

2013 WORK PLANS FOR BASHKIRIAN–MOSCOWIAN BOUNDARY TASK GROUP

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The Bashkirian-Moscovian boundary task group plans to continue with its research in Eurasia to evaluate lineages suitable for definition of the Bashkirian-Moscovian boundary. Investigations will focus on evolutionary transitions in conodont lineages and it is anticipated that during the November 1st, 2012 - October 31st, 2013 fiscal year a lineage and taxon suitable for boundary definition will be selected.

A major effort will be devoted to the continued study of the conodonts within the Bashkirian-Moscovian transitional interval in the Naqing (Nashui) section and nearby sections in southern Guizhou Province, South China. Special attention will be directed toward the study of the lineage containing *Diplognathodus ellesmerensis* Bender 1980, one of the taxa considered to have the best potential for boundary definition. Another priority will be the continued evaluation of the FAD of *Neognathodus bothrops* Merrill 1972, the other conodont considered to have the best potential for boundary definition. Use of *N. bothrops* will necessitate moving the base of the Moscovian up one substage from the base of the Vereian regional Substage of Russia (lowermost Moscovian substage) to the base of Kashirian regional Substage of Russia.

Work on the sedimentology, stable-isotope geochemistry, and geophysical characteristics of the boundary interval in the Nashui and nearby sections are not as advanced as the paleontological investigations and need to be a focus of the team's work in 2013. During 2013 at the Nashui section, the task group plans to complete measuring the Moscovian component of the section into the lower Kasimovian and finish a bed-by-bed analysis of the strata over a 10 to 20 metre-thick interval on either side of the two proposed boundary levels as defined by the FADS of *D. ellesmerensis* and *N. bothrops*.

Isabel Montanez and her students will continue their studies of stable-oxygen isotopes using conodonts derived from the Pennsylvanian succession in the Donets Basin, Ukraine. Their objective is to develop a high-resolution (near cyclothem-scale) record of the oxygen-isotope composition of conodonts from the Donets Basin limestones. This will be the highest resolution record of its type for the Carboniferous. The record derived from the conodonts will be compared to the sea-level history that was recently defined for the Donets Basin (Davydov *et al.*, 2010) and correlated with the sea-level curves derived from the Midcontinent of the U.S.A. (Heckel *et al.*, 2007) and Pennine Basin. Their ultimate objective is to determine the degree that shifts in conodont-oxygen-isotope composition track the established sea-level changes that were based on sedimentologic analyses.

References

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