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A NEW EVENT-STRATIGRAPHICAL MARKER BED
IN THE UPPERMOST DEVONIAN
OF THE ARDENNO-RHENISH MASSIF

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A new ferruginous ooid-bearing limestone bed is described from the uppermost Famennian in the Denée borehole, near Maredsous (Dinant Synclinorium).

This pseudo-oolitic ironstone (level V) consists of a 19 cm-thick medium-grey bioclastic grainstone/rudstone with densely-packed, non-sorted ferruginized allocherts (50-60% bioclasts) and heterogenous intraclasts (Fe-intrasparrudite). The grainstone itself is embedded in finely-laminated and bioturbated, micaceous siltstone, interlayered with silty mudstone.

Microfacies analysis points to either slowed accumulation of coarse bioclastic material in the zone of constant winnowing, or to a settling from turbid surficial clouds in a highly turbulent environment.

This new "oolitic ironstone" level (V) shows some good similarities with level IV, which is associated with a transgressive lag deposit or a mineralized hardground at the very base of the Souverain-Pré Formation (Dinant and Vesdre Synclinoria) (Dreesen, 1982). Biometric analysis of the spore flora from the enveloping mudstones indicated the presence of the D/E step limit within the *S. lepidophytus* Zone. This limit is situated at or just below the base of the Etroeungt Limestone in the Ourthe and Hoyoux Valleys (Northern border of Dinant Synclinorium). Thus according to palynological data, level V is situated near the top of the LV Sporezone (Higgs & Streeel, 1984) or at the PLm/PLsI transition (sensu Paproth & Streeel, 1971).

A particular event deposit occurs at exactly the same (bio)stratigraphical level within the Rheinisches Schiefergebirge, near Dillenburg (Dill Syncline).

Here, the so-called "Jungoberdevonischer Bombenschalstein" represents an excellent marker bed at the very base of the greenish grey shales and sandstones of the Wocklum Stufe (do VI). This volcanic bomb level is a heterogenous lithological complex (2-25 m) comprising spilitic volcanic bombs, pillow lavas, tuffs, and subordinated exoclastic boulders of Upper Devonian cephalopod or reef limestones, and ironstones.

The youngest conodonts collected from the enclosed limestone boulders indicated a Lower *praesulcata* Zone (or top of former Middle *costatus* Zone). Moreover, palynological analysis of the enveloping shales indicated that a 25 m "Bombenschalstein" sequence at Langenaubach (near Dillenburg) is included within the upper part of the LV Sporezone (Somers & Streeel, 1978), or more precisely, that is inserted between shales bearing respectively C and E biometric spore zones.

This remarkable synchronism of extremely different event deposits from widely-spaced localities, is not a coincidence, but rather the result of strongly interdependent tectono-sedimentary processes, which have been episodically triggered by syndimentary tectonic movements along deep-seated transversal faults or block faults crosscutting the Ardenno-Rhenish Massif.

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