

## Southwestern Willow Flycatchers Recaptured at Wintering Sites in Costa Rica

### ABSTRACT

An adult Southwestern Willow Flycatcher banded in summer 1998 at Ash Meadows National Wildlife Refuge, Nevada, was recaptured the following winter in Santa Cruz, Costa Rica, then relocated at Ash Meadows during the 1999 breeding season. Another Southwestern Willow Flycatcher banded in 1999 as a nestling at Roosevelt Lake, Arizona, was recaptured in January 2000 on its wintering grounds in Bolsón, Costa Rica. The bird was recaptured at Roosevelt Lake in summer 2000, returned to the same wintering site in Bolsón the following winter, and was relocated at Roosevelt Lake in summer 2001.

### INTRODUCTION

From 1997 through 2001, we banded wintering Willow Flycatchers (*Empidonax traillii*) throughout the Pacific lowlands of Costa Rica as part of a study of the species' winter ecology. On 12 Jan 1999, we recaptured and uniquely color-banded a wintering individual (#2160-27034) along the Rio Cañas in Santa Cruz, Guanacaste Province, Costa Rica. The flycatcher (identified via genetic analysis as a male) was banded previously as an adult on 23 Jul 1998 at Ash Meadows National Wildlife Refuge, Nye County, Nevada (straight line distance from Ash Meadows to Santa Cruz is 4230 km). We re-sighted the bird on two separate occasions, (30 Jun and 12 Jul) on its 1999 breeding territory at Ash Meadows within 8 km of its original capture location.

On 28 Jul 1999, as part of a Willow Flycatcher breeding ecology study, we banded a nestling flycatcher at Roosevelt Lake, Gila County, Arizona. During our winter ecology work, we recaptured and uniquely color-banded this bird (#1710-20561) on 29 Jan 2000 at a seasonal wetland in Bolsón, Guanacaste Province, Costa Rica (straight line distance from Roosevelt Lake to Bolsón is 3668 km). We regularly re-sighted this flycatcher at the site through 26 Apr 2000. The individual returned to Roosevelt Lake the following summer, where we recaptured it on 12 Jul 2000, and confirmed it to be a breeding female. The flycatcher returned to Bolsón the following winter, where it was re-sighted

on 14 Oct 2000 and 5 Jan 2001. Throughout summer 2001, we re-sighted the bird at Roosevelt Lake where it was confirmed as breeding in the same patch used in 2000.

### DISCUSSION

Based on the locations of their breeding sites, both of these flycatchers are of the endangered southwestern race (*E.t. extimus*; Unitt 1997). To date, these individuals represent the only known recaptures of Willow Flycatchers on both the breeding and wintering grounds. Furthermore, these are the first Willow Flycatchers to be recaptured in multiple, consecutive breeding and wintering seasons. Both individuals returned in subsequent years to their general breeding areas, although the Roosevelt Lake bird settled 28 km from its natal site. This is consistent with research showing that most Willow Flycatchers return to their previous year's breeding sites (Sogge 2000, Sedgwick 2000). Relocating the Roosevelt Lake flycatcher repeatedly at the same wintering site during two consecutive seasons is suggestive that Willow Flycatchers may exhibit between-year site fidelity on the wintering grounds. If so, this has potential ramifications to Southwestern Willow Flycatcher conservation and recovery, in that individuals may be affected negatively by the loss of particular wintering sites.

### ACKNOWLEDGMENTS

Funding for this work was provided by the U.S. Bureau of Reclamation, U.S. Fish and Wildlife Service, and the U.S. Geological Survey. We especially thank Rebecca Davidson, Heather English, David St. George, Suzanne Langridge, and Kristen Pearson for their outstanding banding contributions in the field, and Eben Paxton for genetically sexing the birds. Many thanks to The Organization for Tropical Studies, San Jose, Costa Rica, which has and continues to assist with permits and logistics. A special thanks to Co-opeortega Raices, Bolsón, Costa Rica, for their valuable support in the field and their love of natural areas.

### LITERATURE CITED

- Sedgwick, J.A. 2000. Willow Flycatcher (*Empidonax traillii*). In *The Birds of North America*, No. 533 (A. Poole and F. Gill, eds.). The Birds of North America, Inc., Philadelphia, Pa.

Sogge, M.K. 2000. Breeding season ecology. Pp. 57-70 in Status, ecology, and conservation of the Southwestern Willow Flycatcher. USDA Forest Service Gen. Tech. Rep. RMRS-GTR-60.

Unitt, P. 1987. *Empidonax traillii extimus*: and endangered subspecies. *West. Birds* 18:137-162.

Unitt, P. 1997. Winter range of *Empidonax traillii extimus* as documented by existing museum collections. Report to U.S. Bureau of Reclamation, Phoenix, AZ.

**Thomas J. Koronkiewicz  
and Mark K. Sogge**

U.S. Geological Survey, Forest and  
Rangeland Ecosystem Science Center  
Colorado Plateau Field Station  
Flagstaff, AZ