

The Surinam Toad, *Pipa Pipa* (Linn.)

By H. G. KUGLER

H. W. Parker in his list of the frogs and toads of Trinidad (Tropical Agriculture, Vol. X, pp. 8-12, 1933) mentions this extremely interesting, and only representative species of the family of the Pipidae, without any comments. It has been recorded in the Handbook of Trinidad and Tobago for 1924, page 100, but as far as I know there is no authoritative record of the existence of *Pipa* in Trinidad. My late friend F. W. Urich mentioned once to me that he had seen it in the swamps of Cumuto, but in spite of repeated search over many years, I failed to secure any specimens. I was therefore pleasantly surprised when Mr. T. M. Knowles sent me in April 1953 a live specimen caught near the swamp south of Barrackpore. This specimen is now deposited with the batrachian collection of the Royal Victoria Institute Museum.

The Surinam toad has been described from the Guianas and Brazil and was well known to Linnaeus as far back as 1758. Being rather a nocturnal animal it is probably rarely to be seen in day time. According to reports it can stay under water for half an hour without taking a next breath. The specimen in my care remained submerged for 15 minutes but unfortunately died an hour later having probably suffered during its capture and transport. Its body is about 4½ inches long and flat. The depressed triangular head with its small eyes and pointed mouth is entirely different from any other frog or toad for the wide mouth has no tongue and no teeth. The fingers are very slender and free and end in fine tips. The legs are strongly developed and the toes broadly webbed pointing to a powerful swimmer. The dark brown skin of the back is covered with small tubercles while the underparts are whitish.

PARENTAL CARE

It is, however the parental care that renders *Pipa* of greatest biological interest, in as much as the eggs are attached on the back of the female and the young complete the metamorphosis within the egg. The female spreads the fertilized eggs onto its own back. Once there the pimples of the skin start to swell and form little rings round the eggs. Finally these rings extend over the eggs and close them with harder lids. Each tadpole grows inside the little chamber and finally pushes through the lid but does not leave the cavity in which it has developed. In this stage the female appears like a honeycomb and for this reason *Pipa* has also been called

"Wabenkrote" in German or Honeycomb-toad. Once the little Pipas reach a certain size they leave the mother. It has been recorded, however, that they remain near the mother and in a moment of danger take refuge in her large mouth.

Pipa is entirely aquatic, feeds on small fishes and other swamp life. It could be kept in a large aquarium. Carefully controlled studies would still reveal new facts.

H. G. KUGLER.

FOOTNOTE—While in the case of Pipa the female carries the cares of parenthood on her back, there is a small toad, native of Central and Western Europe, in which the male takes over the parental duties. This toad is known by the name of the midwife toad, from the fact that its eggs, which are laid on land in a rosary-like string, and not in water as in the case of the majority of frogs and toads, are taken care of by the father who, immediately they are deposited, twines them round his hind limbs. The male parent carries his burden about with him for three or four weeks. He then makes for the nearest pond, where the fifty to sixty tadpoles that have developed within the egg, bite their way through the tough egg string and are liberated in the water.

MEETINGS AND EXCURSIONS

Following is the programme for the rest of the year of monthly meetings and excursions of the Trinidad Field Naturalists' Club:

July 23—Excursion to Caroni Swamp bird sanctuary—Dr. D. Snow.

Aug. 10—Meeting, St. Mary's College, 5 p.m.

Lecture: Lizards of the Eastern Caribbean—Prof. G. Underwood.

Aug. 20—Geological excursion, conducted by Dr. K. Barr.

Sept. 14—Meeting, St. Mary's College, 5 p.m.

Members evening—Three 20-min. talks by members.

Sept. 17—Excursion to Fondes Amandes, St. Ann's.

Leaders: Capt. A. Mendes and Mr. Frank Ambard.

Oct. 12—Meeting, St. Mary's College, 5 p.m.

Lecture: Forestry in the Federation.

Oct. 22—Excursion to Navet Dam and Brickfield teak plantations.

Leaders: Mr. Bain and Mr. Chalmers.

Nov. 9—Meeting, St. Mary's College, 5 p.m.

Lecture: Plant Collecting in Sarawak—Prof. Purseglove.

Nov. 19—Excursion to Icacos Savannah.

Leader: Mr. Reinbrecht.