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## Indigo Bunting: New Longevity Record and Documentation of Habitat Connectivity

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### **Indigo Bunting: New Longevity Record and Documentation of Habitat Connectivity**

The Black Swamp Bird Observatory began conducting mist netting research on bird migration in 1981 at the Navarre Marsh Station (41.5906° N, 83.0643° W), with daily study commencing in 1989. This site is located on property owned by First Energy, Ottawa County, OH, with a long-term management agreement with the U.S. Fish and Wildlife Service as part of the Ottawa National Wildlife Refuge. The study site is Lake Erie beach ridge consisting of Carolinian Forest (Braun 1950). In 2008 the Black Swamp Bird Observatory initiated a new banding station on the Creek Bend Sandusky County Park (41.4102° N, 83.2286° W), Sandusky County, OH. This station resides in a small stream corridor that feeds into Sandusky Bay in the Western Basin of Lake Erie.

An Indigo Bunting (*Passerina cyanea*), band number 2171-48678, was first encountered on 23 May 2001 at the Navarre Marsh Station. It was banded as a second-year male and was recaptured at the same site on 28 May 2001. The bird was again encountered on 28 Sep 2013, when it was netted at the Creek Bend Station. This represents a longevity record of 13 yr and 3 mo, eclipsing the previous record of 9 yr and 2 mo, as reported by the Bird Banding Laboratory (Bird Banding Laboratory 2014).

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This recovery represents a distance of 24 km southwest from the original banding location.

This record is significant for several reasons. The average life span of an Indigo Bunting has been reported as 2.34 yr (Payne and Payne 1990), with an overall estimate of very low annual survival rate (Payne 1992). The present longevity record is more than five times the average life span and represents a nearly 33% increase in the documented longevity record. In addition, this single individual demonstrates the importance of habitat connectivity in the western basin of Lake Erie, especially in light of the ongoing development of elevated structures (i.e., wind turbines) in a significant stopover habitat region. Our long-term studies at these sites demonstrate an interaction between the lake shore habitat and inland sites as much as 25 km from the shoreline; in the past two years, four birds have been banded at the Navarre site and recaptured in later years at Creek Bend. The routine movements between lakeshore and inland sites were a surprising finding from our long-term research. That a single migrant bird has been documented using both lakeside and inland stopover sites demonstrates that both of these habitat types are important to migrants, and may serve as a cautionary tale in an era when both lakeshore and inland habitats are being eyed for wind turbine development.

### **ACKNOWLEDGEMENTS**

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### **LITERATURE CITED**

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### **Three Long-Distance Recaptures of Rufous Hummingbirds that Overwintered in the Southeastern United States**

Rufous Hummingbirds (*Selasphorus rufus*) breed from the Pacific Northwest north to Alaska, with the majority migrating to Mexico for the nonbreeding season. However, the species was first documented overwintering in the southeastern United States in 1909 (Conway and Drennan 1979). Hill et al (1998) investigated the increase in the numbers and distribution of Rufous Hummingbirds (hereafter, Rufous) in five states of the Southeast during the 1990s. A study of wintering hummingbirds from 1998 to 2008 in Alabama and Florida (Bassett and Cubie 2009) found Rufous to be the most common species (824 of 1,598 individuals or 51.6 %).

A total of 37 short- to medium-distance recaptures of Rufous (53 to 1,437 km) were documented by Bassett and Cubie (2009). The only long-distance recapture of a southeastern Rufous reported to date in the literature was a male banded in Baton Rouge, LA, on 5 Dec 2000 and recaptured in Black Creek, British Columbia, on 19 May 2001, a straight-line distance of 3,517 km (Finlay 2007). Here we report

on three long-distance recaptures (5,632 km, 3,621 km, and 3,106 km) of Rufous that overwintered in Florida or Alabama.

The first bird was a second-year female Rufous banded at a private residence in Tallahassee, FL, by Fred Dietrich on 13 Jan 2010. On 28 Jun 2010, she was recaptured by Katherine McLaughlin in Chenega Bay, AK, a straight-line distance of 5,632 km. This is the longest distance between banding and recapture for any hummingbird species. She did not return to the home in Tallahassee, or to the location in Alaska, in subsequent years.

The second Rufous recapture was an adult female banded in Dunster, British Columbia, on 19 Jul 2011 by Curtis and Bonnie Culp. The bird was recaptured by Fred Bassett on 28 Dec 2011, in Foley, AL, a straight-line distance of 3,621 km between banding and recapture. The bird returned to the same residence the following winter and was recaptured again on 19 Dec 2012. She did not return to the yard in Alabama during the winter of 2013-2014.

The third recapture was a second-year male Rufous banded by Fred Dietrich in Tallahassee, FL, on 20 Jan 2014. The bird had completed approximately 70 percent of its flight feather molt when it was captured. It was color marked with a pink dot on the forehead and was observed in the yard until the first week in February. It was recaptured by Katie Allen in the Tijuana River National Estuarine Reserve near Imperial Beach, CA, on 17 Apr 2014, a straight-line distance of 3,106 km.

The female Rufous recaptured in Chenega Bay, AK, on the west side of Prince William Sound, was likely at or near her breeding grounds. In their study of migratory connectivity in Rufous using feather deuterium, Moran et. al (2013) suggest it is not likely that Rufous overwintering in the southeastern US come from the far western breeding grounds. However, this female Rufous clearly did. It is not known whether the second recapture, the female Rufous banded in Dunster, British Columbia, was a breeding bird at that location or a migrant. She did, however, demonstrate strong site fidelity to her wintering location.