## Leopard Frog Eggs in October<sup>1</sup>

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From field observations it has been observed for some years that the most abundant type of leopard frogs of Oklahoma (known variously as *Rana pipiens*, *R. berlandieri*, or *R. p. berlandieri*) differ from their northern relatives in habits (Bragg, 1). The latter have a breeding season limited to early spring, whereas our Oklahoma frog has not. Calling males, mated pairs, or eggs of our local leopard frog have been found in Oklahoma in every month from February to August. Their over-wintering tadpoles, found in January and February, have also given indirect evidence that this frog sometimes reproduces in September or October, but no direct or conclusive evidence for this has been forthcoming till now.

On October 8, 1954, a single clutch of eggs of this frog (Rana pipiens berlandicri) was observed in the valley of Buncombe Creek approximately 3½ to 4 miles north of the University of Oklahoma Blological Station, Marshall County; and some of the eggs were collected. This was a few days after one of several light rains succeeding an exceedingly hot, dry summer. The clutch was attached to the tip of a willow branch which extended over and into the water of a shallow pool in the creek channel.

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We therefore now have conclusive evidence (1) that R. p. berlandieri may breed at any time between February and October inclusive (2) that its pattern of breeding is clearly of the intermediate type as earlier inferred (Bragg, 1), and (3) that this frog differs remarkably in habit and reaction from R. p. pipiens which it so closely resembles morphologically as to be separated from it only with uncertainty and great difficulty.

## LITERATURE CITED

Bragg, Arthur N. 1950. Observations on the ecology and natural history of anura. XVII. Adaptations and distribution in accordance with habits in Oklahoma. Researches on the Amphibia of Oklahoma VI:59-100. University of Oklahoma Press, Norman, Okla. Address of the authors: Department of Zoology, University of Oklahoma, Norman, Oklahoma.

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