

Only Documented Canada Lynx (*Lynx canadensis*) Taken in Illinois

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The Boone County Museum of History (BCMh), Belvidere, Illinois, has on display the only known extant specimen of a Canada lynx (*Lynx canadensis*) taken in Illinois, but the record has never been published (Figure 1). Based on an examination of the photograph included here the identification of the mount as a Canada lynx was confirmed by both Bruce Patterson, MacArthur Curator of Mammals at the Field Museum of Natural History, and Robert Timm, Associate Professor Emeritus of the Department of Ecology and Evolutionary Biology at the University of Kansas. Later, Diana Krejsa, Curator of Birds and Mammals at the University of Wisconsin (Madison) also agreed that the photo is of a lynx. In addition, eleven photos (including close-ups of various body parts) and detailed measurements (taken by Stefanie Altneu DVM in the company of first and third authors) were forwarded to the Canadian Museum of Nature where the identification was further corroborated by Kamil Khidas, Curator of Vertebrate Zoology, and the second author. Although the species identification of the mount is confirmed to be a Canada lynx, determination of the sex based on the recent measurements is currently inconclusive. Canada lynx are sexually dimorphic, with males larger than females, but there is variation and overlap in size depending on age and population (Lavoie et al. 2019).

Skin clips were removed from the toe pads of the specimen; samples were cleaned and tDNA extracted using museum protocols provided by the second author. Attempts by John P. Wares of the University of Georgia to PCR amplify and sequence the isolated DNA proved unsuccessful due to high degradation of the sample.

The BCMh shared with us materi-



Figure 1. Canada Lynx, Boone County Historical Museum, Belvidere, Illinois.

al documenting provenance of the mounted animal. Morris Bulte shot the lynx in 1899 as he was hunting in Spring Township, Boone County, Illinois. Recognizing the rarity of his trophy, Bulte had it mounted, and the specimen stayed in the family for decades (Newton 1967). The family assigned such significance to the lynx occurrence it was mentioned in Bulte's obituary (Republican Northwestern 1945). Meanwhile, Granger Newton, another local resident, began in 1860 to amass an assortment of birds, mammals, and other animals that included a passenger pigeon he killed nearby in 1874 (Republican Northwestern 1944). The Bultes and the Newtons knew each other and eventually the former donated the lynx to the latter's collection (Newton 1967). In 1936, the entire assemblage was presented to the Belvidere High School where it was exhibited for many years (Republican North-

western 1944) until its final conveyance to the museum in 1967.

In the earliest inventory of northern Illinois mammals, Kennicott (1855) includes the lynx as a species occurring in Cook County, but no details are provided. Records of the Academy of Natural Sciences of Drexel University indicate they obtained a lynx specimen from Illinois in 1842, but the skin is no longer present in the collection (McKelvey et al 2000). However, a review of the literature left Hoffmeister (1989) unconvinced that the species "was ever present in Illinois." Lynx have been reported from Lake, Porter, La Porte, and Starke counties in Indiana, although without corroboration (Lyon 1936). An additional animal was supposedly shot in 1873 at Tremont in Porter County (Brennan 1923). As for Wisconsin, an individual was purportedly taken in a tamarack bog in Racine County in 1841 (Leach collection). A male speci-

men originating from Jefferson County was killed in April 1870 and is in the University of Wisconsin collection (Jackson 1961). And finally, Iowa's sole documented lynx was a male shot on 13 July 1963 in Shelby County (Rasmussen 1969).

The aforementioned vagrant records of Canada lynx most likely represent individuals dispersing from Canada during years of high population. Though the northern limit for the geographic range of Canada lynx has not changed significantly during the past two centuries (Lavoie et al. 2019), the southern limit continues to be in a state of flux, with ranges reportedly being pushed northward in southern Canada (Poole 2003). Ecologically, Canada lynx abundance in their southern distribution is largely determined by climate (particularly snowfall; Lavoie et al. 2019), the relative abundance of snowshoe hare (*Lepus americanus*) (Aubry et al. 2000 and other references therein), and interspecific competition with other mesocarnivores such as bobcat (*Lynx rufus*) (Peers et al. 2013) and coyote (*Canis latrans*) (Bunnell et al. 2006); due to the nature of anthropogenic activity in the midwestern United States (e.g., projected climate change and habitat modification), it remains to be seen if Canada lynx sightings and occurrences in this region would change in the future.

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