

# The Living Fossil (Horseshoe crab)

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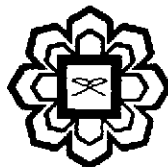
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# Table of Contents

Chapters	Titles	Page No
1.	Global distribution and Taxonomy of extant horseshoe crabs..... (5410/18557)	1
2.	Limiting factors on the global distribution of horseshoe crabs..... (5410/18558)	11
3.	Site selection and nesting behaviour of horseshoe crabs with special reference to <i>Limulus polyphemus</i> ..... (3575/18560)	19
4.	Distribution of horseshoe crabs at their nesting grounds, East coast of Peninsular Malaysia..... (5410/18560)	27
5.	Hydrology of horseshoe crab nesting ground at Pahang coast –Part 1..... (3575/18563)	35
6.	Hydrology of horseshoe crab nesting ground at Pahang coast –Part 2..... (3575/18566)	47
7.	Physicochemical parameters relationship at the horseshoe crab nesting grounds of Pahang coast, Malaysia..... (5410/18567)	57
8.	Macrobenthic diversity at the Horseshoe Crab nesting ground, Balok station, Pahang, Malaysia – Part 1 ..... (3575/18568)	69
9.	Macrobenthic diversity at the Horseshoe Crab nesting ground, Balok station, Pahang, Malaysia – Part 2 ..... (3575/18570)	83
10.	Macrobenthic diversity at the Horseshoe Crab nesting ground, Pekan station, Pahang, Malaysia – Part 1 ..... (5410/18571)	95
11.	Macrobenthic diversity at the Horseshoe Crab nesting ground, Pekan station, Pahang, Malaysia – Part 2 ..... (3575/18573)	109
12.	Influence of physicochemical parameters on the macrobenthic diversity and abundance in horseshoe crab nesting grounds, East coast of Peninsular Malaysia. .... (5410/18574)	127
13.	<i>In-vitro</i> study on the effect of salinity on the hatching success of Malaysian Horseshoe crab eggs..... (3575/18575)	137
14.	Effects of salinity on the early growth of <i>Tachypleus gigas</i> larvae - An <i>In-vitro</i> study..... (3575/18577)	147

15. Sediment characteristics of horseshoe crabs nesting ground at Balok station, Pahang, Malaysia .....	(5410/18579)	155
16. Sediment Profiling of the Estuarine Nesting Ground of Horseshoe Crabs at East Peninsular Malaysia .....	(3575/19587)	165
17. Bioaccumulation of some essential metal concentration in Malaysian horseshoe crabs ( <i>Tachypleus gigas</i> ).....	(5410/18584)	175
18. Cu and Cd Bioaccumulation in Malaysian Horseshoe Crab .....	(5410/18585)	183
19. Metal concentration in horseshoe crab nesting ground along Pahang coast, Malaysia.....	(5410/18586)	193
20. Bionomics of Malaysian horseshoe crabs <i>Tachypleus gigas</i> .....	(5410/19718)	203
21. Feeding Ecology of Mangrove horseshoe crab <i>Carcinoscorpius rotundicauda</i> .....	(5410/19717)	213
22. Emerging interest on DNA barcoding technology and its application for high-tech biodiversity studies using COI gene as a reference sequence .....	(3575/19716)	225
23. Can DNA barcode accurately delineate living fossil (Horseshoe crab) and its different developmental stages?.....	(5410/19715)	237
24. Revision on the molecular phylogeny of horseshoe crabs – Part 1.....	(5410/19717)	251
25. Revision on the molecular phylogeny of horseshoe crabs – Part 2.....	(5410/19720)	267
26. Genetic Diversity of <i>Tachypleus gigas</i> Population from West coast of peninsular Malaysia .....	(3575/19727)	275
27. Does continental drift influence in the genetic variability among the horseshoe crab population? .....	(3575/19727)	287
28. Evolution of horseshoe crabs – paleontological and Molecular viewpoint.....	(3575/19731)	297
29. Factors involving in the clot formation of horseshoe crab blood.....	(5410/19711)	307
30. Methods for bacterial endotoxin quantification in reference to horseshoe crab blood studies .....	(5410/19740)	317
31. ENDO SENSOR (TAL) production from Malaysian Horseshoe crab blood.....	(5410/19744)	325
32. Characterization of <i>Tachypleus</i> Amebocyte Lysate (TAL).....	(3575/19759)	333

33. Environmental and Pharmaceutical applications of Amebocytes Lysate (LAL/TAL) from Horseshoe crabs .....	(5410/19751)	343
34. <i>Tachypleus gigas</i> mortality due biomedical bleeding process .....	(3575/19756)	351
35. Conservation measures on horseshoe crab population – A global view.....	(5410/19759)	359
Glossary.....		369

## CHAPTER - 2

### Limiting factors on the global distribution of horseshoe crabs

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#### Abstract

There are at least four large-scale, global, environmental parameters that, spatially and temporally, set limits on the distribution of horseshoe crabs. Of these, continental geomorphology and temperature regimes are two major constraints on the wide spread distribution of horseshoe crabs. Basically, the continental shelves define the areas available to horseshoe crabs while low temperatures limit their northern most occurrences. Tidal types and benthic currents also play a role in the distribution of horseshoe crabs.

**Key words:** Horseshoe crabs, limiting factors, continental shelf, temperature regim, tidal influence

#### Introduction

Horseshoe crabs are marine chelicerate arthropod belong to the class merostomata. Despite their name, they are more closely related to spiders, ticks and scorpions than to crabs (Kamaruzzaman *et al.*, 2011). There are four extant species of horseshoe crabs, *Tachypleus tridentatus*, *Tachypleus gigas*, *Carcinoscorpius rotundicauda* and *Limulus polyphemus*. Demographic data showed their global distribution pattern where Atlantic horseshoe crab (*L. polyphemus*) are most commonly found in Gulf of Mexico, Southeast Asian horseshoe crab (*T. gigas*) inhabits in the shores of the bay of Bengal particularly along the coast of Orissa (India) to Indo-China, North Vietnam, Borneo and Celepes), *T. tridentatus* (Northern shores of Japan up to South Vietnam and along the Western islands of the Philippines) and (Mangrove horseshoe crab) *C. rotundicauda* (Northern shores of the bay of Bengal to the Southern coast of the Philippines) where they inhabit in the continental shelf region within 47.7km upto 312km (Chatterji and