

## Notes on the Behavior of the Red Bat (*Lasiurus borealis*)

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Observations of *Lasiurus borealis borealis* were made at the Camp Polk Military Reservation in Vernon Parish, Louisiana, from October 1, 1952, to October 1, 1953. Flight, feeding, and the time of daily appearance of this bat were observed. The bats were of two colors: pale reddish as in the eastern race *Lasiurus b. borealis* (Muller) and dark mahogany as in the alleged southern subspecies *Lasiurus borealis seminolus* (Rhoads). Some workers (for example, Coleman, Jour. Mamm., 31:190, 1950) are of the opinion that *seminolus* is a distinct species whereas Miller (N. Amer. Fauna, 13: 100, 1897) mentioned the possibility that *seminolus* is only a color phase. Be that as it may, the behavior of the mahogany colored bats was identical with the behavior of the reddish bats. The two could be distinguished in flight only when the color could be observed in adequate light. About 30 individual bats were killed with a shotgun for identification after their behavior was noted. Military obligations prevented daily observations but observations were made on more than 150 days in the one year period. No time interval between observations was greater than five days. Most observations were made in a small clearing in an area that was heavily wooded with yellow pine and oak. A small, but permanent, creek was 200 yards west of the clearing. To the south 300 yards there was a rarely used railroad right-of-way, cut through a hill, with banks seven yards high, and 100 yards east of the clearing there was a highway. The gray fox (*Urocyon cinereoargenteus*) and the armadillo (*Dasypus novemcinctus*) were the mammals most frequently seen.

The bats appeared in the evening usually from five to ten minutes after sunset. This was when diurnal birds were going to roost. The bats appeared every day, except in heavy rain, until December 10, 1952. The first reappearance was February 26, 1953. The whereabouts of the bats in this period is unknown. The bats were sometimes seen flying in light rain in the evening and feeding when the rain ceased for brief intervals. On several occasions they fed in broad daylight. In the evening the bats were usually seen first high in the air and were flying with slow, even wing-beats. Feeding was in progress in eight minutes. With increasing darkness, the tempo of flight increased. Twenty minutes after their initial appearance, the bats were flying rapidly. I gained the impression that nearly every individual was repeatedly flying along a given route. The bats swooped and dived sometimes clearing the ground only by inches. One hour after sunset the bats had disappeared. On three occasions, bats were seen feeding over an artificially lighted skeet range at 1:00. The bats fed again in the thirty minute period preceding sunrise. Bats were seen also over water. Their manner of flight there was the same as that used in the clearing. Sometimes these bats caused a ripple in calm water at the end of a dive without touching the water by disturbing the air above the water, or by "scooping up" a mouthful of water.