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The comparison of suspected sauropod's track at Bukit Panau, Kelantan and sauropod's track from Ban Nom Tum, Thailand

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Abstract: In the middle of year 2020, a profound palaeontological discovery had shocked the nation amid a global pandemic crisis. The almost circular structures exposed on sandstone formation found in Tanah Merah, Kelantan

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was claimed to be the footprint tracks of the infamous Early Jurassic to Late Cretaceous herbivore, the Sauropod. This had drawn national attention to Bukit Panau, a hill topography situated 30 kilometres from Tanah Merah Town where the tracks were observed. However, this discovery is not new. In 2018, a group of scientists had visited Bukit Panau and discussed these structures in a joint workshop attended by Malaysian and Thailand geologists. This paper intends to provide scientific insights of the claim which appeared in a conference proceeding in 2020. These suspected footprint tracks were exposed on a surface of a thick layer of sandstone belonging to the Panau Formation. Panau Formation is characterised by coarsening upward sequence of sedimentary rocks ranging from pebbly sized conglomerate, arenaceous facies to argillaceous facies. Fragmented plant fossils such as *Frenelopsis* sp., *Otozamites* sp., *Calamites* sp., and *Pecopteris* sp. were recovered from argillaceous facies suggesting Cretaceous age. These flora assemblages also suggested a continental depositional environment. Seven irregular circles which vary in sizes (70 to 90 centimetre) structures were observed on the plane. Two of these structures exhibit smaller and concave internal structures. Comparison has been made between 'tracks' structures of Bukit Panau with the better-preserved Sauropod footprint tracks found in Ban Nom Tum, Thailand. The comparison was based on significant criteria that are typically observed in Sauropod footprints such as the distance and angle in between footprints, the internal structure normally present during the preservation (i.e track walls and displacement rims), and the geometry of the footprints (pes and manus). This study suggests that the structures in Bukit Panau provide insufficient data to be convincingly identified as the footprints of a Sauropod. Further analysis on the absolute age of Panau Formation based on radiometric dating is recommended in order to confirm its age which is currently relatively dated as Cretaceous.

Keywords: Trace fossil, dinosaur track, palaeontology, Panau Formation