

Cross-species microsatellite amplification of river terrapin (*Batagur affinis*)

Nurul Aini Ismail, Nurul Izza Ab Ghani* and Ahmad Ismail

Department of Biology, Faculty of Science, Universiti Putra Malaysia,
43400 UPM Serdang, Selangor, Malaysia.

Abstract

Batagur affinis (river terrapin or “tuntung”) is one of the world’s most critically endangered species. It is distributed across Sumatera, Malaysia, Thailand and Cambodia. Its population number is declining in the wild because of habitat destructions and its economic value (i.e. exotic delicacies for eggs and meat). Hence, many reintroduction efforts had been done. Yet, the wild populations are not improving. One of the possible reasons behind this failure is possibly due to low genetic diversity in this species. Thus, population genetics study should be conducted. In this preliminary population genetics study, a total of 33 microsatellite primers from other freshwater terrapin (i.e. *B. trivittata* and *Podocnemis unifilis*) were screened and optimised for 30 samples of river terrapin from Kemaman, Terengganu using touchdown protocol and followed by gradient protocol. Among those 33 primers, 23 primers were able to cross-amplify with *B. affinis* and optimised for annealing temperature (51 – 70°C). Those 23 primers will be used for future population genetics study using samples from both Bota Kanan, Perak and Kemaman, Terengganu.

Keywords: *Batagur affinis*, cross species, microsatellite markers, population genetics, primer screening and optimization.

*Corresponding author: nurul_izza@upm.edu.my