An arenaceous member was noticed in the Mercia Mudstone Group to the west and south-west of Taunton by Buckland (1836), Ussher (1906, 1908), and Edmonds and Williams (1985). It gives rise to a generally westward-facing scarp feature by means of which its outcrop (Fig. 1) has been traced by one of us (A.R.) between scattered, mostly small, exposures.

The main part of the outcrop extends for more than 5km between Hele and the MS motorway, and includes the principal section through the arenaceous member, at Lipe Hill (5, Fig. 1: ST 1872 2150). This section (Fig. 2) was given its first, and only, description by Ussher (1906, p. 24); some 13m of beds comprising the arenaceous member (10.5m; 2 to 6 in Fig. 2) and contiguous beds in the Mercia Mudstone Group succession (1 and 7 in Fig. 2) are exposed in a cutting where a minor road traverses a steep west-facing scarp formed by resistant sandstone beds which dip gently eastwards.

Sandstone in the Mercia Mudstone, Somerset

2m of laminated siltstones and sandstones with tracefossils of Planolites or Phycodes type are exposed in a road cutting, and to the Taunton Deane motorway service area (Fig. 1: ST 195 0 2032). Farther south the scarp feature is difficult to follow and the outcrop has not been defined. Northwards from Castleman’s Hill the scarp becomes less prominent towards Rumwell where it turns westwards and passes to the north of Hele, reaching the River Tone north of Hele Hill. Around Hele, and exposed in an old pit (3, Fig. 1: ST 1873 2432) Edmonds and Williams (1985) recorded interbedded grey-green marls, siltstones and sandstones. North of the River Tone the outcrop is traced discontinuously. A low hill between the Taunton - Exeter railway line and the A 361 road west of Norton Fitzwarren may correspond to the feature traced to Hele; blue blocky mudstones are exposed at the north end of this hill (2, Fig. 1: ST 1820 2607) but no sandstones are visible. Farther north, sandstones overlie red and grey-green marls on the prominent feature of Knowle Hill (Edmonds and Williams 1985), and up to 1.5m of sandstones with grey shale interbeds and tracefossils of Planolites and Phycodes type are exposed (1, Fig. 1: ST 1882 2752) in Norton Manor Camp grounds (40 Commando Regiment). A palynological preparation (MPA 27479) from this locality contains largely indeterminate bisaccate pollen associated with Plaeodictyon mosellanum and some Botryococcus: Ovalipollis pseudoalatus is present in the assemblage which, though less rich, is similar in character to those from Lipe Hill.

Ussher (1906, p. 24) and Edmonds and Williams (1985, p. 40) suggested that the arenaceous beds in the Mercia Mudstone Group at, respectively, Lipe Hill and Hele were probably correlatives of those at North Curry, to the east of Taunton. The lithological and palaeontological characters documented here from the arenaceous member west of Taunton are analogous to those reported from the North Curry Sandstone Member in its type area between 6 and 14km east of Taunton (Warrington and Williams 1984), and a comparable late Carnian (Julian or Tuvalian) age is indicated by the palynomorph assemblages from Lipe Hill. The arenaceous member west of Taunton is, therefore, considered the representative there of the North Curry Sandstone Member. The latter is considered analogous to the Late Triassic Schlifsandstein of Germany (Wurster 1964); it is interpreted as comprising thicker, more arenaceous sequences formed in delta distributaries or fluvial channels, and thinner, more argillaceous, laterally equivalent interdistributary or overbank sequences (Warrington and Williams 1984). A comparable relationship is evident in the outcrop of the arenaceous member west of Taunton. There, the thick scarp-forming succession in the Castleman's Hill - Lipe Hill - Cutsey Hill area includes a substantial proportion of cross-bedded sandstones that accumulated in a distributary channel environment, and is flanked, to the north and south, by thinner interdistributary or overbank successions that are less arenaceous and give rise to a weaker topographic feature. The eastward or east-south-east direction of transport determined from tabular crossstratification, ripple marks, current parting lineation and oriented plant debris in units 5 and 6 at Lipe Hill (Fig. 2) -is consistent with that recorded on the North Curry outcrop (Warrington and Williams 1984, p. 86).

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