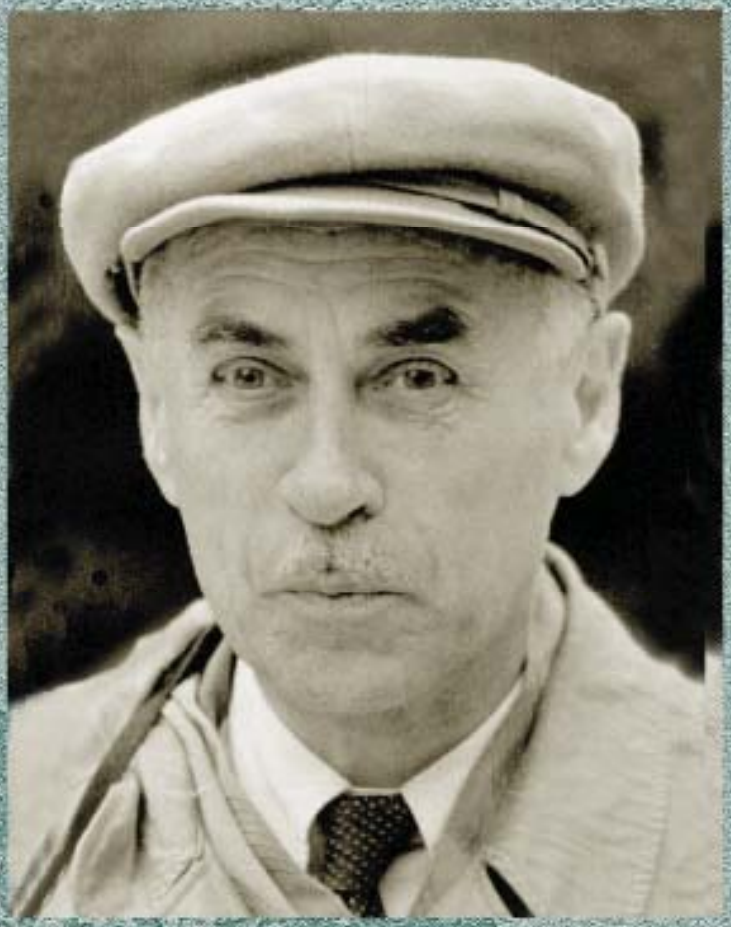

Palaeozoic Early Vertebrates

II Obruchev Symposium

Abstracts

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Department of Palaeontology, Geological Faculty, Saint Petersburg State University
Borissiak Palaeontological Institute of the Russian Academy of Sciences
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EARLY AND MIDDLE PALAEOZOIC VERTEBRATE PALAEOBIOGEOGRAPHY: RECENT ADVANCES AND CRITICAL COMMENTS

Alain BLIECK [1] and Živile ŽIGAITE [2]

[1] Université Lille 1, Sciences de la Terre, FRE 3298 du CNRS, Villeneuve d'Ascq, France, Alain.Blieck@univ-lille1.fr
[2] Evolutionary Biology Center, Uppsala University, Uppsala, Sweden, zivile.zigaite@gmail.com

Oldest known possible vertebrates are Early Cambrian in age. They are small, naked and unossified. Oldest species with a mineralized exoskeleton (euvertebrates) are from the Ordovician, which ends with the Talimaa's Gap (Rhuddanian, earliest Silurian). Ordovician and Silurian vertebrate faunas are dominated by ossified agnathans (ostracoderms). Early Palaeozoic vertebrates have occupied a wide range of environments: from proximal marine to restricted marine in the Ordovician, all along the marine epicontinental shelves in the Silurian. Silurian-Devonian vertebrates are useful biostratigraphic indicators and good markers of palaeocontinental margins. Two main palaeobiogeographic units are defined for the Ordovician: a Gondwana Realm and a Laurentia-Siberia-Baltica Realm. Vertebrate fossil localities are more numerous in the Silurian, therefore a series of palaeobiogeographic provinces are defined on the Old Red Sandstone Continent, Siberia and South China. No formal units are defined for the other palaeocontinental masses. Gnathostomes, and in particular placoderms, become dominant upon agnathans in the Devonian, for which a series of provinces have been defined, including Gondwana. Several palaeobiogeographic analyses of Silurian, and mainly Devonian vertebrates have been proceeded by different authors who used different biogeographic methodologies, such as their results can hardly be compared. Devonian vertebrates suffered of two biotic crises: ostracoderms disappear at the Frasnian-Famennian boundary, placoderms at the Devonian-Carboniferous boundary. However, contrary to what is usually said for marine invertebrates, the F-F boundary is not the strongest extinction of both end-Devonian crises for vertebrates; the D-C one corresponding to a more important turnover in vertebrate faunas with the development of eugnathostomes (chondrichthyans and osteichthyans). This event is followed by the Tournaisian Romer's Gap for tetrapods.

A NEW ISCHNACANTHID (ACANTHODII) BASED ON DISARTICULATED REMAINS FROM THE LOWER DEVONIAN OF SPAIN

Hector BOTELLA, Cristina PLÁ, Esther MANZANARES and Carlos MARTÍNEZ-PÉREZ

Area of Palaeontology, Department of Geology, University of Valencia, Spain, Hector.Botella@uv.es

Acid preparation of carbonate rocks from the Lochkovian and Pragian (Lower Devonian) of the Iberian Chains (Spain) yields an abundant and diverse assemblage of microichthyoliths studied during the last decades (e.g. Mader, 1986; Wang, 1993). This material appears as