

FIRST RECORD OF THE BRAZILIAN FREE-TAILED BAT (*TADARIDA BRASILIENSIS*) FROM TENNESSEE

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ABSTRACT--The first record of *Tadarida brasiliensis* is reported for Tennessee. The specimen is a male collected from a school building in Montgomery County, Tennessee. Whether the specimen represents a vagrant or a pioneer is unknown at present.

The Brazilian free-tailed bat (*Tadarida brasiliensis*, Fig. 1) is widespread and locally abundant over much of the southern United States, most of the Caribbean Islands, all of Mexico and Central America, and much of South America (Wilkins, 1989). Its total range is one of the most extensive of any mammal in the Western Hemisphere. In the southeastern United States, the northern limit of its normal range extends from southeastern North Carolina (Lee and Marsh, 1978) westward generally along the southern borders of North Carolina and Tennessee to northwestern Arkansas (Hall, 1981). Extralimital records from east of the Mississippi River exist for southwestern Ohio (Smith and Goodpaster, 1960; Mills, 1971), northern Illinois (Walley, 1970), and southern Illinois (Feldhamer, 1985). Nursery colonies of the southeastern subspecies (*T. b. cynocephala*) have been reported from sites as far north as Little Rock, Arkansas (Saughey et al., 1983), and are suspected in southeastern North Carolina (Lee and Marsh, 1978). The southeastern subspecies is believed to be nonmigratory, though roosting sites may shift seasonally (Wilkins, 1989). *Tadarida brasiliensis* has not previously been reported from Tennessee.

On 19 March 1991, a male *Tadarida brasiliensis* was collected by students of Northwest High School, Clarksville, Montgomery County, Tennessee, in an inside hallway of their school building, outside the

gymnasium. The live bat was brought to me for identification by Teresa Celusta, a teacher at Northwest. Though it showed no obvious physical injuries, it was weak. As I photographed it in my laboratory, it flew about the room several times, but the flights never lasted >30 sec. After each brief flight, it was easily retrieved. The bat was prepared as a standard museum specimen by P. K. Kennedy and deposited in the Memphis State University Museum of Zoology (MSUMZ 13510). Measurements I took from the specimen are: total length, 90 mm; length of tail, 28 mm; length of hind foot, 10 mm; length of ear, 15 mm; length of tragus, 4 mm; length of forearm, 43 mm; greatest wingspan, 290 mm; length of second phalanx of fourth digit, 14 mm; weight, 7.7 g.

I visited the site of capture on 20 March 1991, looking for other bats or signs of a former colony. Examination of the space between a fiberboard false ceiling and the roof, both above the hallway where the bat was found and over an adjacent classroom, revealed no sign of bats.

Lowery (1974) reported a mean body mass of 11.7 g (range of 9.6 to 14.4 g) for a series of 10 male *T. brasiliensis* from Louisiana. The exceptionally low weight (7.7 g) reported here for the specimen from Tennessee may reflect the weakened condition in which the animal was found, the season in which it was taken (season during which the series of 10 bats from Louisiana was collected not indicated by Lowery, 1974), or the fact that it was simply a small individual for its species. Most of its measurements are near the lower end of the range reported by Wilkins (1989).

The biological significance of this record (whether the animal represents a vagrant or a pioneer) is unknown at present. Lee and Marsh (1978) suggested that the species was expanding its range northward along the Atlantic Coastal Plain. Saughey et al. (1988) noted a similar expansion in Arkansas and speculated that the species would eventually be found throughout that state. Other extralimital records from east of the Mississippi River are from between 31 July (Smith and Goodpaster, 1960) and 6 November (Mills, 1971), a 3-month window immediately following the maternity period, and may represent post-breeding vagrants. The records for Illinois were thought to be of young-of-the-year and of the *mexicana* subspecies (Hoffmeister, 1989). The record for Tennessee reported herein was obviously not a young-of-the-year and is apparently the only extralimital spring record thus far reported from the eastern United States.



FIG. 1. Brazilian free-tailed bat (*Tadarida brasiliensis*). Drawing by John Cook.

LITERATURE CITED

- FELDHAMER, G. A. 1985. A Brazilian free-tailed bat (*Tadarida brasiliensis*) in southern Illinois. Trans. Illinois State Acad. Sci., 78:103-104.
- HALL, E. R. 1981. The mammals of North America. Second ed. John Wiley and Sons, New York, 1:1-600 + 90.
- HOFFMEISTER, D. F. 1989. Mammals of Illinois. Univ. Illinois Press, Urbana.
- LEE, D. S., AND C. MARSH. 1978. Range expansion of the Brazilian free-tailed bat into North Carolina. Amer. Midland Nat., 100:240-241.
- LOWERY, G. H., JR. 1974. The mammals of Louisiana and its adjacent waters. Louisiana State Univ. Press, Baton Rouge.
- MILLS, R. S. 1971. Second record of the Mexican free-tailed bat in Ohio. J. Mamm., 52:479.
- SAUGEY, D. A., D. R. HEATH, C. EFAW, G. A. HEIDT, AND T. E. BEGGS. 1983. First report of Brazilian free-tailed bat maternity colonies in Arkansas. Proc. Arkansas Acad. Sci., 37:98-99.
- SAUGEY, D. A., ET AL. 1988. Distribution and status of the Brazilian free-tailed bat (*Tadarida brasiliensis cynocephala*) in Arkansas. Proc. Arkansas Acad. Sci., 42:79-80.
- SMITH, E., AND W. GOODPASTER. 1960. A free-tailed bat found in Ohio. J. Mamm., 41:117.
- WALLEY, H. D. 1970. A Brazilian free-tailed bat (*Tadarida brasiliensis*) taken in north-central Illinois. Trans. Illinois State Acad. Sci., 63:113.
- WILKINS, K. T. 1989. *Tadarida brasiliensis*. Mamm. Species, 331:1-10.