

## **Dicynodont fossils from the Upper Triassic Momonoki Formation, Mine Group, Yamaguchi, Japan**

Kanae Jinnouchi, Nao Kusuhashi (Ehime Univ.), Jun Liu (IVPP), Fumio Takahashi, Kenji Shinoda (Mine City Mus. Hist. Folk.), and Yoshikazu Hasegawa (Gumna Mus. Nat. Hist)

Dicynodonts are a group of synapsids that first appeared around the middle Permian and mainly prospered during the late Permian. Dicynodont species that survived the end-Permian mass extinction are characterized by a pair of canine-like tusks protruding from the maxillary rostral area and are known for their reliable fossil record through the Late Triassic; however, in East Asia, their fossil record ends during the Middle Triassic.

Here, we report dicynodont fossils from the Momonoki Formation (Mine Group) in Okuhata, Mine City, Yamaguchi Prefecture, Japan. The Momonoki Formation has been correlated to the Carnian (Upper Triassic)<sup>1</sup>.

The fossils found include two fragments considered to belong to the same individual. One is a portion of the upper right jaw including a broken tusk, and the other is the root of a tusk and some of the surrounding maxillary bone. In both cases, bone preservation is poor, but a portion of the orbit is present on the portion of the upper right jaw, and the tusk is slightly recurved with a crown height of at least 2-3 cm. This specimen is considered to have come from a medium-sized individual, based on the cross-sectional diameter near the tip of the tusk (12.51mm) and the shape of the surrounding bone.

This specimen is both the first recorded dicynodont fossil from the Upper Triassic in East Asia and the first recorded dicynodont fossil in Japan. For these reasons, this specimen is particularly important when considering the paleobiogeography of dicynodonts during the Late Triassic.

<sup>1</sup>Hase, Akira. 1951. Geology of the Triassic in Japan. *Special issue on geology*: 72-89.

\*Original Citation: Jinnouchi K, N Kusuhashi, J Liu, F Takahashi, K Shinoda, and Y. Hasegawa. 2018. Dicynodont fossils from the Upper Triassic Momonoki Formation, Mine Group, Yamaguchi, Japan. *The Palaeontological Society of Japan 167<sup>th</sup> Regular Meeting, Abstracts with Programs*: 42. [In Japanese]

Translated by Benjamin T. Breeden III, University of Utah, December 2019