

PROCEEDINGS
OF THE
BIOLOGICAL SOCIETY OF WASHINGTON

THE STATUS OF THE NAME *MYOTIS*
SUBULATUS SAY¹

BY BRYAN P. GLASS AND ROBERT J. BAKER
Zoology Department, Oklahoma State University

The name *subulatus* was first applied to a North American *Myotis* by footnotes in James' (1823) account of Long's expedition from Pittsburgh to the Rocky Mountains. Apparently James took the description verbatim from Say's field notes, and the description has quite properly been attributed to Say. The type locality is about 40 miles above the Purgatoire, on the banks of the Arkansas River, slightly east of the 104th meridian. Say's notes suggest that he collected at a place where a flowing creek enters the river. The place most nearly fitting this description lies somewhere between the towns of Fowler and Manzanola in Otero County and Olney Springs in Crowley County, Colorado. This is a more precise definition than the one used by Miller and Kellogg (1955), where the locality is given as "Arkansas River, near La Junta, Otero County, Colorado." Actually La Junta is some 25 miles east of this locality. James recorded that the party had passed the Wharf (= Huerfano) during the morning of July 20, and had ridden 26 miles along the river during the day. The next morning they traveled only approximately 10 miles, where they camped at a ford on the north bank, remaining there until the morning of the 24th. This places the type locality of *Myotis subulatus* in the vicinity of the mouth of Apishapa Creek, which enters the Arkansas from the south.

The type specimen is not mentioned in Say's notes as having

¹ Contribution number 450, Department of Zoology, Oklahoma State University, Stillwater, Oklahoma 74074.

been preserved, but in another footnote (James, 1823:14) it was indicated that the type of the band-tailed pigeon and other natural history specimens acquired on this expedition were placed in the Philadelphia Museum. This collection, popularly known as Peale's Museum, was later destroyed by fire and the type of *M. subulatus* with it, if such was ever actually preserved.

LeConte (1855) applied the name *Vespertilo subulatus* Say to bats in the tidewater country near Riceboro, Liberty County, Georgia. Miller and G. M. Allen (1928) have indicated that LeConte presumed that he had two species, to one of which he applied the name *V. subulatus* Say, but they suspected that all LeConte's specimens were actually *Myotis lucifugus*. Whatever the species actually was, it certainly was not the saxicolous species currently bearing the name *M. subulatus*, which is absent from the southeastern United States.

Harrison Allen (1864) applied Say's name to the eastern form of the long-eared *Myotis*, which usage was accepted until the revision of the genus by Miller and G. M. Allen (loc. cit.) wherein they correctly rejected *M. subulatus* for the eastern long-eared *Myotis* in favor of the name *M. keeni* Merriam 1895, which is currently accepted, and allocated *M. subulatus* instead to the form currently bearing the name. They based this change (op. cit. p. 25) in part, on their imperfect knowledge of the bats known to occur in southeastern Colorado.

To date only two species of *Myotis* are known from the plains where Say made his collection. These are the species currently known as *M. subulatus*, and *M. yumanensis*. Both are known from Cimarron County, Oklahoma and the former also by one specimen from Baca County, Colorado about 12 miles north of the Oklahoma border.

Upon reading Say's description, one who is familiar with both species is impressed by the fact that the characters fit *M. yumanensis* as well as, or better than, they do *M. subulatus* (*sensu* Miller and Allen, 1928 *et. auct.*), particularly in its being cinereous rather than chestnut, having a normal-sized rather than dwarfed foot, with toes beset with hair, and in

its manner of flight. Say described this bat as flying—"rapidly in various directions, over the surface of the creek"—. In the writers' experience *M. yumanensis* flies close to the surface of streams, but follows a rather steady path directly above the water. *M. subulatus* seems not to be a compulsive stream-flier, and is often high enough to be seen against the sky.

Because of the questionable identity of Say's specimen one of us (Glass and party) attempted to collect bats near the mouth of Apishapa Creek May 15, 1967. Several bats were seen coursing the water in typical "*yumanensis*" fashion, and two taken in mist nets proved to be *M. yumanensis*. However, one or two bats were also seen flying some 10–12 feet above the ground, and these could well have been *M. subulatus*. Unfortunately none were collected. It seems to the writers that the species now called *M. yumanensis* is as likely to have been the species Say collected as is the bat presently called *M. subulatus*.

In view of the involved history of use of the name *Myotis subulatus*, its present dubious assignment, and the threat that it poses to the well-established name *M. yumanensis*, the writers feel that the name should be considered nonassignable. The species currently bearing the name should therefore be called *Myotis leibii*, published as *Vespertilio leibii* Audubon and Bachman (1842). Relegation of the name *subulatus* to synonymy requires that the subspecies of this taxon be as follows:

Myotis leibii leibii Audubon & Bachman 1842. Type locality Erie County, Ohio.

Myotis leibii ciliolabrum Merriam 1886. Type locality near Banner, Trego County, Kansas.

Myotis leibii melanorhinus Merriam 1890. Type locality Little Spring, North base of San Francisco Mountain, Coconino County, Arizona, altitude 8,250 feet.

The writers earlier proposed to the International Commission (Glass and Baker, 1965) that this name be suppressed and that *M. yumanensis* be placed on the official list. However, the proposal was withdrawn after numerous expressions of disapproval, primarily because the action amounts to resolv-

ing a taxonomic problem by legalistic nomenclatural procedure. Secondly, the proposal as made would protect *M. yumanensis* from justifiable nomenclatural challenge in the future.

LITERATURE CITED

- ALLEN, H. 1864. Monograph of the bats of North America. Smith. Misc. Coll., (165): 1-85.
- AUDUBON, J. J., AND J. BACHMAN. 1842. Descriptions of new species of quadrupeds inhabiting North America. Jour. Acad. Nat. Sci. Phila., Sr. 1, 8: 284.
- GLASS, B. P., AND R. J. BAKER. 1965. *Vespertilio subulatus* Say, 1823: Proposed Suppression. Bull. Zool. Nomen., 22 (3): 204-205.
- JAMES, E. 1823. Account of an expedition from Pittsburgh to the Rocky Mountains, Volume 2. H. C. Carey and I. Lea, Philadelphia.
- LECONTE, J. 1855. Observations on the North American species of bats. Proc. Acad. Nat. Sci. Phila., 431-438.
- MERRIAM, C. H. 1886. Description of a new species of bat from the western United States (*Vespertilio ciliolabrum* sp. nov.). Proc. Biol. Soc. Washington, 4: 1-4, December 17.
- . 1890. Results of a biological survey of the San Francisco Mountain region and desert of the Little Colorado, Arizona. N. Amer. Fauna, 3: 46.
- MILLER, G. S., AND G. M. ALLEN. 1928. North American bats of the general *Myotis* and *Pizonyx*. Bull. U. S. Nat. Mus., 144: 218 pp.
- , AND R. KELLOGG. 1955. List of North American recent mammals. Bull. U. S. Nat. Mus., 205: 954 pp.