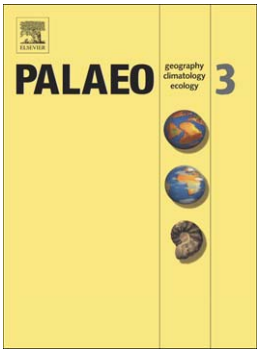

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Vladimir Davydov

PII: S0031-0182(14)00467-2
DOI: doi: 10.1016/j.palaeo.2014.09.013
Reference: PALAEO 7017

To appear in: *Palaeogeography, Palaeoclimatology, Palaeoecology*

Received date: 7 February 2014
Revised date: 28 August 2014
Accepted date: 12 September 2014

Please cite this article as: Davydov, Vladimir, Warm water benthic foraminifera document the Pennsylvanian-Permian warming and cooling events – The record from the Western Pangea tropical shelves, *Palaeogeography, Palaeoclimatology, Palaeoecology* (2014), doi: 10.1016/j.palaeo.2014.09.013

Vladimir Davydov

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Permian Research Institute, Boise State University and Kazan (Volga Region) Federal University , Russia; 1910 University Drive, Department of Geosciences, Boise State University, Boise, Idaho, USA; vdavydov@boisestate.edu; fax: (208) 4264061.

ABSTRACT.

Shallow warm water benthic foraminifera (SWWBF), including all larger fusulinids (symbiont-bearing benthic foraminifera), are among the best indicators of paleoclimate and paleogeography in the Carboniferous and Permian. The distribution of benthic foraminifera in space and time constrain important tectonic, paleogeographic and climatic events at a global scale. The North American shelves during Pennsylvanian and Permian time - though geographically within the tropical belt - are characterized by temperate environments with significantly lower foraminifera diversification and rare occurrences of warm water Tethyan forms, that are in general appear in the region as a migration entities. Such environments allow documentation of warming episodes associated with sudden immigration of warm water and exotic forms of SWWBF that evolved elsewhere into the area. First occurrence datum (FOD) of the forms exotic to North America during warming episodes are always delayed in respect of their First Appearance Datum (FAD) elsewhere. The time of delay and taxonomic diversity of fusulinids in North America shelves depended on the scale and intensity of the warming episodes. Cooling events, on the other hand, are associated with decreased taxonomic diversity