

Discovery of a presumed-lost specimen of Smooth-billed Ani (*Crotophaga ani*) from Louisiana, with comments on the dispersal abilities of anis

J. V. REMSEN, JR. • MUSEUM OF NATURAL SCIENCE AND DEPARTMENT OF BIOLOGICAL SCIENCES • LOUISIANA STATE UNIVERSITY
BATON ROUGE, LOUISIANA 70776 • (NAJAMES@LSU.EDU)

PAUL R. SWEET • DEPARTMENT OF ORNITHOLOGY • AMERICAN MUSEUM OF NATURAL HISTORY • NEW YORK, NEW YORK 10024



Figure 1. Specimen (AMNH 793532) of Smooth-billed Ani (*Crotophaga ani*) from Louisiana. Photograph by Margaret Hart.

Abstract

Twenty years ago, Smooth-billed Ani (*Crotophaga ani*) was removed from the official list of birds known from Louisiana because the specimen on which the original record was based had been presumed lost, and its identification could not be corroborated. Furthermore, the natural occurrence of the species in Louisiana seemed highly unlikely. We rediscovered the lost specimen and confirmed the identification and the authenticity of the specimen. We summarize evidence that all three species of anis exhibit patterns of dispersal that are unexpected given their short, rounded wings and generally nonmigratory behavior.

History

Smooth-billed Ani (*Crotophaga ani*) was included in the list of species officially known

from Louisiana by Lowery (1974) based on a specimen from Diamond (Mississippi River delta in Plaquemines Parish) taken by H. L. Ballowe, a resident of Buras (near Diamond), in "midsummer" 1893 (Beyer et al. 1908). Ballowe lived for many years in Buras and sent the specimen to George E. Beyer (Arthur 1931), one of Louisiana's first resident professional ornithologists. The renowned Harry C. Oberholser subsequently published the precise date of the specimen (18 July 1893) and confirmed its identification, presumably having seen the skin (Oberholser 1938).

Although Lowery (1974) included the species on the official roster of birds known from Louisiana, he noted that the specimen was supposedly in the collection at Tulane University but evidently lost. Further, Ballowe reported seeing about 20 more Smooth-

billed Anis in winter between 1893-1929 but never reported any Groove-billed Ani (*C. sulcirostris*), a very similar species documented on many occasions in the lower Mississippi River delta, including during that time period (Arthur 1931). No verifiable record of Smooth-billed has been obtained subsequently in Louisiana. Smooth-billed Ani does not have much of a track record as a disperser, and the nearest populations, in southern Florida, may not have become established there until the early decades of the twentieth century (Roberston and Woolfenden 1992, Stevenson and Anderson 1994), long after the Louisiana specimen was collected.

Together, these doubts led the Louisiana Ornithological Society's Bird Records Committee to remove Smooth-billed Ani from the official state list (Schulenberg 1988), and this decision has been followed elsewhere in synopses of the species' distribution (e.g., A.O.U. 1998).

The lost specimen

In 2007, Remsen noticed that the recently available computerized holdings of the bird collection of the American Museum of Natural History (AMNH) listed a specimen of *C. ani* from Louisiana (Figure 1). Assuming this to be an error, Remsen contacted Sweet, who then found that the specimen label matched the detail above for Ballowe's "lost" specimen from Diamond (Figure 2). It had been given to AMNH in November 1969 by "Texas Technical College" (now Texas Tech University); M. K. Rylander's (e.g., Rylander 1967) connection to both institutions provides a possible clue as to how a specimen from Tulane University could end up at Texas Tech.

We confirmed the identification of the specimen (AMNH 793532), which is indeed a Smooth-billed Ani. In addition to the absence of the grooves on the bill typical of *C. sulcirostris*, it shows the typical bill shape and form (Mlodinow and Karlson 1999) with respect to the prominently arched culmen that curves slightly downward as it approaches the

forehead as well as the thick gonys on the lower mandible that results in the lower mandible being narrower basally than distally. The abrupt decurvature at the distal end of the mandible is unlike Groove-billed's gradual curvature (Quinn and Startek-Foote 2000). Therefore, we consider the specimen as definitive documentation of the species' occurrence in Louisiana. The plumage on the neck and back is not in good condition, and so we were unable to assess whether the specimen showed the subtle differences between the two species in coloration there (*C. ani* has slightly broader, greener, less bronzy streaking on those feathers than does *C. sulcirostris*; Balch 1979).

Anis as dispersers

A factor contributing to skepticism over the validity of Louisiana's record of Smooth-billed Ani is that this species is generally nonmigratory and that its apparent flight abilities make it an unlikely candidate for a long-distance vagrant. With its relatively short, rounded wings, this species typically flies no more than a few meters a time, typically not much above the vegetation layer. Hilty (2003) described the flight as "weak and barely utilitarian, typically a few quick flaps and a wobbly sail as members of a group straggle across an opening."

Despite its seemingly low potential for moving long distances, the species has previously been recorded as a vagrant in North America from North Carolina (Pearson et al. 1942), South Carolina (Dick 1983, Post and Gauthreaux 1989), and Ohio (McLean 1995, McLean et al. 1995), i.e., up to 1400 km north of its breeding range. A specimen taken near Philadelphia, Pennsylvania by John Krider sometime in the mid-1800s (ANSP 24271)

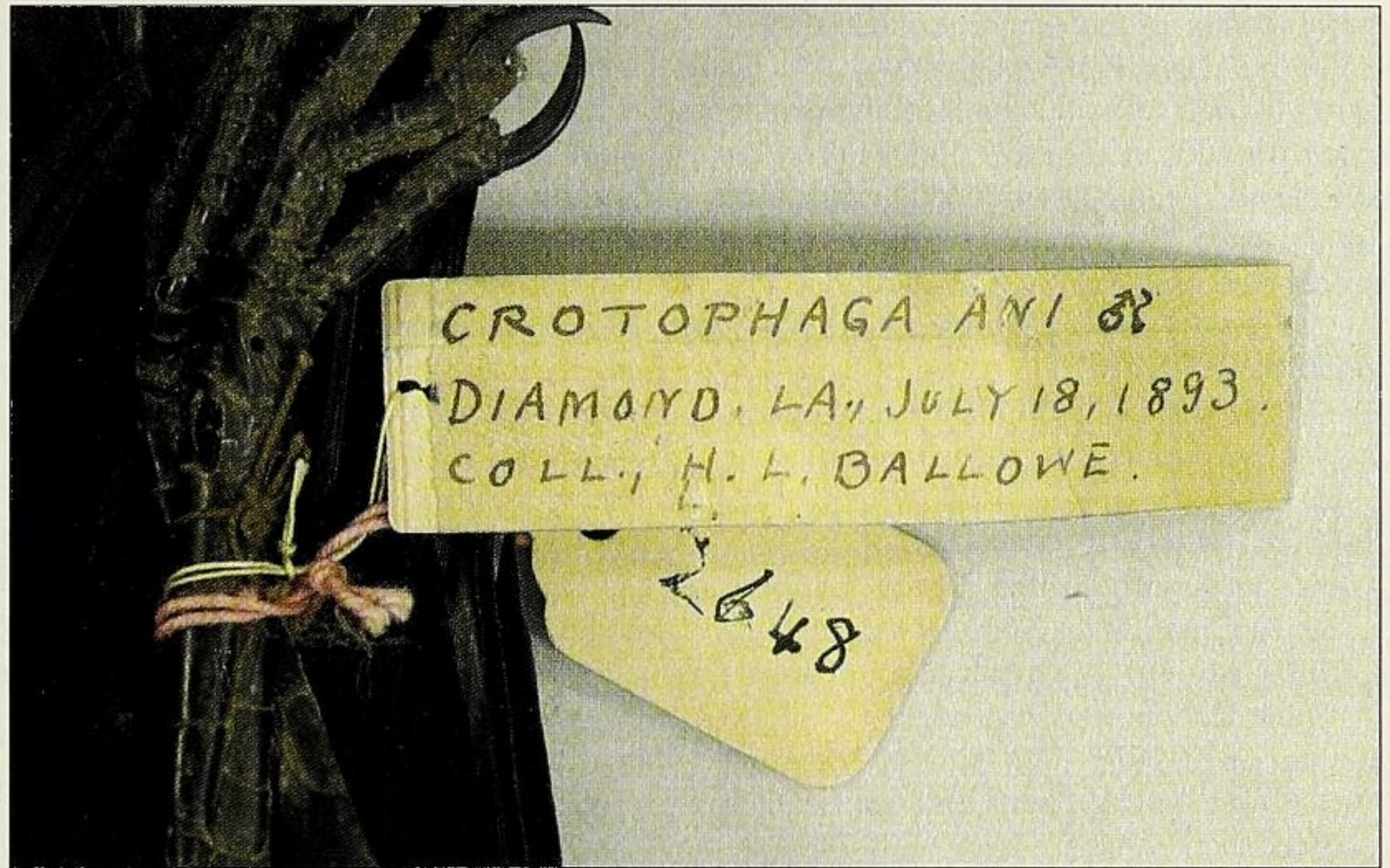


Figure 2. Specimen label (AMNH 793532) of Smooth-billed Ani (*Crotophaga ani*) from Louisiana. Photograph by Margaret Hart.

eral sources have reported it as September 1849 (Turnbull 1869, Warren 1890; details of this record based on ms. by Keith Russell).

Smooth-billed Ani's distribution, and lack of geographic variation, suggest excellent dispersal ability. It is found on most islands in the Caribbean, including relatively isolated Isla Providencia, the Cayman Islands, Isla Cozumel, and Isla San Andrés (Howell and Webb 1995, A.O.U. 1998, Raffaele et al. 1998), as well as on Isla Coiba off the Pacific Coast of Panama (Wetmore 1968). The population on the Galapagos Islands is generally considered to have been introduced by humans (to control grasshoppers), although subsequent dispersal among the islands may have occurred naturally; see discussion in Grant

also reported "frequent occurrences" on the Dry Tortugas, where it is not resident, and this would suggest regular overwater movements. Anecdotal information suggests that the status of the species on some of the smaller, near-shore islands in the Caribbean is irregular and fueled by periodic invasions (Howell and Webb 1995, Raffaele et al. 1998). On rare occasions, observers in the Greater Antilles have seen Smooth-billed Anis perform overwater flights to small nearshore islands or flights at about 100 meters' altitude (Figure 3).

The track record of the closely related and morphologically very similar Groove-billed Ani (*C. sulcirostris*) as a long-distance disperser is well established. Although its flight behavior is essentially identical to that of Smooth-billed Ani, Groove-billed has been recorded regularly north of the breeding range in North America, including as far north as central California, southern Nevada, northern Arizona, northern Colorado, South Dakota, Minnesota, Wisconsin, Ontario, Virginia, Maryland, and New Jersey, i.e., to 2000 km north of its northernmost breeding localities. See Mlodinow and Karlson's (1999) detailed tabulation of North American records beyond its limited breeding range.

The third member of the genus, Greater Ani (*C. major*), is restricted mainly to tropical South America and would seem even less likely than its congeners to make long-distance movements. However, populations at the southern limit of its range are somewhat migratory (Payne 2005). Although the record of two specimens (21 and 23 April 1960) from Tamaulipas, Mexico, has been considered to represent a relictual population (Olson 1978), another possibility, albeit much

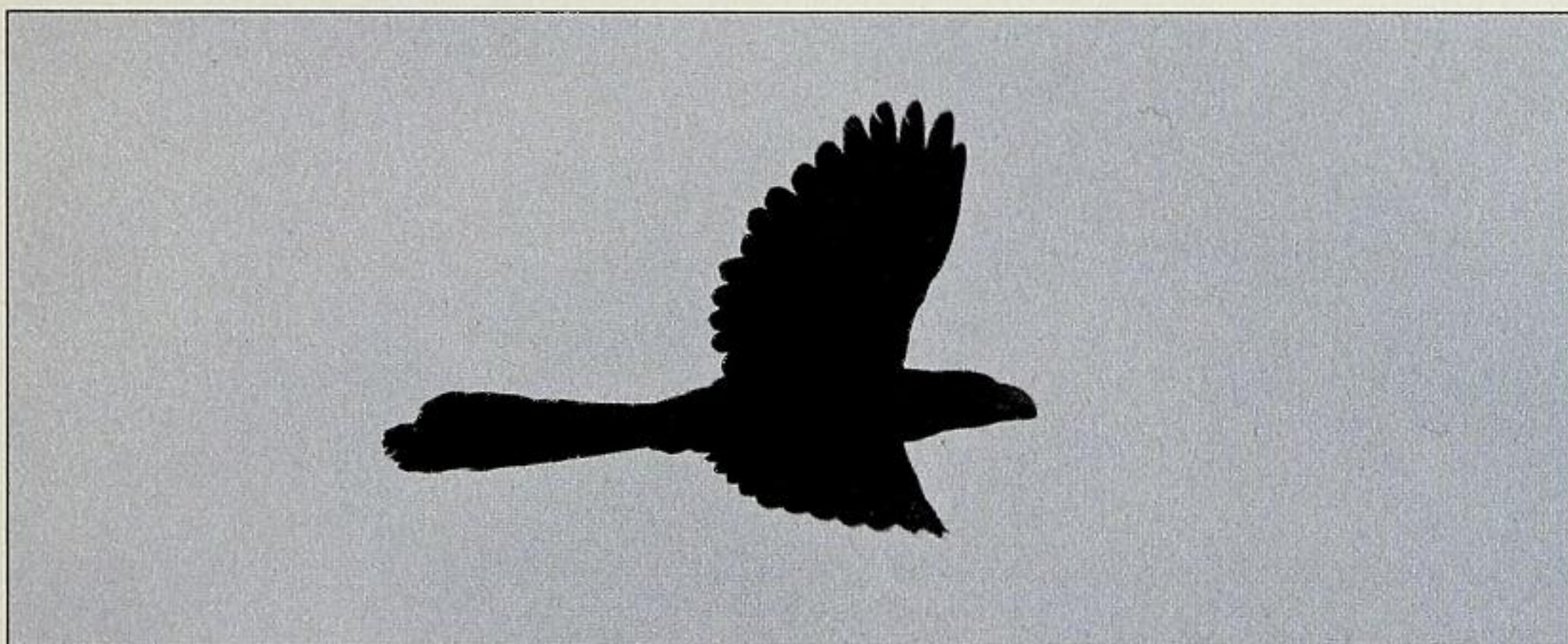


Figure 3. Smooth-billed Ani in high, direct flight over golf course at Palmas del Mar resort, southeastern Puerto Rico, 6 April 2006. Photograph by George L. Armistead.

has long been ascribed to Petty Island, Camden County, New Jersey (Stone 1894, A.O.U. 1957) but may have been collected downriver along the Delaware River in south-central Philadelphia (Krider 1879); the exact date and year is not known with certainty, but sev-

and de Vries (1993) and Wiedenfeld (2006). Yet despite this extensive insular distribution, no geographic variation has been described. This may reflect the recency of colonization, but it also might reflect continued inter-island dispersal. Robertson and Woolfenden (1992)

more remote, is that the record represents a pulse of long-distance vagrancy (1200 km north of the nearest known breeding population). Howell and Webb (1995) considered the record hypothetical, noting that fieldwork in the area before and after the specimen records did not reveal a population.

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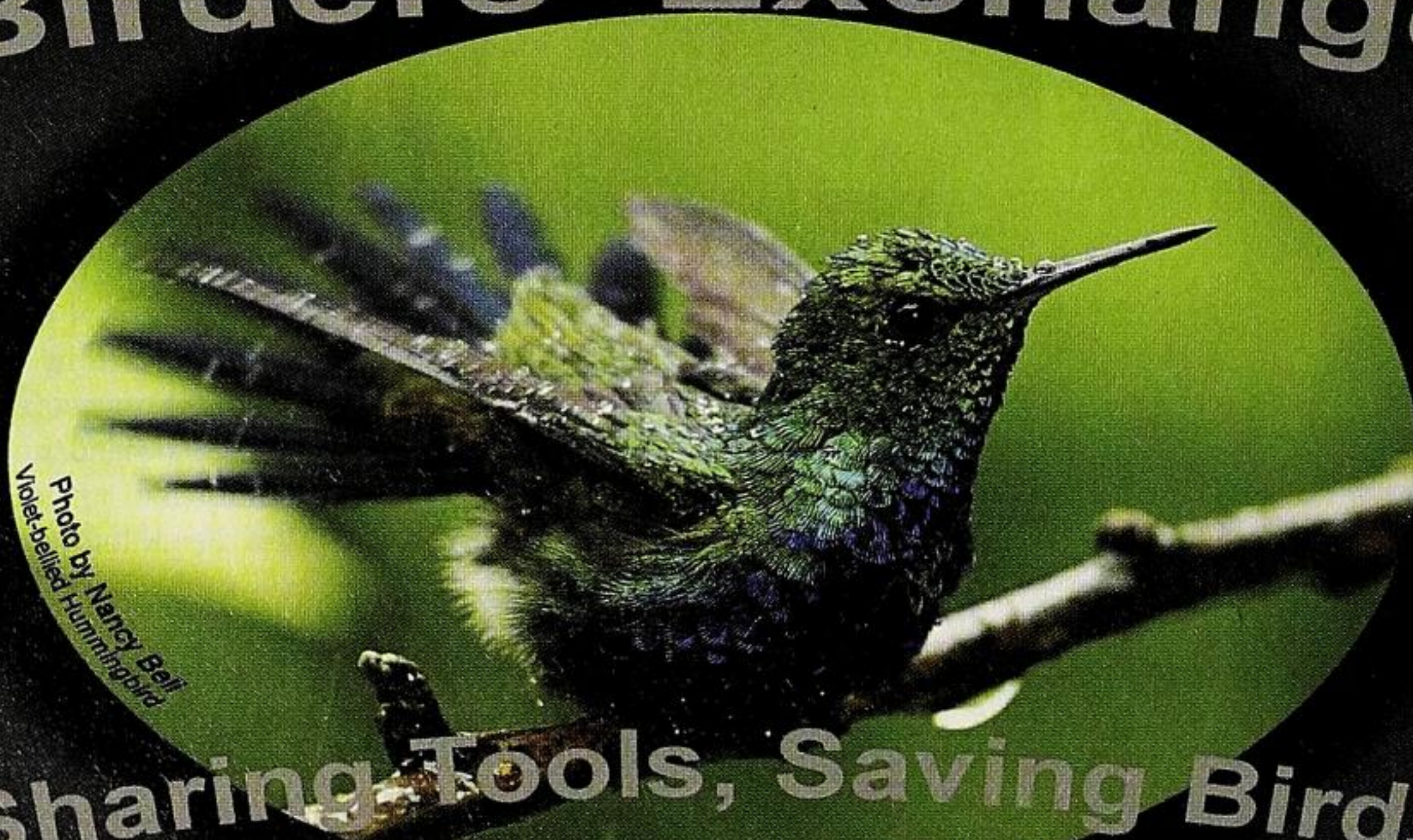


Photo by Nancy Bell
Violet-bellied Hummingbird

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