

Shelloch Burn Lava Member

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Shelloch Burn Lava Member (**SHEB**), Fintry-Touch Block, Carboniferous, Midland Valley of Scotland

Shelloch Burn Lava Member is part of the [Clyde Plateau Volcanic Formation](#).

Name

Previously named the Shelloch Burn Group (Francis et al., 1970)^[1].

Lithology

The Shelloch Burn Lava Member consists of a varied assemblage of lavas including: trachybasalt that is variably massive to locally platy-jointed, slaggy and vesicular; basaltic-trachyandesite (mugearite); plagioclase-microphyric basalt ('Jedburgh' type); plagioclase-macrophyric basalt ('Markle' type); and transitional plagioclase-microphyric to plagioclase-macrophyric basalts. The member is best developed in the northern Fintry Hills and its upper part is well exposed in Shelloch Burn (NS 6509 8913 to NS 6523 8924) where the sequence comprises a basaltic-trachyandesite, a plagioclase-macrophyric basalt that is deeply weathered to a dull red bole basalt, and a basaltic-trachyandesite (mugearite) that is deeply weathered to a dull red bole. The lower part of the member is best exposed in Boquhan Burn (NS 6468 8967 to NS 6490 8963) where the sequence comprises a trachybasalt lava, which is deeply weathered to a dull red bole and a basaltic-trachandesite (mugearite). West of the Balmenoch Fault (Francis et al., 1970)^[1] the member forms the highest part of the Fintry Hills but is not well exposed. However, a good section through all but the highest lavas in the member is seen in the highest of the crags that form the western edge of the Fintry Hills (NS 6281 8910 to NS 6304 8870) where the sequence comprises a trachybasalt, two transitional plagioclase-macrophyric to plagioclase-microphyric basalts, another trachybasalt, two basaltic-trachyandesites (mugearites) and a further trachybasalt.

Stratotype

The type area is in the Fintry Hills, north-east of Glasgow (NS 6361 8794 to NS 6489 8991) (Francis et al., 1970)^[1]. A reference section is in crags forming the western edge of the Fintry Hills (NS 6281 8910 to NS 6304 8870) that shows all but the highest lavas in a section 60 m thick (Francis et al., 1970)^[1]. The member is well exposed in Shelloch Burn (NS 6509 8913 to NS 6523 8924) where a section 21 m thick includes the top of the member. The lower part of the member, including its base, is best exposed in Boquhan Burn (NS 6468 8967 to NS 6490 8963). Here the section is 18 m thick (Francis et al., 1970)^[1].

Lower and upper boundaries

The basal trachybasalt lava of the member is conformable or disconformable on the underlying plagioclase-microphyric basalts of the [Spout of Ballochleam Lava Member](#).

The member is overlain unconformably by the [Fintry Hills Lava Member](#). The lithological change is from basaltic-trachyandesite (mugearite) or trachybasalt to plagioclase-microphyric basalt.

Thickness

Between 40 and 61 m.

Distribution and regional correlation

The member is restricted to the Fintry-Touch Block (Francis et al., 1970)^[1], specifically to the Fintry Hills, north-east of Glasgow. These rocks crop out from around Stronend (NS 6290 8946) in the north-west of the Fintry Hills towards the east, in the Boquhan Burn and its headwaters (NS 6388 8988 to NS 6490 8965) and the Shelloch Burn (NS 6513 8920 to NS 6541 8939), and south-east to the Balmenoch Burn (NS 6465 8771 to NS 6464 8753) and beyond, although the limits of the member to the south-east are uncertain.

Age

Mid Visean (Arundian to Asbian).

References

- ↑ ^[1] Francis, E H, Forsyth, I H, Read, W A, and Armstrong, M. 1970. The geology of the Stirling district. *Memoir of the Geological Survey of Great Britain*, Sheet 39 (Scotland)

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