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## Shepton Mallet and the Doultong area

Shepton Mallet is a market town with a wealth of interesting history. The town has links back to Roman times as the Fosse Way passes close to the town. Mentioned in the Domesday book as Scepton, or 'Sheep-town', the town grew prosperous in the Middle Ages as a centre for woollen cloth and stockings. The geological history of the area is even more fascinating, stretching back over 300 million years. Located at the boundary between the young Jurassic rocks and the older, harder Carboniferous strata, there is a huge variety of rocks to be seen within a small area.

The town is built on a shelf of Jurassic limestone 30 m thick, known locally as Downside Stone, which was deposited when the sea slowly transgressed over the eroded Triassic landscape about 200 million years ago. The Downside Stone, named after the local village [64] [ST 62268 44581] where the stone was quarried for building stone, is part of the Lias Group. However, instead of the characteristic interbedded thin limestones and mudstones seen elsewhere, the rocks here are typically white, coarsely crystalline, shelly and sandy limestones with thin beds of conglomerate. These rocks were deposited in a shallow sea, close to the shore in a high-energy environment. At this time, the Mendip region formed an archipelago of small islands in a shallow sea, with deeper water to the south where more typical Lias Group sediments were deposited.

The Downside Stone rests on Triassic rocks (Mercia Mudstone and Dolomitic Conglomerate) south of the town, but oversteps this to the north, resting directly on the underlying Carboniferous Limestone between Doultong and Downside. To the west, the Downside Stone forms a discontinuous outcrop north-west to Horrington, where it changes character and is known locally as the Chilcote Stone. Here, the topography forms a very distinctive shelf lapping onto the southern slopes of Mendip, and mimicking the original Jurassic shoreline.

Specimens of the coarse-grained, fossil-rich, creamy-grey pebbly conglomerate can be seen in the fields and stone walls in the area. Good examples can be seen at Croscombe Church [65] [ST 59100 44417] and in the buildings and walls around Horrington.

The Downside Stone can also be seen in three small quarries, all of which are on private land and thus require permission to enter. The largest is now a Site of Special Scientific Interest, and lies just north-east of the old railway viaduct on the B3136 south of Downside [66] [ST 62121 44225]. Here, the rock is a white, bioclastic limestone, with shelly beds dominated by oysters, but coral, ammonites and gastropods also occur.

The second quarry, located 400 m to the north [67] [ST 62167 44602] is now used as a builders' yard. Here, the striking angular unconformity between the Downside Stone and the underlying Carboniferous Black Rock Limestone is exposed behind some buildings. A third quarry, 1.3 km to the east [68] [ST 63481 44835] and visible from the Fosse Way, shows several metres of pale grey horizontally bedded Downside Stone. The quarry is now used for storing silage.

To the west of Shepton Mallet, a small roadside cutting in Bowlsh [69] [ST 61233 43971] again exposes the Downside Stone. However, here, the interbedded pale grey limestones and thin mudstones indicate a change in depositional environment from the nearshore (littoral) to a more offshore setting, but still within fairly shallow water. The limestones are fossiliferous and include ammonites, gastropods, bivalves and coral, with some fish remains. One bed contains wood fragments indicating that land was probably still in close proximity.

Farther south, these littoral deposits thin rapidly and merge with the more typical deeper water Lias Group sediments around Cannards Grave, where only eight metres of limestone was deposited [70] [ST 62688 41853]. According to legend, this small village may be named after the publican Giles Cannard, who was the last man to hang for sheep-stealing in the late 17th century.

The older rocks beneath the Downside Stone are exposed where erosion has removed the younger cover. Several small streams draining the Portishead Formation ridge to the north sink underground on meeting the Carboniferous Limestone. At Thrupe Lane Swallet [71] [ST 6037 4577], a small stream sinks at the foot of a cliff and enters an almost vertical cave system 120 m deep. The water from this and the other stream sinks resurges at the St Andrew's Risings in Wells.

The Carboniferous Black Rock Limestone has been quarried on either side of the disused Somerset and Dorset Joint Railway at Windsor Hill [72] [ST 61232 45257]. This complex of disused quarries was opened by John Wainwright and Co Ltd, in about 1902. In the quarry north of the railway tunnels, the German palaeontologist Walter Kunhe obtained a specimen of *Oligokyphus*, a mammal-like reptile that resembled a weasel, from a fissure infilled with Lias Group sediments.

Walking from Windsor Hill down through Ham Woods to Croscombe, the valley deepens into a narrow ravine, cutting through the overlying Downside Stone (which can be seen in a quarry [73] [ST 60234 45096]), into the underlying Carboniferous Limestone. Several good crags of the Burrington Oolite can be seen in the lower part of the valley. At the bottom, it widens out where it meets the younger Triassic Dolomitic Conglomerate, which can be seen in a small but accessible exposure on the A371 [74] [ST 59475 44348].

Following the A371 towards Shepton Mallet, several streams flowing down the southern flank of the valley opposite the sewage works are actively depositing a lime-rich rock known as tufa [75] [ST 60043 43863]. This is a very porous, pale grey rock deposited by water over-saturated with calcium carbonate (limestone).

East of Shepton Mallet, the A361 climbs up a hill towards Doultling [76] [ST 64012 42977]. This hill is formed by the Jurassic Inferior Oolite, which creates a prominent scarp. This rock, Doultling Stone, has been quarried here since the Roman times and was used in Wells Cathedral, Glastonbury Abbey and many local buildings. It was especially prized by stonemasons restoring the statues on the west front of Wells Cathedral.

The rock is a creamy white to yellow, massive, flaggy, cross-bedded, oolitic, limestone which becomes paler and harder on exposure to the air. Abundant crinoid debris in a matrix of crystalline calcite gives it a regular, uniform, and sugary texture. It is described by stone masons as a massive 'freestone', meaning it can be cut in any direction.

Doultling Stone Quarry [77] [ST 65127 43520] is one of few quarries left in the Mendips that still produces building stone. This is a working quarry so permission is needed for a site visit.

However, spectacular examples of the stone can be seen on Chelynych Road by the quarry entrance. Several old, overgrown quarries are visible in the woods between Doultling and Chelynych [78] [ST 65074 43814], which are carpeted with moss and ferns, with snowdrops early in the year. The quarries here were connected by a tramway with the nearby railway that is now restored as the East Somerset Railway.

In the valley immediately west of Doultling is a group of springs, one of which is named after St Aldhelm, the Bishop of Sherborne, who died here in 1709 [79] [ST 64589 43191]. A water wheel was installed here in the mid 1800s to provide a pumped water supply to the village. The spring occurs where water percolating through the permeable Inferior Oolite meets the underlying Charmouth Mudstone. This rock is impermeable so the water is forced to the surface.

## Figures

(Figure 73) Aerial photograph of the Shepton Mallet and the Doultling area.

(Figure 74) Downside Stone exposed in an old quarry, Ham Woods, Croscombe.

(Figure 75) Schematic geological cross-section across the southern limb of the Beacon Hill Pericline, showing the relationship of the Carboniferous, Triassic and Jurassic rocks.

(Figure 76) Doultling Quarry in operation. Courtesy National Stone Centre, F. Davies collection.

(Figure 77) *Oligokyphus*, a mammal-like reptile from the Lower Jurassic.

(Figure 78) St Aldhelm's Well, Doultling.

(Figure 79) The Inferior Oolite, known locally as Doultling Stone.

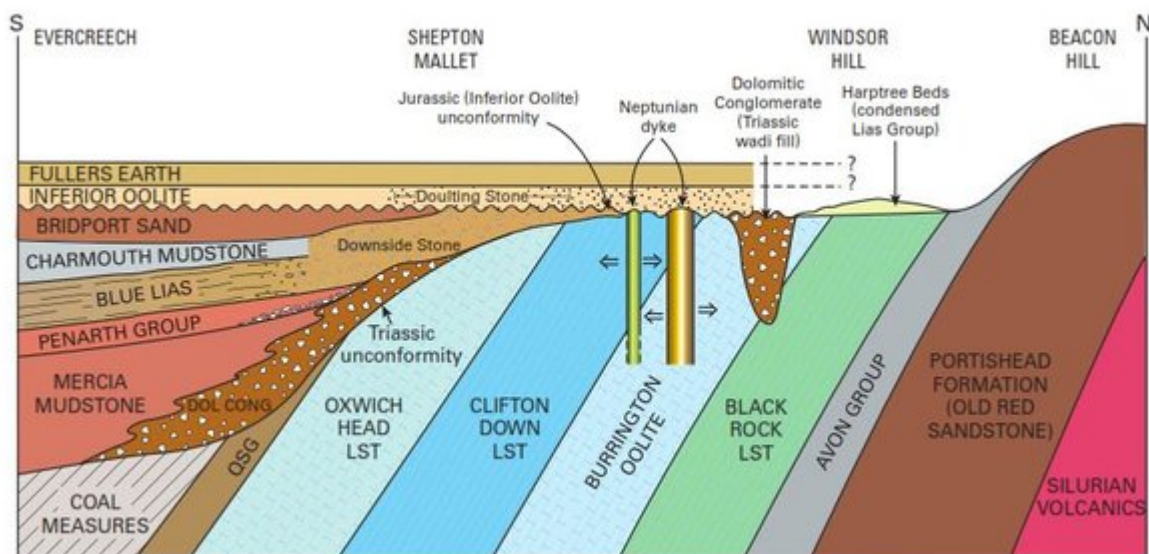
(Figure 80) The Inferior Oolite, known locally as Douling Stone. [Inset].



(Figure 73) Aerial photograph of the Shepton Mallet and the Douling area.



(Figure 74) Downside Stone exposed in an old quarry, Ham Woods, Croscombe.



(Figure 75) Schematic geological cross-section across the southern limb of the Beacon Hill Pericline, showing the relationship of the Carboniferous, Triassic and Jurassic rocks.



*(Figure 76) Doulting Quarry in operation. Courtesy National Stone Centre, F Davies collection.*



*(Figure 77) Oligokyphus, a mammal-like reptile from the Lower Jurassic.*



*(Figure 78) St Aldhelm's Well, Doulting.*



*(Figure 79) The Inferior Oolite, known locally as Doulting Stone.*



*(Figure 80) The Inferior Oolite, known locally as Doulting Stone. [Inset].*