RANA UTRICULARIA (Southern Leopard Frog). **ROAD MORTALITY**. Investigators conducting surveys of road-killed vertebrates generally encounter few amphibians (e.g., Christoffer 1991. Florida Sci. 54:65–68; McClure 1951. J. Wildl. Manag. 15:410–420; Scott 1938. Amer. Midl. Nat. 20:527–539). This is undoubtedly due to the small, relatively fragile body of amphibians which is easily overlooked, readily obliterated by vehicular traffic, and quickly consumed by predators. Furthermore, road-kill surveys are typically performed diurnally, a time of reduced amphibian activity (Pechmann and Semlitsch 1986. Can. J. Zool. 64:1116–1120), as well as from a moving vehicle, a perspective from which amphibians are often overlooked (pers. obs.).

This paper details anectodal observations of road-killed *Rana utricularia* metamorphs adjacent to a semi-permanent pond approximately 2.7 km N of Blountstown, Calhoun County, Florida (T1N, R8W, Sec. 20) on 19 April 1991. The 1.2 ha pond is within a developing subdivision. Approximately one half of the pond is surrounded by an open field dominated by weedy graminoids, the other half by a stand of mature *Quercus virginiana* (live oak), *Q. nigra* (water oak), and *Nyssa sylvatica* (black gum). Observations were made along 0.3 km of a 5 m wide, dead-end, clay-sand road which passes within 8–20 m of the east-southeast end of the pond.

Mortality of emigrating *Rana utricularia* from vehicular traffic was assessed by slowly walking and scanning the road surface with the aid of a headlamp between 2115 and 2145 h. The road was wet from a late afternoon thunderstorm. All living and freshly-killed metamorphs encountered were collected and counted. Live metamorphs were released. The mean wet-mass body weight of eight intact dead metamorphs was 4.65 g (measured with a Pesola spring scale). The air temperature at ground level was 19.8° C and the surface water temperature near shore was 21.8° C.

I counted 74 (57%) living *Rana utricularia* metamorphs and 55 (43%) dead. Emigration of metamorphs did not begin until sunset; therefore emigrants were exposed to an undetermined number of passing vehicles for approximately one hour. The number of frogs killed by vehicular traffic seems high considering that the road is a dead-end and only twelve families live beyond the pond. However, since *R. utricularia* migrate principally after dark (Pechmann and Semlitsch, *op. cit.*), a migration pulse is likely immediately after sunset, resulting in a relatively high emigration rate.

The percentage of emigrating frogs killed is probably inflated because some frogs may have successfully crossed the road prior to my arrival. Some dead frogs also may have been undetected because they were generally flattened to the level of the road surface and did not attract attention by movement. Still, frog mortality can be high during migration periods on a lightly traveled secondary road when the road is adjacent to a breeding pond.

The published rates at which frogs are killed on roads as determined by diurnal road cruising can be misleading. For example, *Rana pipiens* was killed at the rate of 0.002 frogs/km (Scott, *op. cit.*); McClure (*op. cit.*) found 0.0008 frogs/km; and Christoffer (*op. cit.*) found one *Bufo* killed (.0002 frogs/km). Diurnal estimates imply that vehicular traffic is not a threat to frog populations. Surveys of anuran habitat under meteorological conditions conducive to frog movement reveal a much different picture. Immediately following a storm, Scott (*op. cit.*) observed 10 dead frogs/m² along 0.8 km of highway adjacent to a marsh. Gelder (1973. Oecologia 13:93–95) recorded the death of 122 *Bufo* *bufo* along 1.5 km of road near breeding ponds in 84 nights of observation. My observations document the death of 55 *Rana utricularia* metamorphs along 0.3 km of road adjacent to a pond. These results underscore the need to assess the mortality of amphibians on roads nocturnally under proper meteorological conditions. Although quantitative data regarding the impact of vehicular traffic on amphibians is available for some European species (Langton 1989. Amphibians and Roads. ACO Polymer Products Ltd., Bedfordshire, England), few data are available for North American amphibians. Better understanding of the effect of vehicular traffic on amphibian populations will require nocturnal surveys, particularly during, or immediately following, precipitation, and surveying on foot.

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CROCODYLIA

ALLIGATOR MISSISSIPPIENSIS (American Alligator). **NESTS.** We discovered two unusually constructed alligator nests at Brazos Bend State Park, Fort Bend Co., Texas during 1992. Alligators typically build terrestrial mound nests composed of plant material and soil. One nest found on 29 July possessed an egg cavity completely below ground level. The nest measured 31.8 cm at its highest point, and the uppermost egg was 7.6 cm below ground level. It was composed primarily of soil mixed with some sticks and finer plant material. Although we documented four nests that were lower in height, none had eggs in a subterranean cavity. A nest discovered on 30 June was unusual in that it was built on a pile of logs surrounded by water. A previous study of nesting at the park showed that islands were preferred nesting sites over banks (Hayes-Odum et al. 1993. Texas J. Sci. 45:51–61). However, islands used for nesting were well defined areas of land many times larger than the nests. This pile of logs extended >1 m out of the water, and thus afforded substantial protection from flooding. Nest material consisted of grass, leaves, and soil.

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TESTUDINES

CARETTA CARETTA (Loggerhead Sea Turtle). **DIURNAL NESTING.** Among the sea turtles, diurnal nesting is well known in only the Kemp's Ridley, *Lepidochelys kempi*, and occasionally in the Olive Ridley, *Lepidochelys olivacea*, especially during peak arribadas (Pritchard et al. 1983. Manual of Sea Turtle Research and Conservation Techniques. Center For Environmental Education, Washington, D.C. 126 pp.). During the 1992 and 1993 nesting seasons, researchers on Wassaw National Wildlife Refuge, Chatham County, Georgia were fortunate to view two loggerhead sea turtles (*Caretta caretta*) which nested during daylight hours.

On 23 June 1992, an untagged loggerhead possessing no previous signs of tagging (CCL=101.0; tags: QQP768, QQP784, 0000158E46) was found as it emerged from the surf at 1300 h on Wassaw Island. The turtle emerged just prior to high tide, crawled above the high water mark, and nested. The day was sunny and notably hot (ca. 35°C). The turtle was seen again during two additional nesting visits in the 1992 season, both of which occurred at night.

On 1 July 1993, a loggerhead tagged during a previous season (CCL=102.0 cm; tags: QQB144, QQZ077, 00001582BA) emerged from the water at 1645 hours. As in the previous case, this turtle also emerged just prior to high tide, crawled up the beach, and nested on this sunny, hot day. This turtle had been observed on two other nesting crawls during the 1993 season, both of which were at night.