## NEW RECORDS OF THE EASTERN PIPISTRELLE (PIPISTRELLUS SUBFLAVUS) IN COLORADO

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On the morning of 30 March 2004, a female eastern pipistrelle (*Pipistrellus subflavus*) was found at the south end of the dam of Wonderland Lake (NW1/4 SE1/4 sec 13, T1N, R71W; elevation 5520 ft), Boulder, Boulder County, Colorado. The animal was picked up and taken to Jarrow Montessori School by teacher Chad Blohm. The bat was retrieved by a wildlife control officer and delivered to the Greenwood Wildlife Rehabilitation Center where it died. At the center K.E. Taylor identified the bat to species and referred it to D.M. Armstrong for confirmation. External measurements were total length, 72 mm; length of tail, 27 mm; hind foot, 7 mm; ear from notch, 11 mm; tragus, 4.5 mm; and forearm, 31 mm. The specimen was dissected by R.A. Adams, was found not discernibly pregnant, and was preserved in alcohol for deposit in the University of Colorado Museum of Natural History.

This specimen represents the 2nd published report of the eastern pipistrelle (Pipistrellus subflavus) in Colorado. The 1st record was a female captured from the side of a dwelling in September 1987 at Greeley, Weld County (Fitzgerald et al. 1989), about 45 mi northeast of the Boulder County locality. That animal is preserved in the Denver Museum of Nature and Science (DMNS 7693). The next nearest locality of capture is at Wildcat Cave, 18 mi SW Lusk, Goshen Co., Wyoming, some 180 mi north-northeast of Boulder (male, DMNS 8510, first reported by Priday and Luce [1996]). Bogan and Cryan (2000) reported the eastern pipistrelle roosting and perhaps hibernating in Wildcat Cave in February and March. Beyond these records, the species is known from southeastern Nebraska, central Kansas, the Texas Panhandle, and eastward (Adams 2003).

In addition, there is an unpublished specimen housed in the Denver Museum of Nature and Science (DMNS 9284), a female eastern pipistrelle captured in Arapahoe County (exact locality not specified) and obtained from the Colorado Department of Public Health and Environment (test date 20 September 1996, Bill Alther personal communication).

Fitzgerald et al. (1989) reported the first specimen of *P. subflavus* from Colorado as a "range extension." Armstrong et al. (1994) speculated that this individual may have been a "disoriented wanderer," and not representative of a resident population, but they did note that this was an intriguing record because eastern pipistrelles are not strongly migratory.

Geluso et al. (2005) reported new records of P. subflavus from South Dakota, Texas, and New Mexico and concluded that the specimens represented an expansion of the range of the species rather than accidental records or previously undetected populations. The records now available from Colorado increase the likelihood that eastern pipistrelles are resident in northeastern Colorado and southeastern Wyoming. The fact that the most recent record was a female found in Boulder County in March suggests that this individual was resident and recently out of hibernation. However, we do not know whether these individuals represent an actual range expansion in recent decades or merely an extension of our knowledge; regarding bats, northeastern Colorado is the leaststudied quadrant of the state. In either case, additional ongoing studies of bats of this region are clearly warranted.

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## LITERATURE CITED

- ADAMS, R.A. 2003. Bats of the Rocky Mountain West, natural history, ecology, and conservation. University Press of Colorado, Boulder, CO. 289 pp.
- ARMSTRONG, D.M., R.A. ADAMS, AND J. FREEMAN. 1994. Distribution and ecology of bats of Colorado. Natural History Inventory of Colorado, University of Colorado Museum 15:1–83.
- BOGAN, M.A., AND P.M. CRYAN. 2000. The bats of Wyoming. Pages 71–94 in J.R. Choate, editor, Reflections of a naturalist: papers honoring Professor Eugene D. Fleharty. Fort Hays Studies, Special Issue 1.
- FITZGERALD, J.P., D. TAYLOR, AND M. PRENDERGAST. 1989. New records of bats (Order: Chiroptera) from northeastern Colorado. Journal of the Colorado-Wyoming Academy of Sciences 21:22.
- Geluso, K., T.R. Mollhagen, J.T. Tigner, and M.A. Bogan. 2005. Westward expansion of the eastern pipistrelle (*Pipistrellus subflavus*) in the United States, including new records from New Mexico, South Dakota, and Texas. Western North American Naturalist 65:405– 409.
- PRIDAY, J., AND B. LUCE. 1996. Inventory of bats and bat habitat associated with caves and abandoned mines in Wyoming. Pages 67–116 *in* Endangered and nongame bird and mammal investigations—annual completion report. Nongame Program, Wyoming Game and Fish Department, Cheyenne, WY.

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