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A Noteworthy Longevity Record for Rafinesque's Big-eared Bat (Corynorhinus rafinesquii)

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Longevity records have been published for many species of North American bats. However, few such records exist for Rafinesque's big-eared bat, Corvnorhinus rafinesquii (Jones and Suttkus et al., 1975; Paradiso and Greenhall, 1967), a species found throughout bottomland hardwood forests in the southeastern United States (Ammerman et al., 2012). An adult female that was captured in West Virginia, 10 years and 1 month after banding, represents the longest-lived C. rafinesquii (Paradiso and 1967). Greenhall. The second-oldest individual in the peer-reviewed literature appears to be an adult male banded and later recaptured in Louisiana at a minimal age of 7 years and 7 months (Jones and Suttkus, 1975). Herein, we report a noteworthy longevity record for C. rafinesquii, based on an animal from Texas.

Monitoring of C. rafinesquii began at the Trinity River National Wildlife Refuge, in eastern Texas, during 2004 (Marcus, 2004). As part of this multi-year effort, we used a hoop net to capture 21 C. rafinesquii (17 females and 4 males), on 25 October 2008. Bats were taken from two roosts-an abandoned farmhouse and a concrete-block tower, which was an artificial roost designed to mimic a large, hollow tree (Bayless, 2006); these structures were located about 50 m apart, approximately 18 km east of Cleveland, Texas. After capture, we removed each animal from the hoop net and recorded various measurements, sex, reproductive condition, and age. We distinguished young of the year from adults by examining the cartilaginous zone of the fourth metacarpalphalangeal joint (Brunet-Rossinni and Wilkinson, 2009). We then banded each bat with plastic, split-ring bands, having an inside diameter of 3.1 mm (XCLD Darvic Leg Bands, Avinet, Dryden, New York). For easy distinction between the sexes. we standardized placement of a blue band on the left forearm of a male and a red band on the right forearm of a female. On the opposite forearm, each bat received two bands in a unique color combination for that sex.

On 21 February 2017, we observed a banded C. rafinesquii in the farmhouse during a roost survey. This individual possessed three colored bands: two on the right forearm (vellow and orange) and one on the left forearm (blue). The male bat appeared in good physical condition with no physical effects from the bands evident on its forearms. Upon reviewing past capture data, we determined that this C. rafinesquii was among the individuals originally captured on 25 October 2008 at the concrete-block tower. This male had been banded 8 years, 3 months, and 27 days earlier in 2008. With a probable birth month of May (Jones and Suttkus, 1975; Trousdale and Beckett, 2004) and the documentation of this individual as an adult at the time of banding, the minimum age was about 9 years 9 months. As such, this bat is now the second-oldest C. rafinesquii on record.

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