

A Simplified Graptolite Zonal Sequence - Reliable Levels for Global Palaeogeographic Reconstructions

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The ongoing correlation chart project is a main objective of the SSS activity. It aims to a better reconstruction and analysis of the palaeogeographic, palaeobiogeographic and evolutionary development in the Silurian. The main aid for the correlation is the "left hand side biostratigraphical column" ("LBC"), which indicates graptolite and conodont time intervals, reliable for global correlation.

This LBC has to be based on all hitherto elaborated complete zonal sequences. But up to now, there is neither a general agreement about the principles of zonation, nor a generally accepted sequence itself. However, well established zonal graptolite sequences exist in several regions, such as the classic ones in Great Britain (there missing the upper part, i.e. Upper Ludlow and Pridoli) and Bohemia (there including the upper part), but also from other regions as, e.g., Poland, Bornholm, Arctic region of Canada, Central Asia).

However, correlation charts in many published papers show that not all of these zones are uniformly defined world-wide (Koren, 1984). This can be explained by the following: (1) in some cases different criteria were used in different regions to define the base of a single zone, (2) in particular parts of the type sequences, zones appear to be not well established, and (3) some intervals were subdivided in such a detail that these smaller units are presently applicable only at local or regional levels.

As a solution to the problems indicated above, it is proposed to use a simplified zonal sequence (Koren, 1984) for the LBS. There, all well traceable zones are named and used in their original biostratigraphic extent. But the parts of the zonal sequence which are not traceable world-wide in detail, or which are still questionable in their range or applicability, those are combined. In this combination (e.g. *parvus* to *deubeli*) all other zones between are included.

In the forthcoming discussion, corresponding compilations of regional zonal sequences, range charts and a LBC will be presented.

An additional task will be to discuss the principles of zonation. The present author pleads to distinguish strictly between the definition of a biostratigraphic zone and its characterization: A zone should be defined by the first occurrence of the zonal species, but characterized by the co-occurrence of other diagnostic species.

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