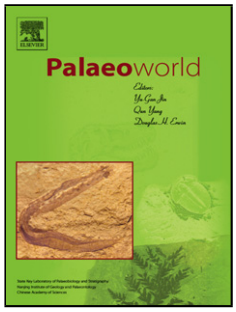

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A fossil freshwater crab from the Pliocene Tatrot Formation (Siwalik Group) in Northern India (Crustacea, Brachyura, Potamidae)

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Abstract

We describe a fossil freshwater crab specimen from the Tatrot Formation, Siwalik Group, of Northern India. We assign this specimen on the basis of morphology of the anterolateral margin, which is comparable to the extant species *Acanthopotamon martensi* (Wood-Mason, 1875) in the Ganges valley. We re-interpret previously described claw fragments from the same formation that have been assigned to the gecarcinucid species *Sartoriana spinigera* (Wood-Mason, 1871). This casts doubt on previous approaches to calibrate a molecular clock for primary freshwater crabs that used these fossils as minimum age of *Sartoriana spinigera*. However, the present findings allow setting a confident lower age constraint for the appearance of *A. martensi* to get a more accurate estimate for nucleic acid substitution rates. The age of fossil *Acanthopotamon martensi* based on the magnetostratigraphy of the Tatrot Formation is ~2.6 Ma (latest Pliocene).

Keywords: Neogene; Pliocene; Siwaliks; Potaminae; *Acanthopotamon martensi*, molecular clock

1. Introduction

Primary freshwater crabs represent an ecologically important part of the subtropical and tropical freshwater macrobenthos (Dobson et al., 2002) with a remarkable species diversity