

Semen Evaluation in River Terrapin (*Batagur affinis*)

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Abstract

The *Batagur affinis* or the southern river terrapin is one of the rarest chelonians in the world, found in the rivers of Malaysia. Over years the population of this species has decreased dramatically. Currently there are no data on the reproductive parameters and performance, to include semen collection and evaluation method, for these species. Therefore, this study documented the first-ever semen collection and evaluation in the freshwater turtle, the *Batagur affinis*. This study was conducted in December 2010 on 15 male river terrapins. Before electroejaculation, the *Batagur affinis* were sedated with Ketamine (5 mg/kg) IM and then restrained on a wooden stool. An electrical rectal probe was inserted into the cloaca and stimulated with 1-4 volts electrical stimuli in 5-6 cycles followed by manual stimulation. Semen samples were collected immediately after electrical stimuli and/or after manual stimulation. The results of semen evaluation showed that the average semen volume was 3.3 mL (range 0.85-7.45 mL). The seminal fluid was watery, clear, viscous and slimy to touch. An average sperm motility of 4% (range 0-24%) and average concentration of 2.3 million/mL were observed. The sperms had slightly curved narrow heads and the live sperm percentage was 59%. This study forms the basis for the development of a protocol for semen cryopreservation and artificial insemination in chelonians. The method should contribute to preservation of one of the world's most critically endangered chelonians.

Keywords: River terrapin (*Batagur affinis*), semen evaluation, electroejaculation