

Some aspects of biology of *Ramanella obscura* (Günther, 1864) (Anura: Microhylidae)

Ramanella obscura (Günther, 1864) is an endemic frog of Sri Lanka, and has been reported from a number of habitats. This study investigates some aspects of the biology of *R. obscura*. Two man made ponds were observed daily, during the period of March 2000 to February 2001 in Sarasavigama (Kandy district). Two spawns each, from pond A (August 2000) and pond B (October 2000) were observed and once a week measurements of 5 tadpoles were recorded until they metamorphosed in to adults.

A total of 23 spawns were observed in the two ponds (pond A, n= 10; pond B, n= 11) that ranged from 0-2 per month/ pond. Spawning peaked during months of November 2000 and January 2001 and was not observed at all in the months of June and July, when there were heavy monsoon rains. Overall, number of eggs per spawn ranged from 173- 530 (overall mean \pm SD= 330 ± 110.35 ; pond A, mean \pm SD= 367 ± 125.03 and pond B, mean \pm SD= 309 ± 99.65). Egg spawns were in a single mass or in small batches on the surface of the water. The diameter (mean \pm SD) of an egg with its albumin layer measured 3.00 ± 0.34 mm (n= 50). Tadpoles hatched within 30- 72 hours. Tadpoles at emergence were 4-5 mm in length. The total body length of tadpoles, acquired during the first week (mean \pm SD= 6.5 ± 0.50 ; 6.4 ± 0.65 mm), quadrupled prior to shedding their tails. Hind limbs were first observed at 65 and 77 days and fore limbs 77 and 97 days. The total body length (mean \pm SD) of tadpoles observed at 77 and 97 days were 21.8 ± 3.75 and 22.8 ± 3.79 mm. Tadpoles from the two ponds metamorphosed into juvenile frogs after 77 and 97 days. Juvenile frogs measured 9.3 and 9.8 mm from the two ponds.

Although size wise these observations compare with a previous study, metamorphosis took a longer time. The previous morphometric study may have been on tadpoles collected from tree holes with leaf litter, a microhabitat that is a rich source of food for the tadpoles. However, these are also temporary habitats and likely to dry up quickly and the pressure to metamorphose into adults is greater. In such environments, it is possible that factors such as accumulation of waste products and the amount of oxygen available could act as limiting factors and hasten metamorphosis, for the purpose of survival. Living in ponds the environment may not be harsh, hence the slower rate of metamorphosis.