

2105 WORK PLANS OF THE TASK GROUP TO ESTABLISH A GSSP CLOSE TO THE EXISTING VISÉAN-SERPUKHOVIAN BOUNDARY

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Introduction

The task group has determined that the FAD of the conodont *Lochriea zieglerei* Nemirovskaya, Perret & Meischner, 1994 in the lineage *Lochriea nodosa* (Bischoff, 1957)–*Lochriea zieglerei* is the best index for boundary definition and is drafting a proposal for discussion at a workshop associated with the XVII ICCP in Kazan, Russia in August 2015. During the 2015 fiscal year, the team will continue to direct its attention toward selecting the best candidate section for the GSSP. The best two candidate sections are the Naqing (Nashui) section by the village of Naqing in southern Guizhou Province, China and the Verkhnyaya Kardailovka section on the Ural River in southern Russia.

Activities in South China

The deep-water (slope), carbonate-dominant Naqing section in southern China is an excellent candidate for the GSSP at the base of the Serpukhovian because the *L. nodosa*–*L. zieglerei* lineage is well defined and the FAD of *L. zieglerei* has been precisely located. The section also contains volcanic ash layers near the boundary level. The conodont studies for the locality are essentially complete and the FAD of *L. zieglerei* has been precisely located (Qi *et al.*, 2010; 2013). Qi Yuping and Tamara Nemyrovska plan to complete their manuscript on the systematics and phylogeny of conodonts within the genus *Lochriea* from the Naqing section. Paul Brenckle is continuing with the study of foraminifers in the Naqing section and several other sections in the region including the important Yashui and Dianzishang sections (see Groves *et al.* 2012). Work on the sedimentology, stable-isotope geochemistry (see Buggisch *et al.*, 2011), and geophysical characteristics of the boundary interval are less advanced than the paleontological investigations and will be the focus of the team's work in the next two fiscal years. To place the Naqing section into its sedimentologic and paleoenvironmental context and to determine the relationship of shallow-water coral zones to the deeper water *L. nodosa* - *L. zieglerei* transition in south China, the investigation of four reference sections - the Yashui, Dianzishang, Luokun, and Narao sections - will continue.

Activities in Southern Urals, Russia

With conodonts of the *L. nodosa*–*L. zieglerei* transition, abundant ammonoids, and moderately common foraminifers, the Kardailovka section, a deep-water, basinal-carbonate succession on the Ural River near the village of Verkhnyaya Kardailovka in the Urals remains the other strong candidate for the Viséan-Serpukhovian boundary GSSP. Conodonts, foraminifers and ammonoids in section have been studied in detail (Nikolaeva *et al.*, 2009; Pazukhin *et al.*, 2010) but additional work across the boundary level is required. Sufficient conodont work has been done to precisely locate the position of the FAD of the conodont *L. zieglerei*. Work on the sedimentology, stable-isotope geochemistry and geophysical characteristics of the section are somewhat less advanced than the paleontological work and will be a focus of the team's investigations in 2015. The team will be showing the section on a fieldtrip for the XVIII International Congress on the Carboniferous and Permian in Kazan, Russia in August 2015 and plans to have a sedimentologic

study of the section up to the base of the Bashkirian completed for that event. The Kardailovka section contains numerous volcanic ash layers near the boundary level and the task group is having the most important ashes dated using the U-Pb isotope dilution thermal ionization mass spectrometry (ID-TIMS) methodology.

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