



## **Conodont natural assemblages in lowermost Triassic deep-sea claystone from northeastern Japan, with probable soft-tissue impressions**

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We report the first discovery of Lower Triassic platform-type conodont (*Clarkina* sp.) assemblages: four natural conodont assemblages from Lower Triassic pelagic black claystones of the North Kitakami Belt in northeastern Japan (Akkamori section; Takahashi et al., 2009, 2019). The fossils were obtained from the black claystone horizon. This horizon has been dated to the earliest Triassic (Griesbachian) by the occurrence of *Hindeodus parvus*, which is the index species for the base of the Triassic, in the same and subjacent horizons. These four fossil assemblages include a paired segminiplanate-formed P1 element, which was identified as the genus *Clarkina*, and have fully or partially preserved the original components of conodont elements. The most complete assemblage among them includes 15 distinctive elements, namely S0 and pairs of M, S1, S2, S3, S4, P1, and P2.

It is noteworthy that these fossil assemblages preserve probable impressions of soft tissue which is possibly sensory organs 'eyes,' which were replaced by aggregations of silicate, phosphate, and sulphide minerals. The occurrence of several sets of fossils that retain the original positioning of the conodonts' elemental apparatuses, as well as the original presence of soft tissue, may be attributed to the process by which the conodonts' bodies were transported to the deep seafloor, and by which the activity of agents of decomposition was inhibited in near-abiotic sediments under anoxic conditions in the pelagic deep sea during the earliest Triassic.