Peer-Reviewed Article:

Comments on Winter Shrike Identification in Missouri

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During the winter months, Missouri has the benefit of the presence of both Loggerhead and Northern Shrikes. The two species are similar in their appearance, and both prefer open areas with scattered bushes and trees. These similarities warrant a deeper discussion of the differentiating features that allow the observer to make an accurate field identification.

Missouri Occurrence

Loggerhead Shrikes are not only year-round breeding residents, but migratory populations also move through each spring and fall, and some will overwinter in the state. Loggerhead Shrikes have "the highest densities in the Osage Plains and Mississippi Lowlands" during winter, although "during severe winters fewer are present in the north."(Robbins, 2018) A noticeable migration occurs from late September to mid-November, peaking in October. One juvenile Loggerhead Shrike banded in Saskatchewan on July 31, 1953 was recovered a few months later, on September 23, at Cross Timbers in Hickory County, Missouri – 1953 miles away. By late March, Loggerhead Shrikes are back on their breeding territories in Northwestern, West Central and the Southeast corner of Missouri (Robbins, 2018).

Northern Shrikes arrive at the end of October into November, with the earliest Missouri arrival date being October 24. Most have left the state by mid-March, with April 8 being the latest date for a Northern Shrike in Missouri. During non-irruption years, Northern Shrikes are found in low numbers north of the Missouri River and in the Osage Plains region, with rare occurrences south to Barton County in the western part of the state (Robbins 2018). During irruption years they have been documented as far south as the Arkansas border and even in the "bootheel" (Eades 2008). However, the species is still listed as accidental in the Ozarks and the extreme southeast. Thus, documentation is still needed in those regions of the state. In all other parts of the state it is listed as only rare and does not require documentation to the Missouri Bird Records Committee (MBRC), although eBird will prompt the observer to enter details or photographs.

The Loggerhead Shrike Working Group cites a 76% decline in population since 1966, resulting in a priority listing on more than two-thirds of State Wildlife Action Plans. Breeding Bird Survey data indicate an 8.9% annual decline from 2003-2013 (Robbins 2018). As a result, Loggerhead Shrikes are a Species of Conservation Concern in Missouri.

Often the two species are presumed to be easily differentiated in the field; however, they can present a variety of ID challenges that observers should be prepared for. A careful assessment of field marks can help when identification is not immediately apparent.

Profile

Most often an observer notices the profile of a shrike first (figure 1). Loggerhead Shrikes are named for their blocky heads that seem large in comparison to their slim bodies, while Northern Shrikes have an overall rounder, proportional shape with the size of the head corresponding neatly to the rest of the body, as well as the appearance of a noticeably longer tail.

Mask

One of the field marks most relied upon for differentiating the two species is the black mask (figures 2 and 3). Loggerhead Shrikes have a wider, continuous, mask extending above and behind the eye and usually above the bill, while Northern Shrikes typically do not have any black on the forehead and exhibit a narrow white arch over the base of the bill (Pittaway and King 2014). Some caution is urged, as it is possible for a Loggerhead to lack black over the bill or for a Northern to have black in this region. Furthermore, the mask of a Northern Shrike is typically much narrower and does not encompass the entire eye, leaving the upper curve of the eye extending in a "bubble" above the mask. The white supercilium is not only broader

Figure 1: Each shrike species can exhibit a “typical” profile, especially during winter months. While these profiles may be typical of each species to a certain point, the species profiles can overlap, and this mark should be used with extreme caution.

Loggerhead Shrike (top): Often a slimmer, smaller-bodied look with a larger blocky head.

Northern Shrike (bottom): A common profile exhibiting a round or “puffed-up” body where the flanks can often obscure the coverts. Note the shape of the head, more proportional to the body, along with the somewhat raised tail.

in Northern Shrikes, but extends well beyond the eye as compared to the supercilium of a Loggerhead Shrike, which extends just barely beyond the eye. Pale lores, white below the eye, and white nasal tufts also point to Northern.

Bill

The bill is also often referred to as a key identification feature (figures 2 and 3). Northern Shrikes have a longer, narrower bill with a prominent hook. This can be a difficult field mark to observe, especially at a distance. A pale base to the bill is also often thought to signal Northern. Again, caution should be used, as some immature Loggerheads may have a pale base to the mandible into late fall and winter, while Northern Shrikes may have pale areas extending to the upper mandible. Both species can transition to all dark bills in spring as they obtain their breeding plumage.

Figure 2. A Loggerhead Shrike that at first view has some features that may steer the observer toward a Northern Shrike. Bird shows a pale base to the mandible and while indeterminate, it appears to lack black over bill. Both features could signal a Northern Shrike; however, the white supercilium ends just above/past the eye.

Figure 3:

The most conclusive identification marks for distinguishing the two species are often the bill and the facial markings.

Loggerhead Shrike (top): Note a wide, dark mask which often bridges over the top of the bill across the forehead. Occasionally the black does not fully cross over (as pictured). Loggerheads can also show a white band across the forehead and to the eyes, but maintaining an even width. The bill is shorter and more rounded than in Northern, but can sometimes show a pale base (as pictured).

Northern Shrike (bottom): Northern Shrikes can show a large variation in the amount of white present in the face, but they almost always show an incursion of white under and often in front of the eye, while Loggerhead will never show a white lower eyering. The bill is slightly longer and slimmer, and can show a more pronounced hook, but hook length is variable in both species.

Chest

A barred (vermiculated) chest is typically noted as a prominent field mark for identifying Northern Shrikes. However, Loggerheads in fall and early winter may show some barring, though never as extensive as in a Northern (Figure 4). Specimens from the collection of the University of Kansas (KU) collected from late October through May were examined, and Northern Shrikes were determined to have significantly more prominent and extensive ventral barring (Robbins, personal observation, 8 February 2019). A lesser amount or complete lack of barring is not conclusive evidence that the bird is a Loggerhead, but distinct barring is another field mark suggesting Northern. Caution is again advised, as by late winter and early spring the barring can be absent from both species.

Back and Rump

Loggerhead Shrikes have darker gray upperparts, with the darkest

Figure 4. In this photo of a Loggerhead Shrike, the shadow and underexposure bring out faint barring on the chest. This would be much more pronounced on a Northern Shrike.

hue on the crown. This provides a clear distinction between the breast and top of the head. This contrast is much less noticeable in Northern Shrikes, which are said to have a 'French grey' shade on their backs. The KU Collection showed the back in Loggerheads was always much darker gray than in Northerns (Robbins, personal observation, 8 February 2019). Determining the shade of gray in the field can be difficult depending on lighting conditions, i.e., bright sunlight and angles, making this field mark unreliable.

A white rump can suggest a Northern and a gray rump can suggest a Loggerhead, but other confirming field marks need to be evaluated. Further complicating identification, Loggerheads that breed in the western and upper Great Plains are paler dorsally in comparison to resident and eastern Loggerheads, and exhibit white on upper tail-coverts and scapulars. The banded Saskatchewan bird previously mentioned was of the Great Plains subspecies.

<u>Additional Considerations</u>

Sibley (2010) reviewed an interesting shrike on Long Island, New

Figure 5. Loggerhead Shrikes retain their juvenile greater coverts until one year of age. Loggerhead Shrikes can be definitively identified and aged by the buffy edges on the greater coverts.

York. The ultimate confirming feature was pale tips on the juvenile greater coverts. Loggerheads reliably maintain their juvenile greater-primary coverts, showing buffy edges despite wear, until they are replaced at a year of age. The age of a Loggerhead Shrike can be reliably determined by retention of the juvenile greater coverts (Yosef, 1996). However, this can be exceedingly difficult to observe under field conditions.

Identification Summary

When differentiating shrikes in the field check for the following field marks that would indicate the bird is a Loggerhead Shrike:

- Overall profile shows a head that appears too large in proportion to a body that is thin or small, with an unremarkable appearance of tail length.
- A wide mask that extends above the eye and over the bill, but at least in some individuals this can be difficult to see just above the maxilla (upper part of bill).
- Some immature Loggerheads may have slight barring on the breast, but it is never as extensive and bold as that in Northerns.
- Darker upper parts, especially on the head, that clearly stand out against the pale breast. Bright sunlight and angle can give Loggerheads the appearance of a light dorsum.

Northern Shrikes have a greater presence in irruption years, when they may be found statewide. Watch for:

- Overall profile shows head proportional to a body that has a more compact, rounded appearance with a longer tail.
- A narrow mask that does not fully enclose the eye.
- A relatively wide, white supercilium that extends beyond the eye and over the base of the bill.
- Diagnostic pale lores and white under the eye.
- Noticeable, relatively bold barring on the chest.

Beware, as many of these field marks can point to one species but not necessarily rule out the other one. Consideration should be made of multiple field marks when making a conclusive identification, and quality photos are helpful to document your observation and further assist with identification.

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