

Important Bird Areas of the Madrean Archipelago: A Conservation Strategy for Avian Communities

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Abstract—The Important Bird Areas (IBA) Program is a worldwide program through BirdLife International that identifies sites considered to provide important habitats for avian species. Criteria for designation are species abundance, diversity, and range restriction. As the United States Partner of BirdLife International, the National Audubon Society administers the IBA Program in the United States. In Mexico, the network of AICAs is administered by CONABIO. The Madrean Archipelago has a diverse range of Identified IBAs (AICAs, Áreas de Importancia para la Conservación de las Aves, in Mexico) that feature riparian, wetland, grassland, and Madrean oak woodland habitats. Five of the 24 IBAs and three of the AICAs in the region are globally significant: the Chiricahua Mountains, San Pedro Riparian National Conservation Area, Whitewater Draw State Wildlife Area, and Willcox Playa.

Introduction

The purpose of designation as an IBA is highlighting the value of specific sites. The lower elevation riparian IBAs are vital for neotropical migrants in the spring as well as providing habitat for resident species. In these habitats, which are particularly productive in the spring, these species can refuel and rest before continuing on their journey north to breeding grounds. The high elevation “Sky Island” IBAs are very productive in the fall and serve as vital stop-over points for migrants headed south. Many birds complete their interrupted molt in these IBAs. This network serves to identify those habitats most important to conserve to benefit native birds.

Important Bird Areas

Bird Conservation Region 34: Sierra Madre Occidental-Sonoran Joint Venture

The Sierra Madre Occidental “Sky Islands” and associated grasslands and riparian corridors are a shared ecological system with Arizona and New Mexico, USA and Sonora, Mexico. The biological diversity of this region is well described and includes significant sites in Arizona such as the Chiricahua and Huachuca Mountains, the San Pedro River, and the San Rafael Grasslands. The National Audubon Society Appleton-Whittell Research Ranch is located within the grasslands and Madrean oak woodland communities. The headwaters of the San

Pedro River and the southern portion of the San Rafael grasslands are in Sonora, Mexico, where the continuation of the mountain Sky Islands provides a connection south into the sub-tropical regions of the Sierra Madre Occidental.

Among the species whose range extends into the United States in this region, highest priorities include Mexican Spotted Owl, Eared Quetzal, Lucy’s Warbler, Red-faced Warbler, Strickland’s (Arizona) Woodpecker, and Montezuma Quail. Riparian areas in lowlands support many in-transit migrants as well as breeding Thick-billed Kingbirds, Bell’s Vireo, and Western Yellow-billed Cuckoos.

Identification of Mexico AICAs in northern Sonora and United States IBAs within the Apache Highlands ecoregion as a globally significant International IBA/AICA management zone will serve as a unifying statement of shared birds and habitats. An International and global AICA/IBA is supported by the Sonoran Joint Venture and Audubon as a contributing strategy to promote conservation of shared border birds.

Sistema de Islas Sierra Madre Occidental/ Sierra Madrean Sky Islands

Globally Important Species

Strix occidentalis Spotted Owl (USA and Mexico)

Euptilotis neoxenus Eared Quetzal (Mexico)

Vireo bellii Bells’ Vireo (USA and Mexico) Riparian

Calcarius ornatus Chestnut-collared Longspur (winter) (USA and Mexico) grasslands

Global Biodiversity — Assemblage of Biome-restricted species

Continental Important Species

Cyrtonyx montezumae Montezuma Quail

Picoides stricklandi Arizona Woodpecker

Coccyzus americanus Western Yellow-billed Cuckoo

Asio flammeus Short-eared Owl (Winter)

Otus trichopsis Whiskered Screech Owl

In: Gottfried, Gerald J.; Ffolliott, Peter F.; Gebow, Brooke S.; Eskew, Lane G.; Collins, Loa C., comps. 2013. Merging science and management in a rapidly changing world: Biodiversity and management of the Madrean Archipelago III; 2012 May 1-5; Tucson, AZ. Proceedings. RMRS-P-67. Fort Collins, CO: U.S. Department of Agriculture, Forest Service, Rocky Mountain Research Station.

Micrathene whitneyi Elf Owl
Caprimulgus ridgwayi Buff-collared Nightjar
Lampornis clemenciae Blue-throated Hummingbird
Calypte costae Costa's Hummingbird
Melanerpes lewis Lewis's Woodpecker (winter)
Colaptes chrysoides Gilded Flicker
Tyrannus crassirostris Thick-billed Kingbird
Vermivora luciae Lucy's Warbler
Dendroica graciae Grace's Warbler
Cardellina rubrifrons Red-faced Warbler
Pipilo aberti Abert's Towhee
Aimophila carpalis Rufous-winged Sparrow
Aimophila quinquestrata Five-stripped Sparrow
Calcarius mccownii McCown's Longspur (Winter)
Spizella breweri Brewer's Sparrow (Winter)
Spizella atrogularis Black-chinned Sparrow
Ammodramus bairdii Baird's Sparrow

Species of Conservation Concern

Callipepla squamata Scaled Quail

Arizona Important Bird Areas

Appleton-Whittell Audubon Research Ranch—National Audubon, BLM, Coronado National Forest-Grasslands

Globally important bird species: Montezuma Quail

Chestnut-collared Longspur and McCown's Longspur (winter)

Buenos Aires National Wildlife Refuge—U.S. Fish and Wildlife Service

Globally important bird species: Masked Bobwhite Quail

California Gulch—Coronado National Forest

Globally important bird species: Five-stripped Sparrow, Spotted Owl

Chiricahua Mountains—Coronado National Forest

Globally important bird species: Spotted Owl, Whiskered Screech-Owl, Violet-crowned Hummingbird, Arizona Woodpecker, Sulphur-bellied Flycatcher, Buff-breasted Flycatcher, Grace's Warbler and Mexican Chickadee

Huachuca Mountains—Coronado National Forest

Globally important bird species: Spotted Owl

Santa Cruz River—Arizona State Park, U.S. Park Service

Globally important bird species: Bell's Vireo

San Pedro River Riparian National Conservation Area—Bureau of Land Management

Globally important bird species: Bell's Vireo

San Rafael Valley—Coronado National Forest, Arizona State Parks

Globally important bird species: Chestnut-collared Longspur (winter), McCown's Longspur (winter)

Santa Rita Mountains—Coronado National Forest

Globally important bird species: Spotted Owl

Sonoita Creek—The Nature Conservancy and Arizona State Park

Globally important bird species: Bell's Vireo

Sycamore Canyon—Coronado National Forest

Globally important bird species: Five-stripped Sparrow, Spotted Owl, Buff-collared Nightjar

Whitewater Draw State Wildlife Area—Arizona Game and Fish

Globally important bird species: Sandhill Crane

Potential Arizona Important Bird Areas:

Patagonia Mountains and Pinaleno Mountains—Coronado National Forest

Globally important bird species: Spotted Owl

Las Cienegas National Conservation Area—Bureau of Land Management

Rufous-winged Sparrow

New Mexico Important Bird Areas:

Clanton Canyon—Coronado National Forest

Montezuma Quail, Whiskered Screech-Owl, Arizona Woodpecker, Whip-poor-will, Elf Owl, Dusky-capped Flycatcher, Grace's Warbler

Gray Ranch Grasslands—Animas Foundation

Botteri's Sparrow

Guadalupe Canyon – Bureau of Land Management

Costa's, Broad-billed, Blue-throated, Magnificent, and Violet-crowned Hummingbird, Northern Beardless-Tyrannulet, Thick-billed Kingbird, and Varied Bunting.

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Appendix: Migratory Birds of Conservation Focus

Map sources: Birds of North America; Cornell Laboratory of Ornithology: green = winter; dark tan = breeding; light tan = migration; blue = yearlong.

Gray Hawk *Asturina nitida*



Common Black-Hawk *Buteogallus anthracinus*. Mexico has resident populations (in the South) and migratory (in the north).



Elf owl *Micrathene whitneyi*



Mexican whip-or-will *Caprimulgus vociferous*



Thick-billed kingbird *Tyrannus crassirostris*



Buff-breasted flycatcher *Empidonax fulvifrons*



Broad-billed Hummingbird*Cynanthus latirostris*

Map by Cornell Lab of Ornithology
Range data by NatureServe

Blue-throated Hummingbird*Lampornis clemenciae*

Map by Cornell Lab of Ornithology
Range data by NatureServe

Magnificent Hummingbird*Eugenes fulgens*

Map by Cornell Lab of Ornithology
Range data by NatureServe

Lucifer Hummingbird*Calothorax lucifer*

Map by Cornell Lab of Ornithology
Range data by NatureServe

Costa's Hummingbird
Calypte costae



Map by Cornell Lab of Ornithology
Range data by NatureServe

Rose-throated becard *Pachyramphus*
aglaiae



Northern Beardless tyrannulet *Camptos-*
toma imberbe



Olive warbler *Peucedramus taeniatus*



Lucy's warbler *Vermivora luciae*



Grace's Warbler *Dendroica graciae*Red-faced warbler *Cardellina rubrifrons*Five-striped sparrow *Aimophila quinquestriata*Varied bunting *Passerina versicolor*Botteri's sparrow *Aimophila botteri*Baird's sparrow *Ammodramus bairdi*

McCowan's longspur *Calcarius mccownii*
(winter) (winteChestnut-collared longspur *Calcarius ornatus*Lark bunting *Calamospiza melanocorys* (win-
ter) (winter)

The content of this paper reflects the views of the authors, who are responsible for the facts and accuracy of the information presented herein.