All about Indian Dinosaurs: Hard Evidence from Late Cretaceous – D.M. Mohabey

Unfolding history of dinosaurs in India began in 1828 when Captain William Sleeman of the Bengal Army discovered the first fossil bone from Lameta Formation of Jabalpur. This bone in 1877 became the first dinosaur to be reported from India by Richard Lydekker and eventually the first *Titanosaurus* described in the world. 1917-1933 was the first golden age of research on Indian dinosaurs when Charles Matley pursued studies on dinosaurs after he carried out systematic excavations in two expeditions during 1917-1921 and 1932-1933 in the Lameta sediments at Jabalpur and at Pisdura. The expeditions were sponsored by Percy Sladden Trust, London. A majority of the excavated bones were shipped to British Museum London (BMNH) and American Museum of Natural History, New York (AMNH) for preparation and description. Majority of the collection was restored back to India which is presently housed in Indian Museum and GSI, Kolkata. But still critical specimens from

the collection are housed in BMNH London and AMNH. Matley contributed monumental work on systematic of Indian Late Cretaceous dinosaurs in 1933 and recognised at least twenty species of sauropods, theropods and ornithopods from Indian Cretaceous.

During post-Independence and 1960 onwards it witnessed excavations of hundreds of dinosaur bones from Lameta Formation of Jabalpur, Pisdura-Dongargaon and Kheda. In 1982 the maiden discovery of dinosaur nesting sites and eggs in the Lameta sediments and associated skeletons of titanosauria and abelisaurid dinosaurs revived interest in dinosaur research. The find provided new evidence for interpreting nesting behaviour, habitat and environments of these extinct reptiles. The discovery of plant bearing coprolites/fecal mass in the year 2000, provided a rare insight in to the dietary habit of the Indian sauropods and showed a close link between sauropods and angiospermic flora during late Cretaceous.

Presence of phytoliths of grass family Poaceae including rice tribe Ehrhartoideae in the coprolites pushed back the timing of its origin as a whole.

Today based on the revised taxonomy only two sauropod genera of Titanosauria viz. *Isisaurus* and *Jainosaurus* and four large-bodied abelisauridae theropods- *Rajasaurus narmadensis*, *Indosuchus matleyi*, *Indosaurus raptorius*, *Rahiolisaurus gujaratensis* and a small bodied theropod *Laevisucius* are considered valid in Indian Late Cretaceous.

The present ongoing museum research of the available collection and field research for finding new dinosaur fossil locales has been promising and is proving helpful in solving the riddles in understanding story of Indian dinosaurs.

(Summary of the lecture delivered at the monthly meeting of the Geological Society of India on 26 June 2013)