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HCG036-P03

Room:Convention Hall

Time:May 24 14:00-16:30

## Entradichnus ichnofacies in eolian dune strata (Djadokhta Formation) at Tugrikiin Shiree, southern Mongolia

Koji Seike<sup>1\*</sup>, Hitoshi Hasegawa<sup>2</sup>, Niiden Ichinnorov<sup>3</sup>

<sup>1</sup>Port and Airport Research Institute, <sup>2</sup>Hokkaido University, <sup>3</sup>Mongolian Academy of Sciences,

Trace fossils provide significant information on the paleoenvironment in which the trace formed. The paleoenvironmental usefulness of the trace fossils is applicable not only to marine strata but also to terrestrial deposits. Eolian sand dune deposits of the Upper Cretaceous Djadokhta Formation at Tugrikiin Shiree, southern Mongolia, yield numerous trace fossils belonging to Entradichnus ichnofacies, which contains Entradichnus meniscus, Skolithos isp, and other ichnospecies. This presentation describes the type ichnospecies, the trace fossil Entradichnus meniscus, a long unlined and unbranched trail that is filled with meniscate laminae and occurs characteristically in positive epirelief. The trail is straight to gently meandering, parallel to the fore-set laminae of the eolian dunes, and their long axes shows predominantly parallel to the depositional dip of the cross-stratification laminae. In addition, almost all the crescentic internal laminae of the trail show concave down-dips. These features indicate the paleoecology of the trace makers, namely the trails were produced beneath the slipface of eolian dunes by the downward burrowing of the trace-makers. Previous studies also reported very similar occurrence mode of the trace fossil from the Jurassic eolian dune deposits in North America. Therefore, the preferred orientation of the trace fossil might be a common feature in arid eolian dune deposits at least during the Jurassic and Cretaceous, and possibly reflecting a behavioral response to the morphology of large sand dunes under an arid climate.