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# Farley Road Cutting

[SJ 637 026]

## Introduction

This site is located on the A4169 road 2.5 km south-west of Buildwas, about mid-way between there and Much Wenlock (Figure 4.27). The originally selected railway-cutting section at Farley Dingle is no longer available owing to recent slight re-routing of the A4169 road to the east. The present cutting (Figure 4.31) represents that original section cut back a few tens of metres farther to the east, so that it now forms the easterly margin to the A4169. The new cutting impressively exposes the typical development in the type Wenlock area of the Farley Member, the highest lithological unit of the Coalbrookdale Formation, of mid-late Homeric age.

When Davidson and Maw (1881) established the lithostratigraphical subdivisions of the 'Wenlock Shale' (see Buildwas River site report), they recognized at the top of this unit and beneath the Wenlock Limestone a transitional group of sediments linking the two. This gradational facies, above their 'Coalbrookdale Beds', they termed the 'Tickwood Beds' after Tick Wood, which is situated immediately to the north-east of Farley hamlet and the present site (Figure 4.27). Pocock *et al.* (1938) continued to use the term Tickwood Beds for strata immediately beneath the Wenlock Limestone, but in a more restricted sense, recognizing them as having a thickness of only about 30 m as opposed to the 90–150 m estimated by Davidson and Maw (1881). Bassett *et al.* (1975) followed the more limited usage of Pocock *et al.* (1938) for these beds. However they renamed them the Farley Member, after Farley Dingle, because Tick Wood is largely underlain by the Much Wenlock Limestone Formation; they also noted that the term 'Tickwood Beds' had been variously employed since its introduction, for example, Greig *et al.* (1968) included within this unit in the Church Stretton area lithologies, which even took in part of the Lower Elton Formation (Ludlow Series). Despite the initial objections of Lawson (1977a), who favoured that a redefined Tickwood Beds be regarded as a member of a 'Wenlock Shale Formation', all other authors subsequent to Bassett *et al.* (1975) have used the term 'Farley Member'.

## Description

About 25 m of the Farley Member are exposed on two levels in this long section, the younger horizons being accessed by a rock bench hewn into the face of the cutting from road level; in the type Wenlock area as a whole the thickness of this unit varies between 24–27 m (Bassett *et al.*, 1975). It consists of alternating thin bands of grey, shaly mudstones and yellow and buff limestone nodules, some of the latter coalescing to form nodular beds, with the unweathered centres of the nodules being blue-grey in colour (Figure 4.32). The grain size of the rocks places them in the range of medium calcilutites to fine calcarenites. Bioturbation is common in some of the calcilutites (Bassett, 1989a).

The fauna of the Farley Member is shelly in nature, comprising mostly (and often small) brachiopod and trilobite specimens and fragmentary pelmatozoans and bryozoans; graptolites are lacking. *Meristina obtusa*, *Nucleospira pisum*, *Ptychopleurella bouchardi*, *Resserella canalis*, *Striispirifer plicatellus* and *Kozlowskiellina strawi* are included amongst the brachiopods and *Warburgella (W.) stokesii* is the most typical trilobite. The section at Farley Road Cutting also yields very rich undescribed acritarch microfloras.

## Interpretation

The return of higher energy conditions marks the transitional passage from the Apedale Member to the Farley Member, accompanied by a shallowing which culminated in the formation of the younger, reefal Much Wenlock Limestone Formation. The depositional environment of the Farley Member was on the mid- to outer platform region. The widespread change to more calcareous sedimentation has been interpreted to reflect climatic warming (Jeppsson *et al.*, 1995).

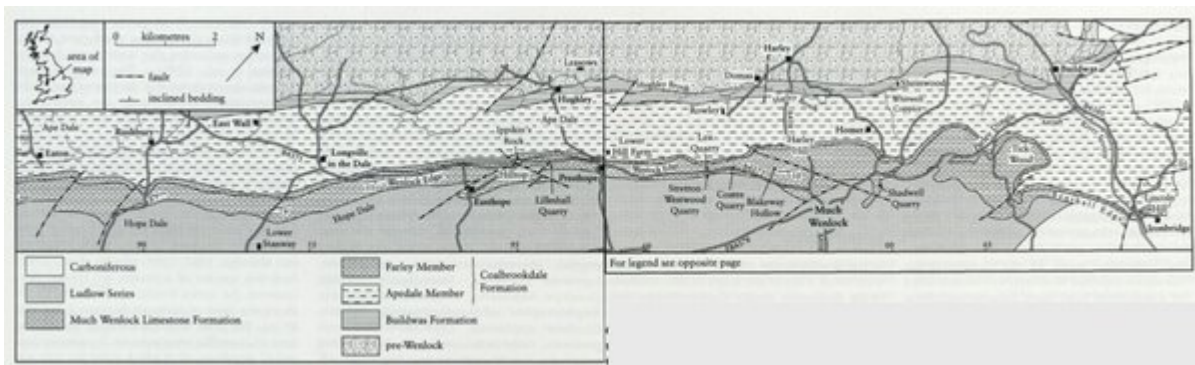
Biostratigraphically, on the basis of graptolite finds from the whole of the type Wenlock area, nearly all the Farley Member has been assigned to the *nassa* Biozone, with its uppermost part belonging to the *ludensis* Biozone. However there is some uncertainty about whether the *nassa* Biozone extends upwards to include beds towards its top as there are no records as yet of graptolites from much of this lithostratigraphical unit (Bassett *et al.*, 1975). The new road section offers the possibility of detailed sampling for micropalaeontology and chemostratigraphy.

The Farley Member is present in the northeast on the scarp face of Benthall Edge, and also along much of Wenlock Edge. Its stratotype base is defined on Harley Hill (see site report), though the Eaton Track site also exposes the lithologically transitional base from the underlying Apedale Member (Coalbrookdale Formation) and the Longville–Stanway site includes its uppermost part. Towards the south-west of the type Wenlock area the Farley Member passes laterally into mudstone facies typical of the Apedale Member (Bassett, 1989a).

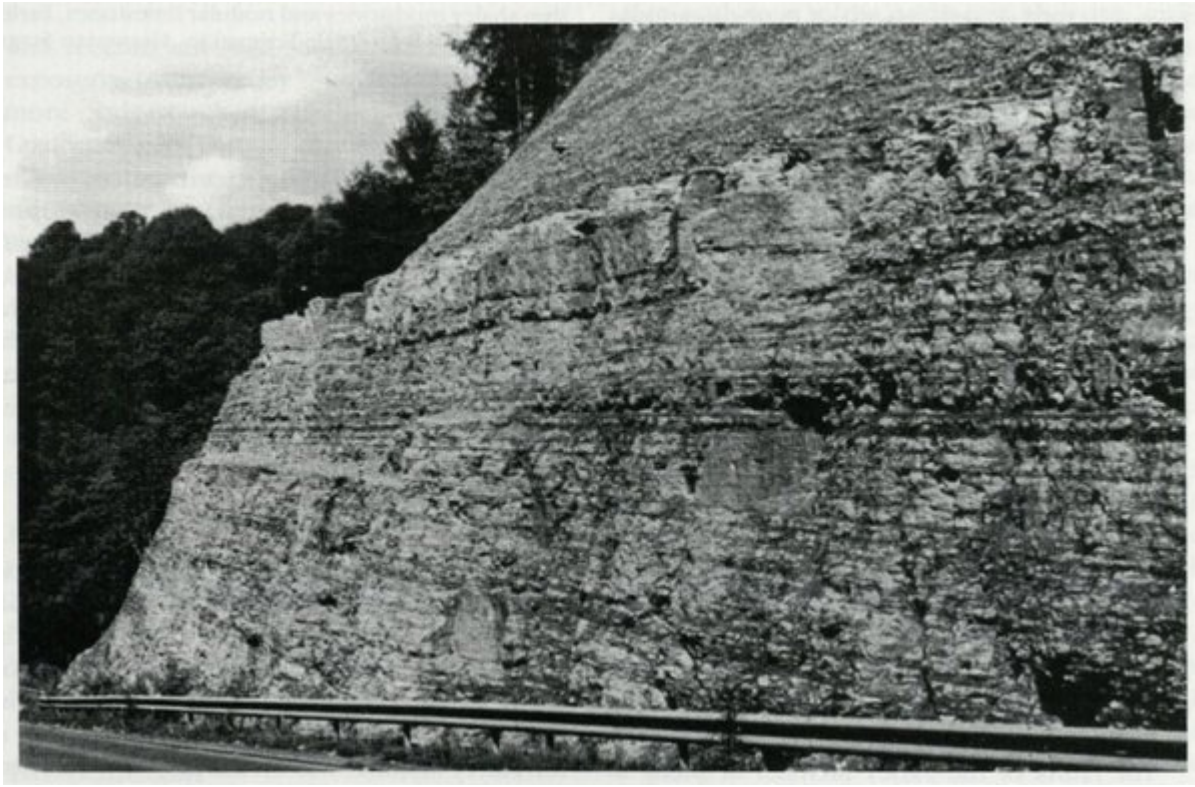
## Conclusions

This recently cut road section affords excellent exposures of the Farley Member, the youngest, more calcareous lithological unit of the Coalbrookdale Formation, in the eponymous district within the type Wenlock area. The sediments comprise thin shale and nodular limestone alternations which provide a transitional facies between the carbonate muds of the Apedale Member, Coalbrookdale Formation, below, and the full carbonate development of the Much Wenlock Limestone Formation above. Concomitant with this lithological change there was shallowing and higher energy conditions, perhaps accompanied by climatic warming.

## References



(Figure 4.27) *Geology of the Wenlock Edge–Benthall Edge area between Eaton and Ironbridge, Shropshire (after Bassett et al., 1975).*



*(Figure 4.31) Farley Road Cutting, between Much Wenlock and Ironbridge, Shropshire. Farley Member, Coalbrookdale Formation, Homerian Stage. (Photo: Derek J. Siveter.)*



*(Figure 4.32) Farley Road Cutting, between Much Wenlock and Ironbridge, Shropshire. Alternations of thin shaly mudstones and nodular limestones, Farley Member, Coalbrookdale Formation, Homeric Stage. (Photo: Derek J. Siveter.)*