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Paper No. 173-22
Booth# 89

OSTRACODES, ROCK FACIES AND MAGNETIC SUSCEPTIBILITY OF THE GIVETIAN / FRASNIAN TRANSITION AT SOURD D'AVE (DINANT SYNCLINORIUM, BELGIUM)

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The study contributes to the IGCP Projects N° 580 and N° 596, and forms a part of a series on the Middle Devonian ostracodes and their lithological context in the type region for the definition of the Givetian Stage. The studied section, located at Ave-et-Auffe, exposes the upper part of the Moulin Boreux Mbr and the Fort Hulobiet Mbr belonging to the Fromelennes Fm (Givet Gr), and the Pont d'Avignon Mbr, Sourd d'Ave Mbr and base of La Prée Mbr of the Nismes Fm (Frasnes Gr). The G/F boundary is still in debate, and is fixed arbitrary at the Givet Gr / Frasnes Gr boundary in the Sourd d'Ave section, where the first *Ancyrodeïlla* have been found by BULTYNCK (1974).

47 samples have been collected for ostracodes and 1,130 ostracodes have been extracted by acetolysis and added to more than 500 ostracodes previously collected by MILHAU (1983) and CASIER (1977, 1987). Ostracods belong exclusively to the Eifelian Mega-Assemblage in the Sourd d'Ave section. In the Fromelennes Fm, 42 species have been identified, and they are indicative of lagoonal, semi-restricted, agitated marine, and shallow marine environments below the fair-weather wave-base. The Givet Gr / Frasnes Gr transition is abrupt at Sourd d'Ave: the environment became exclusively and durably marine and the relative proportion of podocopids and metacopids indicates an increasing depth. In other sections in the Dinant Synclinorium, this change corresponding to the entry of *Polyzygia beckmanni beckmanni*, occurred in the upper part of the Fromelennes Fm.

339 samples have been collected for the study of microfacies, magnetic susceptibility (MS) in the section. The Fromelennes Fm displays restricted facies with poorly fossiliferous horizons interbedded with higher energy peloidal and sometimes oolitic grainstone facies. Dolomitic with pseudomorphs of evaporite minerals are apparent suggesting that the palaeoclimate may be becoming more arid. The MS values were measured with a Kappabridge MFK1-A. The MS values range between 6.0×10^{-10} and 4.52×10^{-7} m³/kg with the highest MS values in the Fort Hulobiet Mbr and are observed at the top of several MS evolutions. A clear decreasing trend of the MS is present at the end of the Fort Hulobiet Mbr and the MS values remain weaker in the sediments at the base of the Frasnian recording the drowning of the givetian carbonate platform.

Session No. 173–Booth# 89

[Paleontology \(Posters\) III: Biogeography, Biostratigraphy, and Taphonomy](#)

Tuesday, 11 October 2011: 9:00 AM-6:00 PM

Minneapolis Convention Center Hall C

Geological Society of America *Abstracts with Programs*. Vol. 43, No. 5, p.427

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