

Fépin Formation – FEP

Authors:Dumont, 1848; Meilliez, 1984; Meilliez & Blicq, 1994a.

Description: Conglomeratic formation made up of rudites and arenites as major constituents with sandstones, siltstones, shales and breccias as interbeds. Depositional environments are either fluvial or tidal marine. The formation is interpreted as a positive megasequence corresponding to the Lower Devonian transgression on the Ardennes. The lowermost layers unconformably rest on the folded Lower Paleozoic basement. The top of the series is placed where the sandstones are passing upwards to the shales of the Mondrepuis Formation.

Stratotypes: The Fépin Fm was first described at an old quarry W of Fépin (France). However, the only place where the series is complete is the Lahonri quarry, S of Couvin.

Area: Mainly known from the northern flank of the Rocroi Massif and the SW flank of the Stavelot Massif.

Thickness:Very variable: 20 to > 40 m at Lahonri quarry, 5 to > 70 m at Fépin, 20 to > 300 m at Dochamps.

Age: Lochkovian (R subzone of the MN Opper Miospore Biozone) on the northern flank of the Rocroi Massif. However, at Muno, in the southern part of the Neufchâteau Synclinorium, Godefroid (1995a) has identified a brachiopod (*Dayia shirleyi*) of Silurian (Pridolian) age in the lower part of the Mondrepuis Fm, overlying the Fépin conglomerate (there also named "Linchamps conglomerate"). In the northern part of the Neufchâteau Synclinorium, South of the Stavelot Massif, at Gdumont, Godefroid & Cravatte (1999) have confirmed the Pridolian age of the Gdumont sandstone overlying the Quarreux conglomerate (3 to 5 m thick) resting unconformably on the Cambro-Ordovician basement. This means that the Fépin Fm is very diachronous from south to north, with ages ranging from Silurian (Pridolian) to Lochkovian.

Remarks: The rocks, which unconformably rest on the Cambro-Silurian basement, generally start with a conglomerate. In some cases, this conglomerate is not thick enough to be considered as a distinct formation (e.g. base of the Marteau and Foz Formations).