

## The Tryon Park controversy: a chitinozoan approach

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Classically, two fossils groups are used to date Ordovician and Silurian rocks: graptolites for deeper siliciclastic environments and conodonts for shallower carbonate environments. A third group, the chitinozoans, occur in both environments and can be used for dating this age span, and for correlation between both facies.

The Williamson Shale Formation is a wide-spread lithostratigraphic unit in northeastern USA, dated to the late Llandovery. Loydell *et al.* (2007) identified a controversy, following their study of the type section of this unit in Tryon Park, Rochester, eastern New York State. Index fossils of the graptolite and of the conodont biozonations are mentioned to co-occur in the Tryon Park type section while elsewhere on the palaeocontinent, one is always older than the other. Chitinozoan microfossils were present (Loydell *et al.* 2007), but only in three relatively poorly localised samples.

Here, we present the results of a detailed re-logging and re-sampling, assisted by one of the co-authors of the 2007 paper. Twenty two samples contain a well-diverse Chitinozoa fauna and over 2200 specimens have been photographed and identified. We suggest that inaccurate positioning of the original samples, plus potential misidentification of certain chitinozoans might be partly at the base of the controversy. The distribution of species throughout the section allow to correlate the Tryon Park Chitinozoa biozones with sections in Wales and Belgium situated on the Avalonia palaeocontinent, confirming the validity of the global character of the standard biozonation scheme.