Mysteries of ancient Rheic Ocean beginning to unravel

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A wealth of information on one of Earth's ancient oceans is now available in a single volume published by the Geological Society of America. The Evolution of Rheic Ocean: From Avalonian-Cadomian Active Margin to Alleghenian-Variscan Collision addresses long-standing controversies surrounding the ocean's origin, paleogeography, and ultimate closure.

The Rheic Ocean was one of the dominant oceans of the late Paleozoic. Approximately 420 million years ago it separated two large land masses: the supercontinent Gondwana, consisting of present-day South America, Africa, India, Australia, and Antarctica; and Laurussia, made up of North America, Greenland, Europe, and part of Asia.

According to co-editor R. Damian Nance of Ohio University, Athens, Ohio, USA, a major challenge in resolving uncertainties about the Rheic Ocean is the large geographic area over which its vestiges were scattered. This publication, in Nance's view, addresses the challenge head-on and sets the stage for new discoveries.

"This volume is a 'first' in a number of respects," said Nance. "It's the first to bring together a multi-disciplinary group of authors from 20 countries who report on aspects of the ocean spanning the full length of its former extent. It's the first to provide in English detailed accounts of important vestiges of the Rheic Ocean in former Eastern Block countries including East Germany, Czech Republic, Poland, Romania, and Bulgaria. It's also the first to describe in detail the existence of a

previously unknown record of the ocean in Mexico."

Lead editor of the publication is Ulf Linnemann, Museum für Mineralogie und Geologie, Staatliche Naturhistorisch Sammlungen Dresden, Germany. Other co-editors are Petr Kraft, Institute of Geology and Paleontology, Charles University Prague, Czech Republic; and Gernold Zulauf, Institut für Geowissenschaften, Universität Frankfurt am Main, Germany.

Papers in the volume originated as talks in several meetings organized by members of International Geological Correlation Programme (IGCP) Project 497. These meetings included the 32nd International Geological Congress in Florence (August 2004), the opening meeting of IGCP in Prague (September 2004), and subsequent gatherings in Mexico, the United Kingdom, and Canada.

Source: Geological Society of America