

Luxembourg Formation – LUX

Authors

Steininger (1828); Guerin-Franiatte et al. (1991); Boulvain et al. (2001); Boulvain & Belanger (2018).

Description

Alternation of sandy limestone and sand with cross-bedded stratifications; locally, homogeneous sand, sandstone and coquinas ("lumachelles").

Stratotype

Large quarry along the N4 road, at Côte rouge (cf. Boulvain et al., 2017).

Area and thickness

Belgian Lorraine and Luxemburg. The formation, a hundred meters thick, comprises five members: at the base, the Metzert Member, a grey to yellow sandy unit (locally sandstone: "Clairefontaine facies"); then, above a slight angular unconformity, the Florenville, Orval and Virton Members, consisting of alternating yellow to orange sand and sandy limestone. These members are differentiated from one another only when separated by marl horizons (respectively, the Strassen and Posterie Members). West of the meridian of Prouvy, these marl horizons become thin layers very difficult to correlate. Near Virton, a third marl horizon (Trite Member) occurs near the base of the formation, separating Florenville and Chevratte Members. On the other hand, at the east of the meridian of Arlon, the same marl horizons thicken quickly and grade into the Arlon Formation. The Stockem Member which consists of clear sand is probably a weathering facies of the Virton Member or the Hondelange Formation.

Age

The Luxembourg Formation is clearly diachronic (Maubeuge, 1965; Guérin-Franiatte & Muller, 1986; Guérin-Franiatte et al., 1991). In eastern Belgian Lorraine, it encompasses the Upper Hettangian and the base of the Sinemurian, from *Schlotheimia angulata* to *Arietites bucklandi* ammonite Zones; in the western part of the area, this formation extends from the Lower to the Uppermost Sinemurian, from *Arietites bucklandi* to *Echioceras raricostatum* ammonite Zones.

Note

This formation was introduced in Belgium by Dumont (1842). Because of its diachronic character, it was later subdivided in various "Assises" on a biostratigraphic basis. The unitary character of the formation was redefined by Guerin-Franiatte et al. (1991). Some units, corresponding partially to old "assises", were redefined as members with new lithostratigraphic limits (Members of Metzert, Florenville, Orval, Virton, Stockem). The other "assises" are abandoned.

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