
River Tonge, Mill Hill

Highlights

The cliff on the River Tonge at Mill Hill is the best available exposure of the Peel Hall Rock (Figure 10.26), an important sandstone body in the Duckmantian of the Lancashire Coalfield.

Introduction

This cliff on west side of River Tonge [SD 725 096], immediately north of the Tonge Bridge, Mill Hill, Bolton, Greater Manchester, shows sandstones in the lower Duckmantian of the Lancashire Coalfield. The only description of the geology is by Tonks *et al.* (1931).

Description

The cliff here exposes some 12 m of sandstone from the lower part of the Peel Hall Rock Formation, overlying grey mudstones. The sandstone, which is pale grey in colour and fine-grained, shows some cross-bedding. However, the two-dimensional nature of the face makes it impossible to determine a meaningful palaeocurrent direction.

The sandstones here contain no fossils, other than indeterminable plant fragments. At the type locality for the formation (Peel Hall Quarry, Little Hutton, Greater Manchester) there have been records of numerous casts of *Trigonocarpus* seeds (Tonks *et al.*, 1931, pl. 2), but these are of no biostratigraphical value.

The mudstones underlying the sandstone here were reported by Tonks *et al.* (1931) to contain bivalves, including *Anthracosia* cf. *phryglana* (Wright). This suggests the subzone of the same name, indicating the lower Duckmantian.

Interpretation

This is the best exposure of the Peel Hall Rock, a fluvio-deltaic, arenaceous formation in the lower Duckmantian of the Lancashire Coalfield. It reaches a maximum of 45 m thick in this part of the coalfield, but thins rapidly to the south and eventually disappears at about Tyldesley. As well being an important fluvio-deltaic complex, the formation is of interest for providing of the distinctive *Trigonocarpus* 'nuts' found in many museum collections.

Conclusions

The River Tonge at Mill Hill is the best available exposure of a sandstone known as the Peel Hall Rock, about 305 million years old.

[References](#)



(Figure 10.26) Peel Hall Rock exposed at Mill Hill on the River Tonge. (Photo: C.J. Cleat.)