

National Commission for Stratigraphy Belgium

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4.3.1 Jalhay Formation - JAL (old: Sm1)

Lower Paleozoic

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Author: Geukens, 1999.

Description: Blue-green slate, sandstone and silty slate (called "quartzophyllade" in the older literature) subdivided into three members.

The Solwaster Mbr – (SLW, old: Sm1a): dark green-blue "quartzophyllade", black or green-blue slate, with at the base sandstone beds containing black shale fragments; occurrence of flattened nodules encircled by cone-in-cone structures, and of dendroid graptolite levels. Locally at the transition with the underlying Revin-Deville Group homogeneous graphitic black slate can occur.

The Spa Mbr – (SPA, old: Sm1b): dark bluish grey and greenish grey sandy "quartzophyllade". Many sandstone beds have characteristic sedimentary structures (slumping, convoluted bedding and oblique stratification).

The Lierneux Mbr – (LIE, old: Sm1c): North of the Xhoris fault, olive green clayey "quartzophyllade"; south of the fault: greyish "quartzophyllade", green sandy slate with reddish patches, magnetite-bearing slate. White sandstone levels in the Lierneux-Vielsalm-Bihain area; light green "quartzophylladic" slate; traces of bioturbation.

Stratotype: Not yet defined; type area of the formation around the village of Jalhay, more precisely around the Gileppe dam; type area of the Solwaster Mbr: around Solwaster, in the section along the forestry track south of the Gospinal Farm; type area of the Spa Mbr: outcrops in the Wayai valley around the city of Spa, more precisely the section along the road to the mineral water factory; type area of the Lierneux Mbr: section along the road from Lierneux to Sart, just south of Lierneux.

Area: See description above.

Thickness: Jalhay Fm: >400 m (Laloux et al., 1996); Lierneux Mbr: 80 m; Spa Mbr: not estimated; Solwaster Mbr: 60-150 m.

Age: The early Tremadoc age is proven by the presence of the dendroid graptolite *Rhabdinopora flabelliformis* in the lower two members of the formation; the subspecies *flabelliformis* is dominating in the lower part of the Solwaster Mbr, while the subspecies *anglica* and *norvegica* are occurring in the upper part of the Solwaster Mbr and in the Spa Mbr (Malaise, 1874a; Geukens, 1950, 1954; Bulman & Geukens, 1970). Vanguetaine (1974, 1992) confirmed this age on the base of acritarchs. He could also on the base of acritarchs, assign the uppermost part of the formation, without graptolites, to the late Tremadoc.

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