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AGE RATIOS, WEIGHTS, AND REPRODUCTION OF THE VIRGINIA OPOSSUM IN NORTH LOUISIANA

Data on the Virginia opossum, *Didelphis virginiana*, was collected during a study of the raccoon, *Procyon lotor*, in north Louisiana (Bienville, Claiborne, Jackson, Lincoln, and Webster parishes) from May 1975 through September 1977, largely by live-trapping.

The age ratio of 209 free-ranging opossums was 14% immature to 86% adult. Age was determined by using the stages of tooth eruption described by Petrides (1949). Males represented 59% of the 209 opossums, whereas males represented 43% in New York (McManus, 1970), 42% in Illinois (Holmes and Sanderson, 1965), 55% in Missouri (Reynolds, 1945), and 57% in Texas (Lay, 1942). If these percentages are consistent in other areas, males made up a larger percentage of the free-ranging population in the southern states than in the north. However, males tend to shift their home ranges farther and more frequently than females. It follows that casual trapping of an area might yield a low male-to-female ratio, but with more intensive sampling, the ratio of males might progressively increase. The male-to-female ratios of opossums captured in the other southern studies cited might be more nearly equal if the animals came from areas extensively trapped, but this is not known. In our study, the animals were captured in traps, which were moved rather often from site to site in order to survey large areas for marked raccoons. This procedure should have favored a truer sex ratio (the one given) than one derived by trapping continuously at specific stations.

Weights were obtained from 209 opossums—105 adult and 18 immature males; 74 adult and 12 immature females. The monthly distribution of captures of these animals was 48 captured during January; 53, February; 11, March; 10, April; 24, May; 11, June; 11, July; 29, August; 6, September; and 6, December. Traps were removed from the study area during the October and

TABLE 1.—*Estimated times of conception and parturition for 60 litters of Didelphis virginiana in Louisiana.*

Dates	Numbers		
	Conceptions	Parturitions	Litters examined
1-15 December	1		
16-31 December	13	2	
1-15 January	20	17	
16-31 January	4	15	9
1-15 February	1	4	11
16-29 February		1	12
1-15 March			1
16-31 March			3
1-15 April	10	2	3
16-30 April	9	10	
1-15 May		7	
16-31 May			12
1-15 June	1		7
16-30 June		1	
1-15 July	1		
16-31 July		1	1
1-15 August			1

November hunting season because of vandalism. Adult males weighed from 0.9 to 3.0 kg (mean = 2.0), which is in close agreement with the findings of Fitch and Sandidge (1953); females weighed from 0.3 to 1.6 kg (mean = 1.8); and all free-ranging immature opossums weighed from 0.3 to 1.6 kg (mean = 1.4). Lowery (1974) reported that 22 adult males weighed from 2.7 to 4.7 kg in Louisiana. However, only one of 105 adult males, in this study, weighed more than the minimum adult weight of males (2.7 kg) denoted by Lowery (1974). Because fewer of our male opossums were weighed in late summer and autumn, when animals tend to be fat, the average weights may be skewed somewhat lower than if the same number were weighed each month. Weights of 22 adult females reported by Lowery (1974) were similar to those weights for 74 females weighed during this study.

Litter size was determined by counting young in association with 68 different female opossums. Litter size ranged from one to 10 (mean = 6.8), which is similar to the findings in other studies: an average of 7.9 for 85 litters in Illinois (Holmes and Sanderson, 1965), 7.1 for 143 in Georgia and Florida (McKeever, 1958), 8.9 for 42 in Missouri (Reynolds, 1945), and 6.8 for 65 litters in Texas (Lay, 1942).

Time of birth was determined by estimating the average of all the ages of young in the litter (Reynolds, 1945). Thirteen days for gestation was added to determine date of conception (Hartman, 1928). Lowery (1974) stated that Louisiana opossums begin mating in late January or early February, but this study indicates that some opossums begin breeding as early as mid-December and continue into early February (Table 1). A second breeding period occurs in April (Table 1). Breeding has been reported to occur from January to July in Texas (Lay, 1942), February to June in Missouri (Reynolds, 1945), February to June in Iowa (Wiseman and Hendrickson, 1950), with breeding peaks in mid-February and mid-May in Georgia and Florida (McKeever, 1958).

We found one female opossum with four pouch young in August, indicating breeding as late as July (Table 1). Although this, and another late litter (Table 1), may indicate the production of a third litter per year, these are probably incidences of late breeding. Lay (1942) found no evidence for third litters among 117 opossums in Texas.

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