

Hierges Formation – HIE

Authors: Sauvage & Buvignier; 1842; de Dorlodot, 1901; Godefroid & Stainier, 1994c.

Description: The formation is divided into two members, from bottom to top:

- The Bois Chession Member: ± 20 m of argillaceous or quartzitic sandstones, locally fossiliferous, forming two or three units separated by one or two grey or green grey shale units with fossiliferous beds. The Bois Chession Mbr generally begins with 2.5-2.5 m of alternating thin argillaceous sandstones and shales beds. Towards the E, from Tellin, conglomerates and gravelly sandstones are interbedded in the sandstones.
- The Barrage Member: 300-310 m of shale and siltstones, locally with carbonate cement, containing numerous fossiliferous calcareous sandstone banks and sandstone beds with or without shells. From Grupont, a sandstone unit appears in the upper part of the Barrage Mbr. Its thickness increases from Grupont to Marche-en-Famenne, reaching 160-170 m S of Hargimont. The sandstone beds with calcareous cement also increase and fossils are very abundant in some places. The top of the Hierges Fm is below the first massive shelly limestone bed of the overlying St-Joseph Fm.

Stratotypes: There is no section at Hierges covering the entire formation. Stratotypes for the lower limit are situated at Vireux (France), and for the upper limit, at Nismes (St Joseph locality).

Area: S and SE flanks of the Dinant Synclinorium, up to the Hampteau area.

Thickness: 320-330 m at Hierges.

Age: Traditionally in Belgium, the top of the Hierges Fm was considered as the top of the Emsian (thus, also as the top of the Lower Devonian). Since 1985, the Lower Devonian-Middle Devonian boundary defined by the International Subcommission on the Devonian Stratigraphy corresponds to the occurrence of the *Polygnathus costatus partitus* conodont. This limit is situated stratigraphically higher, in the Eau Noire Fm. The icriodid conodont assemblage (*Latericriodus cf. beckmanni*, *Icriodus culicellus culicellus*, *I. corniger ancestralis*, *I. fusiformis* and *I. rectirostratus*) found in the Hierges Fm covers the *Polygnathus laticostatus* and *P. serotinus* biozones. *Arduspirifer arduennensis*, *Brachyspirifer mixtus* and *Paraspirifer sandbergeri* are brachiopods occurring a little above the lower limit of the formation. *Paraspirifer praecurssor* is a brachiopod occurring in the upper part of the formation.