The Living Fossil (Horseshoe crab)

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CHAPTER - 1

Global distribution and Taxonomy of extant horseshoe crabs

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Abstract

We discussed the large scale distribution pattern of 4 extant horseshoe crab species namely *Limulus polyphemus, Tachypleus gigas, T.tridentatus* and *Carcinoscorpius rotundicauda*. Global distribution pattern of these ancient creatures showed the restricted population of *L.polyphemus* along the American coast from Maine to Florida, Mexico (Yucatán) and thus named as Atlantic horseshoe crab. The other 3 conspecifics (*T.gigas, T.tridentatus* and *C.rotundicaud*) are widely distributed in south East Asian countries (Japan, China, Indo-china Peninsula, The Philippines, Borneo, Indonesia, Sumatra and Bengal Sea). The dwindling population size of these ancient creatures due to their habitat destruction and various other anthropogenic activities need to be sustainably managed for continuous utilization of horseshoe crab resources for producing biomedical compound (LAL/TAL). The taxonomic ambiguity in delineating the extant horseshoe crab species led to the utilization of various recent molecular tools to address the species level delineation.

Key words: Horseshoe crab, *Limulus polyphemus, Tachypleus gigas, Tachypleus tridentatus* and *Carcinoscorpius rotundicauda*.

Introduction

The Limulacea are an ancient group of aquatic merostome arthropods. Their existence through millions of years with relatively few species, exemplifies their designation as ecological generalists. They inhabit coastal embayments and breed on intertidal shores within global