
New Records of Evening Bats in Washtenaw County, Michigan

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The Evening Bat (*Nycticeius humeralis*) is a medium-sized bat, weighing 9–15 grams (0.34–0.52 ounces), that is abundant in the southern United States. Individuals migrate northward each spring, and reproductive females subsequently form maternity colonies in hollow trees or underneath exfoliating bark (Münzer 2008). Evening Bats are uncommon in Michigan, and have been confirmed in only five southern counties—Kalamazoo in 1938, Washtenaw in 1956, Berrien in 1969, Lenawee in 2004, and Branch in 2013 (Kurta 2008, Denys et al. 2014). Previously, only single records were known from each county except Lenawee, where a maternity colony of at least 40 adults is located (Kurta et al. 2005, Münzer 2008). This colony is farther north than any other discovered maternity colony of this species. Because only this single maternity colony is known, the Evening Bat is considered a threatened species in Michigan (Michigan Department of Natural Resources 2009). The animals from Michigan, along with three from South Dakota (Lane 2003) and one from Point Pelee, Ontario (Kurta 1995), represent the most northern captures of Evening Bats in North America.

Each year, biologists from Eastern Michigan University help identify more than 1000 bats submitted to the Michigan Department of Community Health (MDCH) for rabies testing. While examining bats tested in 2014, the second author discovered two Evening Bats, both adult females from Washtenaw County. The first bat, with a forearm length of 36 millimeters (1.42 inches), was submitted in Ypsilanti on 30 May 2014 and was positive for rabies. The second animal, with a forearm length of 37 millimeters (1.45 inches) was obtained from Ann Arbor on 11 June 2014 and was negative for the virus. Although reproductive condition of the first bat was not determined, the second individual was pregnant with two embryos. Definitive identification of both bats was based on the presence of only one pair of upper incisors and four pairs of upper cheek teeth (Kurta 1995). The positive bat was destroyed following identification, but the negative animal was deposited in the collection of the Michigan State University Museum (MSU 37934).

The two Evening Bats apparently were captured about 40 kilometers (25 miles) northeast of where the maternity colony is located in Lenawee County. The largest home-range size for an individual Evening Bat is less than 6 kilometers² (1400 acres—Morris et al. 2011). Thus, the capture of a pregnant, adult female so far from the only documented maternity colony suggests that a second, more northern, colony exists in Michigan. All extant maternity colonies in Indiana and the one in Michigan are found in bottomland forest (Whitaker and Gummer 2003, Münzer 2008), and we speculate that this new colony occupies mature riparian woods along the Huron River, which flows through both Ann Arbor and Ypsilanti.

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Literature Cited

- Denys, L., J. Mellos, C. D. Rockey, C. Johnson, and A. Kurta. 2014. First record of an Evening Bat in Branch County, Michigan. *Michigan Birds and Natural History* 21:9–12.
- Kurta, A. 1995. *Mammals of the Great Lakes Region*. University of Michigan Press, Ann Arbor.
- _____, 2008. *Bats of Michigan*. Indiana State University Center for North American Bat Research and Conservation, Terre Haute.
- _____, R. Foster, E. Hough, and L. Winhold. 2005. The Evening Bat (*Nycticeius humeralis*) on the northern edge of its range: a maternity colony in Michigan. *American Midland Naturalist* 154:264–267.
- Lane, J. E., C. L. Buck, and R. M. Brigham. 2003. The bat fauna of southeastern South Dakota. *Prairie Naturalist* 35:246–256.
- Michigan Department of Natural Resources. 2009. Michigan's list of endangered and threatened species—effective on 9 April 2009. Accessed 27 January 2015. <http://www.michigan.gov/documents/dnr/2007-007_NR_Threatened_Endangered_Species_nonstrike__9-12_274586_7.pdf>



- Morris, A. D., D. A. Miller, and L. M. Conner. 2011. Home-range size of Evening Bats (*Nycticeius humeralis*) in southwestern Georgia. *Southeastern Naturalist* 10:85–94.
- Münzer, O. M. 2008. Ecology of the Evening Bat, *Nycticeius humeralis*, in Michigan. M.S. thesis. Eastern Michigan University, Ypsilanti.
- Whitaker, J. O., Jr., and S. L. Gummer. 2003. Current status of the evening bat, *Nycticeius humeralis*, in Indiana. *Proceedings of the Indiana Academy of Science* 112:55–60.