

Summarised description

Unit name

Acoz Formation

Code

ACO

Status

Formal Formation

Parent unit

none

Child units

Bième Member, Ruisseau d'Hanzinne Member, Solière Member

Characteristic description

Reddish siltstone and argillaceous sandstone beds, dark reddish siltstone and shale at the base enriched upwards in reddish sandstone and metric to plurimetric beds of light-coloured quartzite, greenish, pinkish or yellowish siltstone and shale. Locally greyish to bluish shale and siltstone with rare sandstone and quartzitic sandstone interbeds.

Age

Pragian

Thickness

0 to 400 metres

Area of occurrence

Northern and north-eastern limbs of the Dinant Synclinorium and in the Vesdre area.

Type locality

Section in the Ruisseau d'Hanzinne River valley south of Acoz.

Alternative names

Schistes d'Acoz

Authors

Conseil de Direction de la Carte (1892)

Modified after

Denayer, J. & Mottequin, B., 2024. Lower Devonian lithostratigraphy of Belgium. *Geologica Belgica*, 27/3-4, 115–154.

Date

23/09/2025

Cite as

Denayer, J. & Mottequin, B., 2025. The Acoz Formation, 23/09/2025. National Commission for Stratigraphy Belgium. <https://ncs.naturalsciences.be/lithostratigraphy/Acoz-Formation>

Full description

Unit name

Acoz Formation

Code

ACO

Status

Formal Formation

Parent unit

none

Child units

Bième Member, Ruisseau d'Hanzinne Member, Solière Member

Origin of the name

Section on the eastern flank of the Ruisseau d'Hanzinne River valley, between Acoz and Bouffioulx.

Alternative names

Schistes d'Acoz

Authors

Conseil de Direction de la Carte (1892, p. 228) : *Cb2 Schistes rouges et grès roses d'Acoz*

de Dorlodot (1892, p. 306) : *schistes siliceux et grès d'Acoz*

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Denayer, J. & Mottequin, B., 2024. Lower Devonian lithostratigraphy of Belgium. *Geologica Belgica*, 27/3-4, 115–154.

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Characteristic description

The Acoz Formation is dominated by reddish-coloured siliciclastics. Its base is defined by the first occurrence of reddish siltstone and argillaceous sandstone beds overlying the light-coloured quartzite of the Bois d'Ausse Formation. In its type area, the Acoz Formation is divided into two members, from base to top: the **Bième Member** dominated by dark reddish siltstone and shale, and the **Ruisseau d'Hanzinne Member** enriched upwards in reddish sandstone and metric to plurimetric beds of light-coloured quartzite, and associated with greenish, pinkish or yellowish siltstone and shale. Quartzite beds contain red shaly pebbles.

Laterally, a shaly unit appears eastwards and was named the Solières Formation (Hance et al., 1992; Dejonghe et al., 1994b). It was mapped as such in the Vesdre area (Laloux et al., 1996) and on the eastern margin of the Dinant Synclinorium by Marion et al. (in press) but, as its development is very limited, it was considered as a member of the Acoz Formation by Delcambre & Pingot (2018). The

Solières Member is dominated by greyish to bluish shale and siltstone with rare sandstone and quartzitic sandstone interbeds. The reddish colour, though occasional, is not as common as in the other members. Moreover, marine faunas (e.g. brachiopods, bivalves) are locally present (Maillieux, 1931; Mottequin & Jansen, 2025). In the type area, the Solières Member is not intercalated between the Bois d'Ausse and Acoz formations as previously suggested by Hance et al. (1992) but entirely bracketed by the red siliciclastics of the Acoz Formation (Delcambre, 2023). The upper boundary is defined below the first sandstone and quartzitic sandstone of the Wépion Formation.

Area of occurrence

The formation is present along the northern and north-eastern limbs of the Dinant Synclinorium and in the Vesdre area but, in the latter region, the Bième and Ruisseau d'Hanzinne members are not recognised, as light-coloured quartzite beds already occur in the lower part of the formation. The Solières Member is known east of the Samson River valley, and only individualised from place to place on the northern flank of the Dinant Synclinorium. The Acoz Formation is also recorded in the Bolland borehole (Graulich, 1975).

Type locality

The Acoz Formation, and the Bième and Ruisseau d'Hanzinne members are exposed on the eastern side of the Hanzinne River (also named Bième River), between the disused quarries of the Bois de Châtelet and the Bois d'Acoz. The Solières Member was defined in a small quarry situated north of the eponymous village (Fourmarier, 1912) but a parastratotype was proposed by Monseur (1959) on the right bank of the Amblève River valley, north of Nonceveux.

Age

Pragian. Steemans (1989) attributed the Acoz Formation to the Pa to Su zones in the Dinant Synclinorium and to the E to Su zones in the Vesdre area, suggesting a younger age eastwards.

Thickness

The formation is 300 m thick west of the Meuse River valley (140 m and 160 m for the Bième and Ruisseau d'Hanzinne members, respectively) and up to 400 m thick east of this valley (Delcambre & Pingot, 2000, 2017). In the Vesdre area, the thickness depends on the reworking induced by the overlying Eifelian conglomerate (Vicht Formation, see Denayer et al., 2024) and varies from 250 m in Eupen, 50 m in Pepinster and 0 m in Heusy (Dejonghe et al., 1994a). The Solières Member is 125 m thick in the Amblève River valley, 130 m in the Hoyoux River valley (where it was merged with the Bois d'Ausse Formation by Mottequin et al., 2021) and less than 50 m at Solières (Dejonghe et al., 1994b; Delcambre, 2023).

Lower boundary

the first occurrence of reddish siltstone and argillaceous sandstone beds overlying the light-coloured quartzite of the Bois d'Ausse Formation.

Upper boundary

First sandstone and quartzitic sandstone of the Wépion Formation.

Regional correlations

The Acoz Formation passes to the Villé and La Roche Formations between the Xhoris and Mormont Faults. It is named Zweifal-Formation in Nord-Rhein-Westphal.

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