

A search for impact ejecta deposits in the Upper Triassic limestone of the Pizzo Mondello section, western Sicily, Italy.

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The 34-million-year (My) interval of the Late Triassic is marked by the formation of several large impact structures on Earth, including the 90-km-diameter Manicouagan impact crater in Quebec, Canada. This crater occurred in the middle-upper Norian (ca. 215.5 Mya). Late Triassic impact events have been considered a factor in biotic extinction events in the Late Triassic (e.g., end-Triassic extinction event), but this scenario remains controversial because of a lack of stratigraphic records of ejecta deposits. The Manicouagan impact ejecta deposits are known only from Mino terrane, Central Japan and southwestern Britain. To investigate the impact ejecta deposit derived from the Manicouagan impact crater, we examined the stratigraphic variations in major and trace element concentrations from the Upper Triassic Pizzo Mondello section in western Sicily, Italy. The Pizzo Mondello consists of a continuously exposed sequence (a 450m thick) of upper Carnian through late Norian (Upper Triassic) pelagic limestone. The trace element data from this study show a consistent trend of decreasing Cr and Ni values starting in the lower Norian. Concentration of these elements are observed in the upper part of the Pizzo Mondello section and is roughly located at the base of the *Epigondolella bidentata* conodont zone in the late Norian.

Keywords: Late Triassic, ejecta sediment, Pizzo Mondello, limestone, main trace element analysis