Summarised description

Unit name

Terres d'Haurs Formation

Code

THR

Status

Formal Formation

Parent unit

Givet Group

Child units

Héblon Facies

Characteristic description

Well-bedded limestone unit arranged in parasequences, starting with argillaceous limestone with corals and evolving upwards to fine-grained limestone.

Age

Early Givetian

Thickness

82 m in the type area, thinning eastwards and northwards.

Area of occurrence

Southern limb of the Dinant Synclinorium between Trélon and Ferrières; Durbuy-Philippeville anticlinorium and northern limb of the Dinant Synclinorium between Bettrechies and Hanzinne.

Type locality

Composite section along the fortifications of the Mont d'Haurs citadel in Givet (France).

Alternative names

none

Authors

Pel (1975)

Modified after

Denayer, J., Coen-Aubert, M., Marion, J.-M. & Mottequin, B., 2024. Middle Devonian lithostratigraphy of Belgium. Geologica Belgica, 27/3-4, 155–192.

Date

23/09/2025

Cite as

Denayer, J., Coen-Aubert, M., Marion, J.-M. & Mottequin, B., 2025. The Terre d'Haurs Formation, 23/09/2025. National Commission for Stratigraphy Belgium. https://ncs.naturalscienes.be/lithostratigraphy/Terres-dHaurs-Formation

Full description

Unit name

Terres d'Haurs Formation

Code

THR

Status

Formal Formation

Parent unit

Givet Group

Child units

Héblon Facies

Origin of the name

After Les Terres d'Haurs locality on the right bank of the Meuse River in Givet (France).

Alternative names

none

Authors

Pel (1975, p. 78): *Membre des Terres d'Haurs*.

Modified after

Denayer, J., Coen-Aubert, M., Marion, J.-M. & Mottequin, B., 2024. Middle Devonian lithostratigraphy of Belgium. Geologica Belgica, 27/3-4, 155–192.

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Denayer, J., Coen-Aubert, M., Marion, J.-M. & Mottequin, B., 2025. The Terre d'Haurs Formation, 23/09/2025. National Commission for Stratigraphy Belgium. https://ncs.naturalscienes.be/lithostratigraphy/Terres-dHaurs-Formation

Characteristic description

The Terres d'Haurs Formation is a limestone unit richer in argillaceous material than the underlying Trois-Fontaines Formation and overlying Mont d'Haurs Formation. Although the argillaceous character is very variable laterally, this unit crops out usually poorly.

The lower part of the Formation starts with a coral bed rich in *Argutastrea quadrigemina*, *Thamnopora cervicornis* and *Pachyfavosites polymorphus* forming locally a 1–3 m thick biostrome or patch-reefs (Préat et al., 1984). Where the corals are not present, this basal horizon is commonly a bioclastic argillaceous limestone. It is overlain by well-bedded dark coloured limestone and shale alternation forming metre to decametre-thick parasequences (= sequences 7 to 12 in Pel, 1965; phases 7 to 9 in Errera et al., 1972, see Bultynck, 1987). Each parasequence starts with argillaceous bioclastic limestone passing to coral-rich beds then to micritic limestone with laminites or coquina beds. The relative proportion of each lithology varies from one parasequence to another (Pel, 1975) as well as laterally. The basal part of the parasequences appears either as calcshale, argillaceous limestone or

pure bioclastic limestone. The capping beds are either bioclastic, or laminate, or micritic limestone with birdseyes and leperditid ostracods reminiscent of the upper part of the Trois-Fontaines Formation (Coen-Aubert, 2003, Barchy et al., 2004). From one locality to another, the Formation appears either more argillaceous (e.g. in Glageon, Givet, Wellin, Marenne, Boulvain et al., 1995; Coen-Aubert, 2003, 2019; Hubert, 2008a) or more carbonate (e.g. Baileux, Hotton, Pel, 1975; Mabille & Boulvain, 2008).

The upper part of the Formation is made of coarser-grained bioclastic, crinoidal or oolitic, limestone with less argillaceous interbeds than below. In Hotton and Givet the argillaceous interval is situated in the upper part whereas the lower part displays more carbonate restricted facies (Coen-Aubert, 2003; Barchy et al., 2004). This unusual development is referred here as the **Héblon Facies** (from the Héblon castle facing the disused Hotton quarry, since the name Hotton was previously used to designate the Trois-Fontaines Formation).

Area of occurrence

The Terres d'Haurs Formation is present along the southern and south-eastern limbs of the Dinant Synclinorium from Glageon (France) to Filot where it passes to the Névremont Formation (Marion & Barchy, in press).

Type locality

The stratotype is a composite section along the fortifications of the Mont d'Haurs citadel in Givet (Errera et al., 1972; Bultynck, 1987; Hubert, 2008b). It can be completed by the sections of the quarries at Glageon (Boulvain et al., 1995), Resteigne (Préat & Tourneur, 1991b) and Hotton (Pel, 1965).

Age

Early Givetian. The conodont assemblages from the type section indicate the upper part of the *obliquimarginatus* conodont Zone to the lower part of the *brevis* conodont Zone of the alternative icriodid zonation (Bultynck, 1987), i.e. upper *hemiansatus* to *timorensis* conodont zones of the standard zonation (Narkiewicz & Bultynck, 2010). The rugose and tabulate corals from the basal beds include *Argutastrea quadrigemina*, *Pachyfavosites polymorphus* and *Thamnopora cervicornis*. They are typical of the southern margin of the Dinant Synclinorium though they already appear in the upper part of the underlying Trois-Fontaines Formation (Préat & Tourneur, 1991a, 1991b; Coen-Aubert, 2003, 2019).

Thickness

In parallel to the facies changes, the thickness varies laterally from 45 m in Glageon (Boulvain et al., 1995), 82 m in Givet (Hubert, 2008a), 75 m in Resteigne and 61 m in Wellin (Coen-Aubert, 2003), and reaches 110 m in Hotton (Barchy et al., 2004) and 90 m in Ferrières (Pel, 1965). In Cour-sur-Heure, the Formation is only 57 m thick (Coen-Aubert, 2000).

Lower boundary

First bed of shaly bed with *Argutastraea, Pachyfavosites* and *Thamnopora* overlying the laminated limestone unit forming the top of the Trois-Fontaines Formation.

Upper boundary

Below the first massive bed of limestone of the overlying Mont d'Haurs Formation.

Regional correlations

It displays important changes in facies and thickness. Along the north-western limb of the Dinant Synclinorium, it is developed between Bettrechies (France) to Gerpinnes (Delcambre & Pingot, 2000). North of the Hanzinne Fault, it passes to the Névremont Formation.

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