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## **First Report of Trace Fossils from Lower Oдания Member of Lathi Formation of Jaisalmer Basin, Akal area, district -Jaisalmer, Western Rajasthan, India.**

Parihar, V.S<sup>1</sup>.

Department of Geology, Jai Narain Vyas University, Jodhpur-342005, Rajasthan.

Email: [geovirendra@gmail.com](mailto:geovirendra@gmail.com)

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The macroscopic trace fossils occur in Early Jurassic Lathi Formation of the Jaisalmer Basin is presented here as first reporting. The Lathi Formation is the oldest lithostratigraphic unit unconformably overlying rocks of Malani Igneous suites, Birmania Formation, Marwar Supergroup and Bhadhura Formation of the Jaisalmer Basin. The Lathi Formation is well developed mainly in the vicinity of Lathi, Oдания, Thaiat and Akal area. The Lathi Formation is divided into Lower Oдания Member and Upper Thaiat Member. The present paper here with reports eight trace fossils namely *Thalassinoides suevicus*, *Thalassinoides paradoxica*, *Ophiomorpha nodosa*, *Ophiomorpha borneensis*, *Palaeophycus heberti*, *Palaeophycus tubularis*, *Gyrocrote* and *Phycodes* from yellowish grey fine to coarse grained calcareous sandstone of Lower Oдания Member of Lathi Formation of Jaisalmer Basin in Akal area. The present trace fossils bearing Akal section is located about 18km south of Jaisalmer city on NH-15. The complete section is about 20m thick comprises glauconitic sandstone at the base, calcareous sandstone and ferruginous sandstone and petrified wood bed. The *Thalassinoides* (*Thalassinoides suevicus* and *Thalassinoides paradoxica*) trace fossils are considered as feeding and dwelling burrows formed by decapods crustaceans, *Ophiomorpha* (*Ophiomorpha nodosa* and *Ophiomorpha borneensis*) trace fossils are interpreted as dwelling burrows mainly produced by crustaceans and shrimps, *Palaeophycus* (*Palaeophycus heberti* and *Palaeophycus tubularis*) are considered as combined and dwelling burrow formed by worm like animals, *Gyrocrote* trace fossils are interpreted as detritus feeding burrow formed by worms like animals probably annelids and *Phycodes* trace fossils are considered as feeding burrows made by marine organisms such as worms. These trace fossils are well -preserved and abundant in nature in Akal area and ethologically they represents domichnia and fodinichnia. The ichnological and sedimentological investigations suggest near-shore to shallow marine depositional environment of trace fossils bearing calcareous sandstone of Akal area. No age can be assigned on the basis of these trace fossils as they have long ranging i.e. Precambrian to Recent, However, the presence of petrified wood from Lower Oдания Member and Dinosaurs foot-prints from upper Thaiyat Member (Pienkowski et.al.,2015), can be assigned Early Jurassic age of Lathi Formation of Jaisalmer Basin.

### *References:*

[1] Pienkowski Get.al. (2015): Volumina Jurassica, XIII (1) 17:26.

