Kansas Ornithological Society
BULLETIN
PUBLISHED QUARTERLY
Vol. 63 December, 2012 No. 4

ACTIVE ANTING BY A SCISSOR-TAILED FLYCATCHER

David A. Rintoul

Division of Biology, Ackert Hall, Kansas State University, Manhattan KS 66506-4901 (drintoul@ksu.edu)

"Anting" behavior has been described in many bird species worldwide (Craig, 1999, Ehrlich et al., 1986, Potter, 1970), and can be classified as active (where the bird captures an insect and places it in the feathers) or passive (where the bird allows insects to crawl over the feathers). There is one previous report (Husak and Husak, 1997) of passive anting by Scissor-tailed Flycatchers (*Tyrannus forficatus*). Those authors reported that a female Scissor-tailed Flycatcher was observed to land on, and sprawl over, a mound created by harvester ants (*Pogonomyrex barbatus*), allowing the ants to crawl over her ruffled and spread feathers. She then moved to a tree and preened, possibly removing the ants from the feathers. There is no report of active anting by Scissor-tailed Flycatchers.

At approximately 9:45 AM on 4 July 2011, I observed an instance of active anting by a Scissor-tailed Flycatcher, when it captured an insect in its beak and then preened its underwing and breast feathers with the insect still held in the beak. The adult male, based on 10th primary shape (Pyle, 1997), was attending two juveniles that were perched in a hackberry tree (*Celtis occidentalis*) on Marlatt Avenue, about 2 km west of Manhattan, Kansas (39.22925°N, 96.64132°W). The juveniles were fully capable of flight, but two adult birds, including the subject of this report, were foraging over a nearby pasture and then feeding the young birds. After one such trip over the pasture the male apparently caught a flying insect and brought it back to the tree where the young birds were located. He did not immediately feed this insect to the young birds, as he had been doing with previous insects he captured that morning, nor did he eat it himself. After perching for 20-30 seconds on an outer dead branch of the tree, he moved into a more densely-foliaged section near the center of the tree. He then proceeded to manipulate the underwing coverts on his left wing, while holding the insect in his beak and rubbing it along the length of several of the feathers (Figure 1). After about 10 seconds, he folded his wing and sat with the insect still firmly clamped in his beak. He then pushed his beak, still holding the insect, into the upper breast feathers for a second or two (Figure 2). After that he flew off toward the back of the tree, still holding the insect. I was unable to see if he then ate the insect, fed it to the young birds, or discarded it.

Figure 1: Scissor-tailed Flycatcher (*Tyrannus forficatus*) rubbing the captured insect along the underwing feathers. Note the notched shape of the 10th (outermost) primary feather. Photo by D.A. Rintoul.

Figure 2: Scissor-tailed Flycatcher rubbing the captured insect into its breast feathers. Photo by D.A. Rintoul.

It is difficult to determine the identification of the insect from examination of the photographs. It was captured by the flycatcher on the wing. Hymenopteran-like wings are visible in some of the photographs, and the insect had a thin-waisted profile (see Figure 3) that would seem to rule out some other insects such as beetles, cicadas, etc. It seems likely that it was some sort of flying bee, ant, or wasp.

Figure 3: Perched Scissor-tailed Flycatcher, showing the profile of the captured insect. Photo by D.A. Rintoul.

The function of anting is unknown; there are at least two (not mutually exclusive) hypotheses to explain this behavior. One explanation, the "dietary" hypothesis, posits that the bird wipes bees and ants over the feathers, allowing the insect to discharge its chemical defenses and rendering the insect more fit for ingestion. The other explanation, the "fumigatory" hypothesis, posits that birds receive some benefit from the chemicals discharged by the insect, perhaps controlling ectoparasites (both arthropods and microbes) with the insect chemical discharges. There is evidence for the dietary hypothesis (Eisner and Aneshansley, 2008) as an explanation for the behavior of Blue Jays (*Cyanocitta cristata*) when they encounter formicine ants (*Formica exsectoides*). There is little or no evidence for the fumigatory hypothesis, and some evidence (Revis and Waller, 2004) that ant secretions have no effect on avian ectoparasites in experiments done *in vivo*. The observations in this report seem to be consistent with the dietary hypothesis, particularly since the bird was actively feeding young both before and after the events described.

LITERATURE CITED

Craig, A. 1999. Anting in Afrotropical Birds: A Review. Ostrich 70(3-4):203-207.

Ehrlich, P.R., D.S. Dobkin, and D. Wheye. 1986. The Adaptive Significance of Anting. Auk 103(4):835.

Eisner, T. and D. Aneshansley. 2008. "Anting" in Blue Jays: Evidence in Support of a Food-Preparatory Function. Chemoecology 18(4):197-203.

Husak, M.S. and J.F. Husak. 1997. Anting by a Scissor-tailed Flycatcher. Southwestern Naturalist 42(3):351-352.

Potter, E.F. 1970. Anting in Wild Birds, Its Frequency and Probable Purpose. Auk 87(4):692-713.

Pyle, P. 1997. Identification Guide to North American Birds: Part 1; Columbidae to Ploceidae. Slate Creek Press, Bolinas, CA. 732 pp.

Revish, H.C. and D.A. Waller. 2004. Bactericidal and Fungicidal Activity of Ant Chemicals on Feather Parasites: An Evaluation of Anting Behavior as a Method of Self-medication on Songbirds. Auk 121(4):1262-1268.

KANSAS ORNITHOLOGICAL SOCIETY OFFICERS 2012-2013