Testing the extent of anoxia in Late Devonian aged Black Shales; a multi proxy approach

Diana L. Boyer, Department of Earth Sciences, SUNY Oswego

Ongoing research aimed at unraveling the mysteries surrounding one of the largest mass extinctions in the history of life (Late Devonian ~375 mya) focuses on ocean chemistry immediately preceding, during and after the extinction event. Vertical pyritized burrows support that oxygen levels decreased rapidly leading into the extinction event, however small burrows within the extinction interval reveal that anoxic conditions were not persistent. High resolution trace metal analysis through the extinction event support fluctuating and periodic oxygen events and oppose an interpretation of persistent anoxic/euxinic conditions as a kill mechanism.

