Science:** Two hotspots of very high biodiversity are the Amazon Basin and the Andes, where many cryptic and otherwise unrecognized species of birds remain to be described. In ongoing collaborations between USGS, the Smithsonian, and research institutes in Brazil and Colombia, intensive studies of avian diversity in these areas are underway. Preliminary results, using data from genetic, vocal, and morphological characters, indicate that four currently recognized species of Amazonian antwrens under study likely consist of nine biological species and as many as 20 phylogenetic species. Likewise, what are now considered to be two species of antpittas in the Andes likely consist of as many as 12 biological species and 15 or more phylogenetic species.

Plain-throated Antwren
Myrmotherula hauxwelli
Photo credit: www.arthurgrosset.com

- **The Future:** Studies of Neotropical birds are showing that numbers of species are significantly underrepresented in current taxonomic treatments. Improvements in our knowledge of species richness in the Americas, throughresults of these and similar studies will contribute to both applied and basic science, improving our ability to designate localities and taxa of conservation importance and providing increasingly accurate knowledge of global patterns of biodiversity.

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