



FIELD EVIDENCE SUGGESTS THAT SOME MIGRANT LOGGERHEAD SHRIKES BREED ON WINTERING GROUNDS

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Abstract.

*I describe evidence gathered over 25 years of in-hand examination for banding free-flying loggerhead shrikes (*Lanius ludovicianus*) in the field. Nestlings were not studied nor banded. Close examination of plumage, molt, wing and tail measures gives more precise information than any other means. Although I sometimes encountered young birds of questionable age during spring migration in Colorado, this winter-breeding hypothesis did not emerge until finding nestling shrikes in Texas in January and February. Then, combined with the capture of young shrikes in late February and April in Colorado, this hypothesis was created.*

Key words: *Winter-breeding, wintering territory, migrant loggerhead shrike, very young birds (<40d), treadle-door trap, banders, stable isotope analysis*

INTRODUCTION

I first became intrigued by loggerhead shrikes when I accidentally caught one on a Bal-chatri trap I'd thrown for a hawk in Florida in the late 1980s. The hawk moved on, but the mouse in the Bal-chatri attracted a shrike, which was caught in one of the trap's nooses. Freeing this feisty little bird left me bloodied, but the encounter ignited my curiosity. Shrikes are not popular birds, since they're listed as "predatory songbirds". For the most part, they catch insects, but also lizards, small snakes, roadkill, mice, and an occasional bird. Prey is often impaled on thorns, barbed wire or yucca tips, which may allow toxins in prey such as anole lizards or lubber grasshoppers to degrade. A row of impaled prey is often used by male shrikes to attract females. This behavior has earned shrikes the nickname "butcher bird".

CAPTURE METHODS

After a lot of thought and experimentation with different designs, I finally created a circular treadle-door trap that worked very well; my capture rate was 96%. During the past 25 years, I've spent many hours touring back roads in eastern Colorado and nearby states. Central flyway shrikes breed on Colorado's eastern plains, but winter farther south in New Mexico, Texas and Mexico. My trap was baited with a small mouse, safely housed in a protective cage in the center of the trap. When a perched shrike was spotted, I lowered the trap through the car window to the side of the road, backed up the car, then waited for the shrike to approach.

"Loggerhead" means large head (full of muscles), and shrikes are notorious biters. It's been shown that the bite of a shrike is, gram for gram, stronger than any raptor (Diego Sustaita, pers. comm.). The shrike's sharply hooked bill prompted me to invent a handling method using a short, closed-end tube. I drilled air holes in the bottom of a clean

plastic spice bottle measuring 1 $\frac{3}{4}$ " in diameter, then cut off the top end so the tube measured about 4" long. Tubes are made from spice bottles containing only parsley or thyme, never from chili, pepper or other spice oils that would irritate the bird's eyes. (Banders should carry one 2" diameter tube in breeding season to accommodate fat, egg-laying shrikes). Traps and tubes are carefully sanded and smoothed so there are no sharp edges or protruding wires.

FIELD WORK RESULTS

In 1991, I moved to Colorado Springs, CO, where I obtained Federal and State permits to catch and band wild birds. Since I already had the tools and knowledge to catch shrikes, I decided to focus on catching shrikes in Colorado. During mild winters, a few loggerhead shrikes can be found on Colorado's plains. Northern shrikes (*Lanius excubitor*) may occasionally be found on the plains and in suburbs as well. Weather permitting, I spent time in the field every month of the year. Beginning in March and April, I started catching early migrants. All these were adults and second-year birds in varying stages of molt. Then one late February morning, I caught a young bird that I could only age as hatching-year. Some juvenal feathers were retained on the head; flight feathers and rectrices were still sheathed at the base, indicating that the bird was less than 40 days old. Molt of secondary coverts had not yet begun. Under-wing feathers were sparse; wing and tail measures were short by 5 or 6 millimeters. I was stunned. Where had this bird been hatched? Certainly not on the high plains of Colorado. This capture encouraged me to return promptly to my field route, where during the next 2 weeks I caught 2 more similarly-plumaged birds with retained juvenal feathers on the head (Fig. 1). I also caught the usual second-year and after-second-year migrating shrikes.

In the winters of 2010 and 2011, I obtained state and federal permission to band birds in Texas, so I started out in early January for a 2 week banding trip. There I found lots of wintering shrikes. On 2 separate days, I caught and banded 33 shrikes with my trusty little traps. In 2011, I was lucky enough to recapture a shrike banded by Amy Chabot from her previous Texas work. Then, in Texas, early-January 2012, I caught a hatching year shrike. It seemed independent of parents, had retained juvenal feathers on the upper back and head, some remaining yellow gape at the corners of the mouth, and had the same molt characteristics as those mysterious migrants I'd caught in Colorado. A few hours later, I caught another shrike with the same characteristics. These captures were decidedly unique.

Significantly, birders in Texas often find nests of loggerhead shrikes in late February and March, indicating that resident shrikes breed early in the south. A shrike enthusiast in Florida found a nest of begging nestlings near the eastern coast of Florida in mid-January. Dr. Reuven Yosef, who did seminal shrike research at Florida's Archbold Biological Research Station during the 90s, caught newly-fledged shrikes during his winters there (pers. comm.). Since aging these birds was not part of his research thesis, they were not considered significant.

CONCLUSION

I have come to realize that over the years, I have caught numbers of these age-suspect birds in Colorado. Some were slightly older, with a few molted secondary coverts, but without any feather wear, fading or secondary molt. A few even had retained juvenal feathers on the head. These birds are readily distinguishable from previous-summer-hatched second-year shrikes, which have clearly molted secondary coverts, show primary feather wear, fading of retained secondaries, and varying numbers of molted inner secondaries.

These observations of winter nesting are anecdotal, but may support the idea that some migrant shrikes breed during favorable winters in southern states. These winter hatchlings then migrate out with other migrant shrikes, and subsequently breed in summer habitats. It has been shown that a few summering locations (south-eastern Alberta and southern Saskatchewan) have experienced an increase in breeding shrikes, which is unusual for this declining species (Amy Chabot, pers. comm.). Obviously additional field study is needed, along with stable isotope analysis in feathers of young shrikes showing where these

young birds were hatched. In springtime, shrike banders everywhere should be on the lookout for birds of questionable age. Aside from noting that the age is "unknown", the Banding Lab has no category for winter-hatched birds that may be only a few months old. In-hand examination, plus looking for telltale signs of newly fledged birds will lend further support to this hypothesis.

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Figure 1. A Hatching Year Loggerhead Shrike (*Lanius ludovicianus*) caught and banded on 1 April 2011 on the plains east of Colorado Springs. Photo: Susan Craig.