

PHOTOGRAPHIC EVIDENCE OF A WESTERN MEADOWLARK ATTACKING AND KILLING A DEERMOUSE

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ABSTRACT.— A western meadowlark was observed pursuing and attacking a deer mouse under mild weather conditions with readily available seasonal food in northeastern Oklahoma. The event was documented with photographs. Our report represents the first known photographic documentation of a meadowlark attacking a mouse. It is not known whether the attack behavior was predatory or defensive in nature.

Opportunistic predation associated with seasonal variation in food availability has been reported in passerines, including the Western Meadowlark, *Sturnella neglecta*. For example, at a study site in southeastern Washington, Rotenberry (1980) showed that seasonal changes in the diet of passerines was correlated with the availability of seed and insects, the normal diet for the species investigated. Additional observations made during harsh weather conditions documented meadowlarks feeding on carrion (Lanyon 1995), killing and feeding two American Tree Sparrows (*Spizella arborea*; Tyler and Choate 1990), and carrying the carcass of a mouse-sized animal (Tyler and Choate 1990). In Oklahoma, meadowlarks have been observed attacking and eating American Goldfinches (*Carduelis tristis*; Bell 1990) and Pine Siskins (*Carduelis pinus*; Waters 1990) following a heavy snowfall. We are not aware of any reported instances of predation on mice by meadowlarks.

We present photographic evidence of a Western Meadowlark attacking and killing a North American Deer mouse (*Peromyscus maniculatus*) under mild weather conditions with normal seasonal food readily available. Because of the mild weather during our observed episode, we consider the possibility of a defensive attack in addition to predatory behavior.

SITE CONDITIONS AND METHODS

The date of the observation was November 19, 2009 at a location below the dam at Hulah Reservoir, Osage County Oklahoma, at a point approximately 36°55'56"N, 96°4'50"W. The site was an open, well-maintained grassy slope between the road at the top of the dam and an access road approximately fifty meters further south. The weather was clear, the ground was free of any snow and the air temperature was approxi-

mately 65° F. The first photograph was taken at 3:34:39 PM, CST and the last at 3:36:02 PM. The meadowlark was approximately 8 meters from the photographers who were in an automobile. The bird flew away shortly after the last photograph was taken as the photographers attempted to move into a better position. It did not return to the mouse while the photographers were present.

All photographs in this paper (DJO) were taken with a Nikon[®] D40X camera with a 150-500mm lens set at 500mm and a shutter speed of 1/1000s. Adobe Photoshop CS3[®] was used to adjust color balance, brightness and contrast and to sharpen and crop the photographs to a usable size. No other alterations were made to the photographs. Additional corroborating photographs (MJD) not presented here were taken.

OBSERVATIONS AND DISCUSSION

During a photographic field trip a bird identified by appearance and normal range (Baskett 1939) as a Western Meadowlark was observed engaged in unusual behavior. It was evident from the action and movement of the bird that it was attacking something in the cropped grass that is located between the dam and the access road that runs on the southeast side of the dam. The meadowlark appeared to be preoccupied with the prey and was not aware of the approach of the automobile. Other birds nearby, including a flock of Red-winged Blackbirds (*Agelaius phoeniceus*), were much more wary of the automobile even though they were feeding in a field next to the access road and bolted as the auto neared. This allowed the photographers to drive their vehicle to within 8 meters of the bird. Using the telephoto lens, it was observed that the prey was a small rodent. It was concluded from the photographs

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Figures 1–8. Sequential photographs taken in November 2009 documenting an encounter between a western meadowlark and a deer mouse in Osage County, Oklahoma. The elapsed time between Fig. 1 and Fig. 7 was 1:23 minutes. Figure 8 represents an enlargement of Fig. 7.



Figure 1 Strike to the left hindquarter area



Figure 2 Strike behind the left ear



Figure 3 Strike to the left throat



Figure 4 Prey released behind the bird



Figure 5 Prey has moved in front of the bird



Figure 6 Prey can be seen below the bird's beak



Figure 7 Strike to the right eye, probably fatal



Figure 8 Strike marks to the throat, face and body

that it was probably a North American Deermouse. The initial attack had taken place prior to the photos so it was not possible to determine the exact duration of the attack. The mouse was observed trying to escape the meadowlark, but the bird continued to pursue the mouse, pecking at it and occasionally lifting it up at the end of its beak (Figure 1). The bird would release the mouse, allow it to move away and then attack it again (Figures 2 - 7). Red marks on the mouse that resulted from strikes from the meadowlark are evident in some of the photographs including clear strike marks to the mouse's right eye (Figures 7-8) that appeared to be fatal. It is highly unlikely that the mouse survived the attack, although the mouse was not inspected to verify its death. This sequence of photographs was taken by one photographer (DJO) and was confirmed by a separate sequence shot by the second photographer (MJD).

CONCLUSIONS

Meadowlarks have been observed killing and feeding on a variety of prey. In all previous instances, the predatory behavior occurred during a period of stress due to inclement weather. In the current observation, no snow was present, the weather was fair, and other food sources were available. The mouse may have presented an opportunity for food and the meadowlark acted on the opportunity. Alternatively, the attack may have been a response to a perceived threat. Deermice (*Peromyscus maniculatus* and *P. keeni*) have been shown to prey on the nests of canopy nesting passerines (Bradley and Marzluff 2003). A deermouse also might pose a threat to ground-nesting meadowlarks. In the absence of further evidence, the authors cannot assign a motive for the observed behavior.

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