

Dear fellow palaeoenvironmental researcher worker

We would like to invite you to present your research at the forthcoming EGU meeting in Vienna. You will be sure of an informed and enthusiastic audience:

**RAIDING THE PALAEOZOIC/MESOZOIC SEDIMENTARY ARCHIVE:
INVESTIGATING ENVIRONMENTAL CHANGE
WITH MULTIPLE PROXIES
(SSP 10)**

**Convenors: Ian Jarvis, Hugh Jenkyns, Isabel Montañez
& Adrian Immenhauser**

European Geosciences Union
General Assembly 2006
Vienna, Austria, 2 - 7 April 2006

The symposium is being co-sponsored by IAS and EGU, and in association with the symposium we hope to produce an IAS *Special Publication* based on the papers presented at the meeting. The general meeting (EGU 2006) home site is at <http://meetings.copernicus.org/egu2006/>

Abstract Deadline: 13 January 2006!

Aim: To bring together palaeontologists, sedimentologists, stratigraphers, organic and inorganic geochemists and palaeoceanographers to demonstrate how multiple palaeoenvironmental proxies can be applied to Palaeozoic and Mesozoic sedimentary successions to better understand and model major shifts and perturbations in the Earth System, including oceanic anoxic events, extinction events, and climate change.

Background: Over the last two decades, the combination of carbon and oxygen stable isotope records with palaeontological and sedimentological proxies has proven to be a powerful tool in advancing our understanding of palaeoclimate and other palaeoenvironmental change through the Palaeozoic – Mesozoic. Strontium isotopes have provided a new stratigraphic tool and have improved our knowledge of variations in the continental weathering flux. Nonetheless, most records of Palaeozoic – Mesozoic environmental change remain largely qualitative. However, considerable scope now exists for improved quantification and modelling by employing a multi-proxy approach that incorporates newly developed methods, such as:

Elemental chemistry: productivity proxies using P, Ba, and Cd/Ca ratios; improved palaeotemperature, palaeoclimate and sea-level change records employing Sr, Mn, Mg/Ca and Sr/Ca ratios.

Novel isotope systems: B, Ca, Ge, Li, Mg, Os and Si isotopes to assess variables including palaeoclimate, palaeo-pH, and hydrothermal versus continental weathering fluxes. Nd isotopes to trace ancient water masses.

Organic geochemical proxies: Applications of the TEX₈₆ palaeotemperature proxy. Carbon and N isotope studies of biomarkers to devolve terrestrial and marine records of carbon cycle perturbations. Biomarker distributions in deep ocean sediments as indicators of photic zone anoxia.

We do not have any funds to support speakers, but IAS are offering travel grants to post-graduate student members (<http://www.iasnet.org/>), so if you have any students working in this area please encourage them to apply.

We very much hope to see you in Vienna.

Best wishes

Ian, Hugh, Isabel & Adrian

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