
Hobbs Quarry

[SO 695 193]

Introduction

The Silurian inlier of May Hill lies between those of Woolhope to the north-west and Tortworth to the south. In structural terms it forms part of a pericline which on its south-eastern side disappears beneath the Permo-Triassic cover of the Severn vale, and on its western side passes into Old Red Sandstone facies. The centre of the inlier is formed of Llandovery strata, these being succeeded by sediments of Wenlock, Ludlow and Plidoli age.

In the 19th century the Silurian geology of May Hill was described in two classic works: Murchison's (1839) *Silurian System* and shortly afterwards Phillips' (1848) memoir on the Malvern Hills and adjacent areas. In the 20th century, Gardiner (1920), then Lawson (1955), re-investigated May Hill, the latter revision forming the standard work on the geology of the district. Minor comment on the inlier has appeared in several other works, for example those of Gardiner (1927, 1934).

Hobbs Quarry takes its name from Hobbs Ridge, a feature referred to by Murchison (1839) and formed of the resistant Much Wenlock Limestone Formation. The quarry stands as the representative exposure within the inlier for this unit.

Description

The site is located on the western flank of the May Hill pericline, 1 km east of Longhope. Here the Silurian strata strike NNW–SSE and dip WSW at 20–25°. Either side of the ridge of Much Wenlock Limestone are carbonate muds of the Wenlock Coalbrookdale Formation and calcareous siltstones of the Ludlow Series, both of which form lower ground.

The Much Wenlock Limestone Formation in May Hill varies between 30–100 m in thickness and can be divided into lower and upper limestone horizons separated by nodular beds (Lawson, 1955). The upper limestone shows variable lithology and near Longhope is notable for being ferruginous and sometimes oolitic in nature, this facies weathering from a fresh, greyish-olive colour to a rusty yellowish-orange. In the south of the inlier, near Flaxley, the formation is at its thinnest and this upper division has not been recognized. The middle, nodular limestones are thinly bedded and contain seams of calcareous shale. The lower limestone is the purest, and provided a focus for former quarrying operations, including those at Hobbs Quarry. Some of the beds of this lower division are pisolitic, and small biohermal structures (the 'hailstones' of older literature) also occur.

The quarries along Hobbs Ridge have yielded abundant fossils belonging to a variety of groups, most particularly brachiopods, with tabulate corals and stromatoporoids being the most common types in the bioherms. Brachiopods from here were used by Davidson in his classic monographs (e.g. 1867), and more lately in taxonomic and community studies by Bassett (1970a) and Hurst (1975a), respectively; the algae were reported on by Wethered (1893) and Johnson (1966); certain corals have been commented on by Ryder (1926), Lang and Smith (1927) and Smith and Tremberth (1929); and more recently the trilobites have been collected by Thomas (1978) and the ostracods investigated by Siveter (1978, 1980). Gardiner (1920) listed about 90 species from the Much Wenlock Limestone Formation of May Hill, many of these records probably being based on Hobbs Ridge material. Some of the specimens from Hobbs have type status (Figure 4.13).

Interpretation

The Much Wenlock Limestone Formation, rich in corals and algae, was formed in low latitudes in a warm, shallow water environment. The bioherms, which occur in other areas as well as May Hill, have been compared to the small patch reefs of the subtropics (Scoffin, 1971). The formation as a whole represents a carbonate shelf extending from the eastern fringe of the Welsh Basin, throughout the Welsh Borderland, to and including most of central England (Bassett, 1974a;

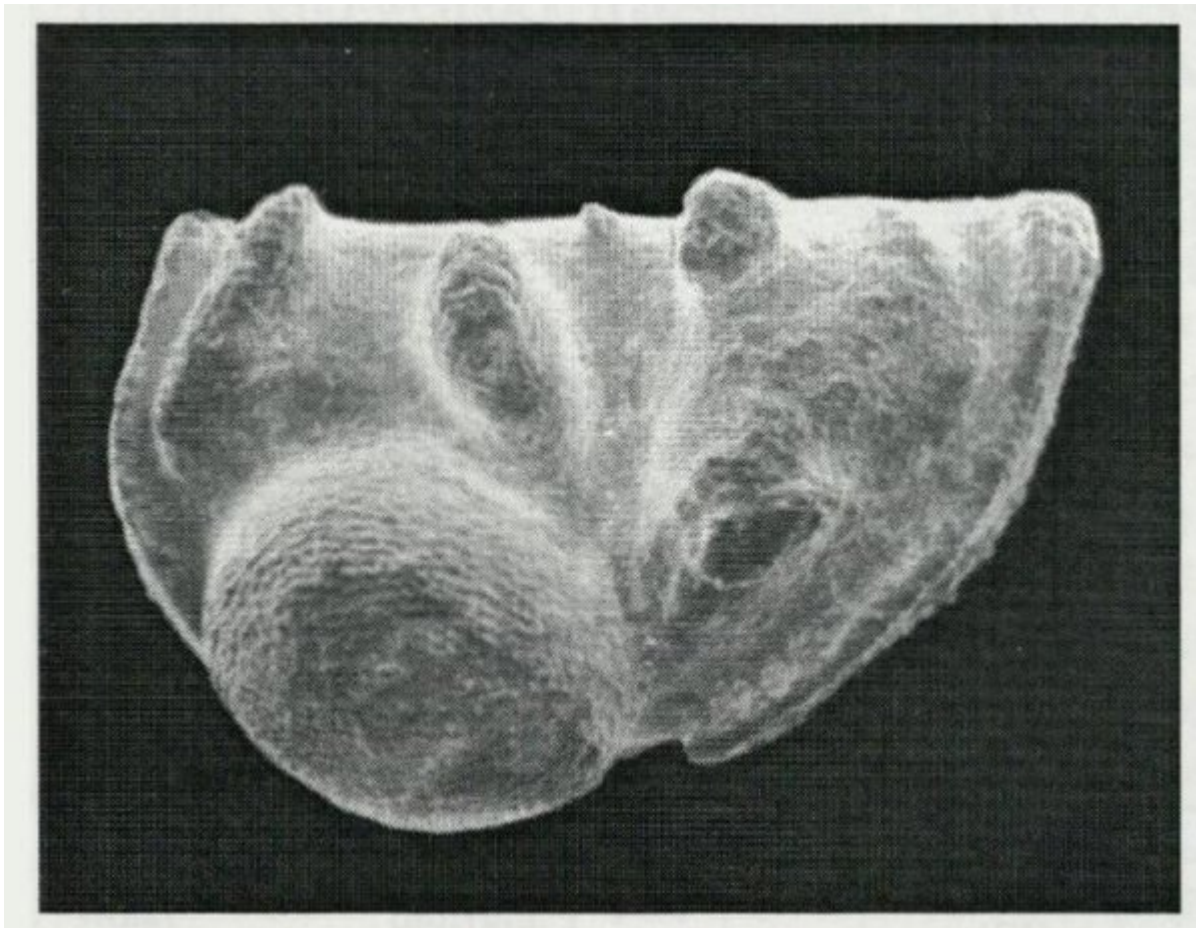
Hurst *et al.*, 1978; Holland, 1992). The low sea level at this time followed on from the deeper conditions under which the carbonate muds of the Coalbrookdale Formation were deposited, and was succeeded by the transgressive pulse responsible for deposition of the lower Gorstian siltstones. This late Wenlock lowstand in the Anglo-Welsh area reflects here the eustatic sea-level fall that has been recognized on several continental blocks (Johnson *et al.*, 1991).

Hobbs Quarry forms part of a group of sites which indicate the nature and extent of the late Wenlock carbonate platform. This feature is in evidence in the nearby Woolhope and Gorsley inliers at Little Hill and Linton quarries respectively, in the West Midlands it can be demonstrated at the Wren's Nest and Daw End localities, and its more distal part is represented by the Easthope–Harley Hill site at Wenlock Edge.

Conclusions

Hobbs Quarry provides the best representative exposure in the May Hill Inlier of the Much Wenlock Limestone Formation. As such it is a useful complementary site to those on Wenlock Edge, which expose the type development of this lithostratigraphical unit. The Much Wenlock Limestone Formation has palaeoenvironmental and palaeogeographical significance. The occurrence of this formation in May Hill demonstrates the extension here of the carbonate platform that occupied central England in the late Wenlock, and the presence in it of bioherms implies a subtropical environment and position. The site also has some palaeontological significance: since the 19th century various invertebrate species have been described on the basis of material from here.

References



(Figure 4.13) *Sleia procincta* Siveter, 1980, a beyrichiacean ostracod from the Much Wenlock Limestone Formation, Hobbs Ridge, May Hill Inlier, southern Welsh Borderland. Holotype, British Museum of Natural History specimen (BM 0S6413); female, left valve, lateral view, x 45; figured Siveter (1980). (Photo: David J. Siveter.)