

A PARTURITION DATE FOR THE HOARY BAT,
LASIURUS C. CINEREUS, IN ILLINOIS
AND NOTES ON THE NEWBORN YOUNG

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ABSTRACT. — Three adult female hoary bats from Sangamon County, Illinois, a parturition date (June 5, 1965) and external dimensions of the well-developed and well-furred newborn young are recorded.

The hoary bat is generally considered uncommon over most of its geographic range and, while there are summer records from all parts of Illinois, it is rare in this state also (Hoffmeister and Mohr, 1957, p. 80). Few published locality records exist and, although several records of pregnant and young-bearing females from adjoining states are known, only one record of breeding in this state is available, that of a lactating female collected in Vermilion County on May 31, 1948 (Provost and Kirkpatrick, 1952). Information on parturition in the species is similarly scanty with apparently but one brief account by Nero (1958) extant. Hamilton (1943, p. 99) reported a birthweight of "about 4.5 grams" and added that "... it is known that they grow very rapidly, attaining sufficient size and strength within a month to fend for themselves." Other descriptions of the fetus at birth are not known (see also a recent review by Wimsatt, 1960). In view of this, and despite certain shortcomings mentioned elsewhere, it seems worthwhile to record three additional state records, a birth date, and certain observations of the newborn young as follows. All specimens described are housed in and bear catalogue numbers of the Illinois State Museum; I am pleased to acknowledge with thanks the donors, Mrs. Francis McGuire, William Landrith and Steve Wood.

The bats were found in residential areas within the city limits of Springfield, Sangamon County. Dates of collection, measurements and other data

are recorded in TABLE 1. The first, ISM 614031, was found roosting beneath an eave of a garage; ISM 614073 suffered a broken wing and was collected on a sidewalk; and ISM 614074 was found about six feet up on the trunk of a tree. The latter was judged pregnant and placed in a cage.

Births of the two young were not observed. They occurred on June 5 the day after the mother's capture some time between 1:30 P.M. and 4:30 P.M., C.S.T. when both young were found dead on the floor of the cage. Artificial confinement can adversely affect parturition in bats (Wimsatt, pp. 185-186) and this is suggested here by the early deaths of the young; the adult, which had refused all food, died approximately 12 hours later. The large size and advanced development of the young, however, indicate that parturition would normally have occurred at or close to this time under natural conditions. Parturition in the species generally occurs in late May or early June (Hoffmeister and Mohr, loc. cit.; see also Cockrum, 1955, p. 499).

Unfortunately measurements of the newborn were not immediately taken; those given in TABLE 1 are from the preserved (in dilute formalin) specimens. While some distortion might be expected, little change in coloration of the specimens was noted, the bodies and wings were quite pliable and the measurements were taken without difficulty. Compared with dimensions given by Nero for two young two days old, little difference is noted (TABLE 1); but the average of the wingspreads of the newborn is only 85.4 per cent of the corresponding measure of Nero's older young. While a rapid early growth of wings may thus be indicated, this dimension is affected (more than others?) by preservative-caused shrinkage. The wingspread of a very young (blind, 2.3

TABLE 1.—Dimensions (in mm) of Specimens of Adult, Two Day Old (after Nero, 1958) and Newborn Hoary Bats.

Date of Col.	Sangamon County, Illinois					Saskatchewan, Can.	
	Adult females ¹			Newborn		Two day old young (Nero, 1958)	
	11 VII 1962	3 V 1965	4 VI 1965	Born: 5 VI 1965		Born: 24 VI 1958	
Sex and ISM No.	Female 614031	Female 614073	Female 614074	Female 614074	Male 614074	Female	Male
Total length	110.0	122.0	124.0	60.5	58.5	67.0	64.0
Wingspread				116.0	112.0	135.0	132.0
Tail length	35.0	53.0	53.0	20.0	18.0	21.0	18.0
Hind foot	12.0	10.0	10.0	11.0	11.0	11.0	11.0
Ear	16.0	13.0	15.0	8.0	8.0	9.0	7.5
Forearm	53.7	54.0	55.0	19.0	18.5	19.0	18.0
Tragus				2.8	3.0		
Thumb				7.5	7.1		

¹ Dimensions recorded on Specimen labels. ISM 614031 may be a large subadult.

gm after freezing, forearm length: 16 mm) red bat, *L. borealis*, for example, decreased from 106 mm before, to 101 mm after preservation—a decrease of 4.7 per cent. Measurements from additional fresh specimens of young, known-age hoary bats are therefore needed. The skin of the blind newborn bats is brown—darker on the body than on the wings and lighter beneath. The throat and head are pale, approaching buffish and the hind feet and thumbs are nearly black. The growth of hair covering the dorsum of hind feet, body, neck and head is especially prominent and the hairs, as in the adult, are noticeably tipped with white. Vibrissae (buccal, genal and superciliary) and a sparse covering of shorter hairs on chin and muzzle are also present. Umbilical cords and placentae were still attached when the young were found.

A sexual segregation or absence of adult males during the period of parturition (Poole, 1932; Constantine, 1966;

and others) has been observed and Findley and Jones (1964, pp. 468-469) suggested "... that the area in which young are born is restricted geographically and perhaps not occupied by adult males." The adult females and parturition recorded here, therefore, help to corroborate these observations and further support the inclusion of Illinois in this "area" of breeding.

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