



The "Buccal Brooding Habits" of the African Tree Frog *Leptopelis brevirostris*

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THE "BUCCAL BROODING HABITS" OF
THE AFRICAN TREE FROG
LETOPELIS BREVIROSTRIS

In 1906, Boulenger (Proc. Zool. Soc., London, p. 179), reported that the female *Letopelis brevirostris* broods her eggs in her mouth. This statement was based on the discovery of eggs in the mouth of a single specimen of this species sent to the British Museum by Mr. G. L. Bates from the Camerouns. No subsequent observation ever confirmed this conclusion, but the "buccal brooding habits" of *L. brevirostris* is usually accepted in the literature as a fact.

While recently studying the Amphibia in the British Museum, I examined, thanks to the kindness of Mr. H. W. Parker, the entire series of this species in the Museum and found the specimen described by Boulenger. Its mouth had not been opened, but the median portion of the lower jaw was broken in such a way that one could plainly see several large eggs within the mouth. I carefully cut the muscles at the angles of the jaw and opened the mouth. To my surprise the specimen contained no tongue nor mucous covering to either the floor or roof of the mouth. A binocular examination of the eggs revealed that they were ovarian for they were covered by a peritoneal membrane and were interspaced with small eggs. A dissection of the abdomen revealed that the specimen had been almost completely eviscerated through its mouth and contained neither heart, lungs, liver, stomach, nor small intestine. Only the ovaries, oviducts, rectum, a short piece of the intestine and the kidneys were present. Obviously, some person (presumably a native hunter) had seized the everted stomach of the living frog and had pulled out the greater part of the animal's viscera through its mouth. The eggs which Boulenger had seen in the mouth of the preserved specimen were merely the anterior

part of the ovaries protruding through the great gap which had been left in the throat of the frog. These ovarian eggs were four mm. in diameter and unpigmented. It is possible that *L. brevirostris* may have a specialized life history, but there is no evidence that buccal brooding is practiced by this or any other amphibian.¹

1. In *Rhinoderma* the vocal sack of the male functions as a receptacle for the eggs.

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THE STATUS OF *SIREDON GRACILIS* BAIRD

I have recently, thanks to the kindness of my friend Chester B. Duryea, been able to compare an authentic larva of *Ambystoma paroticum* Baird 1867, with the type of *Siredon gracilis* Baird 1857.

The latter, U.S.N.M., No. 4080, came from the Cascade Mts. in latitude 44 degrees, and hence in Oregon. The former came from Mt. Rainier, Washington, altitude 5200 ft., and was accompanied by an adult which was caught at the same time as a larva, but had transformed in an aquarium, while the larval companion was almost immediately preserved. Thus my specimen is assuredly a larva of *paroticum*.

Both my larva and the type of *gracilis* agree in having 3 phalanges in the fourth toe; 11 costal grooves; gills with long rami; marked parotoid glands; similar coloration; low dorsal fin; no palmar or plantar tubercles. There is a slight difference in the relative lengths of fingers and toes, but these differ as much between the two sides of the type.

Aside from these comparisons *gracilis* is the same as *paroticum* (as I suggested in a note in Stejneger and Barbour, Check List (2), p. 6, 1923), because *tigrinum* is eliminated from consideration by lack of