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Volume 14, Issue 1, 2019, Pages 41-60Effects of shore sedimentation to *Tachypleus gigas* (Müller, 1785) spawning activity from Malaysian waters (Article)Nelson, B.R.<sup>a</sup> , Zhong, J.M.H.<sup>b</sup>, Zauki, N.A.M.<sup>c</sup>, Satyanarayana, B.<sup>c</sup>, Chowdhury, A.J.K.<sup>d</sup> <sup>a</sup>Tropical Biodiversity and Sustainable Development Institute, Universiti Malaysia Terengganu, Kuala Nerus, Terengganu, 21030, Malaysia<sup>b</sup>Institute of Tropical Aquaculture, Universiti Malaysia Terengganu, Kuala Nerus, Terengganu, 21030, Malaysia<sup>c</sup>Institute of Oceanography and Environment, Universiti Malaysia Terengganu, Kuala Nerus, Terengganu, 21030, Malaysia[View additional affiliations](#) 

## Abstract

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Ripraps, land reclamation and fishing jetty renovation were perturbing Balok Beach shores between the years 2011 and 2013 and visible impacts were scaled using horseshoe crab spawning yields. Initially, placement of ripraps at Balok Beach effectively reduced erosion and created a suitable spawning ground for the horseshoe crab, *Tachypleus gigas*. However sediments begun to gather on the beach onward year 2012 which increased shore elevation and caused complete shore surface transition into fine sand properties. This reduced sediment compaction and made Balok Beach less favourable for horseshoe crab spawning. During the dry Southwest monsoon, Balok River estuary retains more dense saline water which assists with sediment circulation at the river mouth section. Comparatively, the less dense freshwater during the wet Northeast monsoon channels sediments shoreward. Circa-tidal action that takes place at Balok River sorts the shore sediments to produce an elevated and steep beach. Hence, the reduced number of *T. gigas* nests and eggs retrieved during year 2013 (after comparing with yield of year 2012) at Balok Beach are indicating impacts from anthropic-caused sedimentation. Models need to be constructed and associated with *T. gigas* spawning-migration to fully understand sediment transport especially at coastal areas that need or are undergoing nourishment. © Penerbit UMT.

SciVal Topic Prominence Topic: [Limulus polyphemus](#) | [crab](#) | [crab Limulus](#)Prominence percentile: 65.908 

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