

## Dust in the Wind: Aeolian Sediment in Middle Ordovician Carbonates of North America

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The Middle Ordovician Nealmont Limestone of eastern West Virginia and western Virginia is marked by the presence of numerous specimens of the feeding trace fossil *Chondrites*. These ichnofossils are recognizable from a distance because they are typically infilled with tan or light orange, quartz silt and clay and stand out in marked contrast to the dark micritic matrix. In addition, bedding surfaces may be partially or completely covered with this bioturbated material in millimeter-thick layers. As a result, these ichnofossils are useful in identifying the Nealmont for field mapping purposes.

The author has previously had the opportunity to study carbonates of the Middle Ordovician Pogonip Group in the Great Basin, USA. These extensive deposits (particularly the Kanosh Formation) from the western margin of the North American continent are similarly marked by the presence of orange, silty laminae and silt-filled *Chondrites* and other feeding traces. The author interpreted these fine-grained siliciclastic sediments as aeolian in origin because of their presence along the seaward margin of a basin more than 100 miles from the nearest siliciclastic sediment source. It seems likely that similar sediment in the Nealmont Limestone has a comparable origin.

Reconstruction of continents during the Middle Ordovician places eastern North America at approximately 10° south latitude and western North America at approximately 15° north latitude, both in a zone of easterly, equatorial wind flow. The source location for deflated sediment is unknown for this time period as the major land masses lay to the south in a nearly polar position. The presence of deposits of aeolian sediment on opposite sides of the Middle Ordovician North American continent suggests that it may represent a major sedimentological event with widespread stratigraphic significance.