

STONE AND COAL

- a walk from Combe Down to Combe Hay

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This is an account of a walk from Combe Down, Bath to Combe Hay on the Somersetshire Coal Canal and was one of the field trips of the Bath Geological Society's programme for 2003, on 18th October.

About 20 of us, members of the Society and the Bristol Naturalists' Society, met on a grey Saturday morning at Combe Down parish church, with a brisk, chilly easterly breeze making us thankful that we had put on an extra layer or two of clothing as we awaited the start of the day. Our leader for the day was Dr. David Workman, the Chairman of the Bath Geological Society, who explained that we would walk from Combe Down to the Cam Brook valley and then follow the old Somersetshire Coal Canal to Combe Hay locks. He told us that, by 1729, Combe Down was a hive of activity, with many small quarries working the good quality Combe Down Oolite for building. Then, these many small quarries were bought out by Ralph Allen who turned it into a large operation. A large quarry at the back of Combe Down church was opened and a terrace of quarrymen's cottages built to house the expanding workforce. Ralph Allen built a tramway to transport the stone from Combe Down to the River Avon at Widcombe. In the west end of the church, Combe Down oolite has been transformed into finely carved 'fantasy' Gothic style, but also displays extremely well the calcite veins which 'wander' through the stone, a feature known to quarrymen as 'snail-creep'.

We left the church to walk along Church Road and down the footpath which crosses the face of Ralph Allen's quarry, now filled with houses. The stone was won by driving adits into the face for up to a mile under Combe Down, leaving huge voids supported only by stone pillars - a feature now causing much concern to the residents of the houses built above the mines. Walking downhill, we stopped at the top of the steep footpath which leads down to Tucking Mill to look at the site of Kingham Field which William Smith bought in 1811 for a quarrying operation to finance the costly project of mapping England and Wales. He started quarrying but the quality of the stone was poor and the operation failed, subsequently landing him in a debtor's prison.

We followed the steep path, over the base of the Great Oolite on to the Fuller's Earth Formation. The slope of the hillside is less steep than that of the Oolite and the junction is marked by a spring line, still running well even after the prolonged dry period we were still experiencing. The next formation, the Inferior Oolite (named so because it lies under the Great Oolite) passes into the Midford Sands, the junction of which can be seen in a small quarry at the side of the path. For a short distance, the path follows the line

of the tramway that Smith built to bring his stone down from Kingham Field to the Somersetshire Coal Canal. The tramway is marked by occasional grooved oolitic blocks on which the wooden guideways of the track rested.

The Fuller's Earth outcrop is now covered by extensive landslips which, in very prolonged wet weather, still move downslope. The outcrop is about 40 metres thick, but only thin bands were used for fulling - absorbing the impurities from wool - as it is only these horizons that contain the bentonite which is a mineral, derived from fine grained volcanic ash from eruptions in the North Sea area and the south-west of England.

Approaching Tucking Mill, we glimpsed the trackbed of the Somerset and Dorset railway as it climbed to Combe Down tunnel. Indeed, in the days of the railway, sidings were used for removing Fuller's Earth mined in the area. At the point where the footpath reached the road, we were able to see immediately opposite, one of the old bridges that spanned the now dry canal. Behind us, a three-storey house stood a little way back from the road in the trees and it was here, from 1798, William Smith lived, in spite of the plaque being fixed on the house about 50 metres further on. We walked to the latter building which, before it became a residence, was a fulling mill, built beside the canal, using the Fuller's Earth that was mined on Horsecombe Hill and brought into the valley. The mill was demolished in 1931, leaving only the mill cottage which we see now.

From here, the canal bed has been filled although one can follow the route of the towpath. After some distance, however, the depression of the canal becomes obvious and it was along this extant section that we walked towards Midford. The valley is quite flat-bottomed, with a narrow lane, the old Somerset and Dorset railway and the old Great Western Railway trackbeds accompanying the canal along this quiet corner of Somerset. The GWR Camerton branch closed in 1956, ten years before the S & D, but not before the popular film "The Titchfield Thunderbolt" had been made along its overgrown and rusty track. At Midford, the old railway viaduct that carried the S & D south away from the Cam Brook valley, spans the bed of the canal as it turns slightly west. The viaduct, which is built of high quality engineering bricks, has been well restored by the Avon Industrial Buildings Trust.

By the time we had reached Midford, the grey skies had given way and the sun was shining, imparting a very welcome warmth to the sheltered valley and accentuating the wonderful colours of the trees, a feature that so typified the autumn of 2003. Indeed, it was a most enjoyable stroll through the fields along the old towpath to the next historic

structure on the canal, the aqueduct near Midford. Using Combe Down oolite, it has been restored by the Trust. The structure carried a side branch of the canal over the Cam Brook to a two-armed wharf under Twinhoe Hill. From the wharf, a tramway led up the hill to bring coal in from the Wellow area, later extended to Radstock and thus ensuring that the proposed southern arm of the canal would never be built. Not only was the viaduct worth a closer inspection but the locality was eminently suited for a lunch stop - warm, sunny, with a grassy bank for sitting on, (*photograph*). It was also good to see so many butterflies so late in the year, particularly a number of Clouded Yellows.



The coal canal was highly successful, carrying thousands of tons every year to the Avon and Kennet Canal at Dundas Aqueduct, near Limpley Stoke. Eventually, it could not sustain its success and suffered the ignominy of having the GWR build its new branch line to Camerton along its bed. So, in 1910, the canal finally died but, ironically, surviving 105 years, but both railways were gone after 80 for the S & D, and only 46 for the GWR.

So, having lunched, we continued up the canal to Combe Hay bridge and then under another impressive railway viaduct, this one on the GWR branch, after which the gradient gradually increased and the first of 22 locks, of which a few remain, were easily examined. After passing through another fine bridge under the GWR branch, we came on the first of a series of locks which took the canal up 46 feet on a tight curve. Due to the dry weather, one lock was totally dry and we were able to walk between the derelict walls. The story of the canal is best read in the new book by Niall Allsop "*The Somersetshire Canal Re-discovered*" but, briefly, there were three attempts to overcome the gradient. First, a caisson lock consisting of a wooden tank which contained the barge (and bargees) was lowered and raised inside a vertical shaft. At the top and bottom, the tank was opened and the barges floated in or out, one at a time. However, the shaft was constructed in the Fuller's Earth and very soon, the shaft buckled inwards, preventing movement of the tank in the vertical shaft. Next, an inclined plane was used to raise and lower, simultaneously, empty and loaded wagons of coal between the top and bottom levels of the canal. This proved very expensive and slow and was eventually superseded, in

1803, by the flight of 22 locks, the remnants of which can be seen today. Above the canal in the beech trees, a quarry in the Inferior Oolite from where the stone for the locks was taken can be viewed while, close by, are the ruins of the pumping station which fed water from the bottom basin back to lock 1 and the upper basin can be seen.

The walk finished at the South Stoke viewpoint in glorious sunshine and, although hazy, much of the topographical features to the south were visible. From here we dispersed, after expressing our thanks to David for a most interesting and enjoyable ramble through the Cam Brook valley, a delightfully quiet corner of our county, yet so full of the historical and geological gems of the area's past stone and coal industries.

THE MAP THAT CHANGED THE WORLD

THE TALE OF
WILLIAM SMITH
AND
THE BIRTH OF A SCIENCE

Simon Winchester

If you haven't already done so, we recommend that you read this bestseller. It contains details about the Somerset Coal Canal and of William Smith's involvement in it.

'In the summer of 1815 an extraordinary hand-painted map was published in London. Some eight feet tall and six feet wide, brightly coloured - in sea-blue, green, bright yellow, orange, umber - it presented England and Wales in a beguiling and unfamiliar mixture of lines and patches and stippled shapes. It was the product of one man's obsession with rocks, a passion that sustained him whilst the rest of his life slid into ruin.

--- The beautifully excuted map he produced was the first of its kind and transformed the way in which the world was understood'.