Burrington Combe

Ample car parking is available at the top of the combe at Burrington Ham [ST 489 581] and at the Burrington Combe Cafe [ST 476 587].

Burrington Combe is a fine example of a typical Mendip gorge, cutting across the narrow steeply dipping limestone outcrop. In many ways it is very similar to Cheddar Gorge, but with smaller cliff sections. The combe provides a well exposed section through the Carboniferous Limestone sequence. Much of the sequence is easily accessible next to the road and many footpaths lead up onto Blackdown and Burrington Ham, and west to Dolebury and Rowberrow.

The youngest part of the Carboniferous Limestone can be seen in the small quarries behind the garden centre [28] [ST 47867 59007]. Here, good exposures of steeply dipping dark grey, fine- grained Clifton Down Limestone occur.

The prominent bedding plane on the northern side of the quarry is the contact with the overlying Oxwich Head Limestone. The rest of the Clifton Down Limestone, with some colonies of Lithostrotion coral and large brachiopods, can be seen in the many small crags on the east side of the combe above the cafe [29] [ST 47682 58789].

Continuing up the combe, the Rock of Ages towers over the road [30] [ST 47583 58688]. This prominent crag of Burrington Oolite is where the Reverend Augustus Toplady supposedly sought shelter during a storm, inspiring the hymn of the same name.

The quarry opposite provides a nice exposure of the massive pale grey oolitic limestone [31] [ST 47695 58731]. The prominent honey-coloured rock- rib running down the face is a bed of dolomite. In the small crag behind the public toilets, and by the road opposite the Burrington Combe Cafe, the Triassic Dolomitic Conglomerate can be seen. This infills a valley or wadi, which was cut into the northern flank of Mendip more than 200 million years ago.

Just up the valley from the Rock of Ages is Aveline’s Hole [32] [ST 47663 58638]. Discovered in 1797 by two men digging for rabbits, this gaping hole is a fine example of a phreatic cave formed below the water table; it once acted as a spring, but is now abandoned by the river. The main passage extends for a short distance and can be explored with a good torch, appropriate footwear and some care. The cave was largely excavated by archaeologists, including William Boyd Dawkins, who named the site after his friend, William Aveline.

Several human skeletons and a rich late Palaeolithic (about 10 000 years ago) fauna were found. The cave is also the site of the earliest dated human cemetery in Britain, with interments around 8400 years ago during the Mesolithic period. At the back of the cave, and gated for protection, is a series of Mesolithic inscribed crosses, one of the few known examples of cave art in the UK.

The upper part of Burrington Combe provides an excellent section through the Black Rock Limestone. The scree here is a good place to examine loose blocks of the fossiliferous, dark grey, muddy limestone [33] [ST 47989 58206]. Close inspection shows that the limestone is bioclastic with fragments of crinoids, Spirifer brachiopods and corals. Fragments of chert occur within the rock. This black, very hard material is similar to flint and is made of silica.

The thin soils developed on the steep slopes here provide a very species-rich limestone grassland habitat. Overall vegetation cover is very sparse, but supports many different lime-loving plants. Perennial herbs and shrubs help to stabilise the loose stony soil, including salad burnet, small scabious, common rock-rose and ploughman’s-spikenard. The warm, south-facing slopes of the combe are particularly important for butterflies and other invertebrates. The combe was virtually devoid of trees and scrub before myxomatosis wiped out much of the rabbit population in the 1950s.

Opposite are the East and West Twin valleys, two parallel tributaries which descend from the northern slopes of Blackdown. A walk up either of these valleys (take care; the stream bed is often overgrown, wet and slippery) will show the transition from the marine Carboniferous Black Rock Limestone through older shallow-water muddy limestones and mudstones (the Avon Group) to the Devonian continental river- deposited Portishead Formation. The sections through

the Portishead Formation show beds that range from mudstone and fine-grained sandstone to coarse-grained quartz-dominated conglomerate. The conglomerates are resistant to erosion and form small waterfalls. Occasional thin seams of coal are found in these rocks.

The streams flowing down these valleys sink on reaching the limestone. In the West Twin valley the stream sinks a short distance up from the road [34] [ST 47610 58370]. Just upstream, on the west side, is the entrance to Sidcot Swallet [35] [ST 47507 58249]. Developed in the Black Rock Limestone, this cave can be explored by cavers for around 250 m through a series of small passages. Another popular cave, Goatchurch Cavern, lies a short distance up the east bank. It is an abandoned former stream sink [36] [ST 47578 58213]. Here, two entrances lead into a complex three-dimensional maze descending steeply with the dip of 60° to a depth of 60 m. Several other small phreatic caves formed below the water table can be found nearby. In the valley floor just upstream is a curious stone trough beside the path. This is the outfall for the West Twin Brook Adit. The adit was driven

to tap the sandstone aquifer. However, the water yield was much less than hoped and the scheme was a failure. Much of the rock excavated from this adit has been tipped downstream. The East Twin Brook also disappears underground a short distance up from the road, into a prominent cave entrance at East Twin Swallet [37] [ST 47945 58151].

Many ferns, mosses and liverworts flourish in the humid sheltered East and West Twin valleys. Here, lady fern, intermediate polypody and hard fern, hairy woodrush and bitter vetch can be found alongside Dicranum majus and other mosses and liverworts. Many of the caves within the combe support populations of hibernating bats, including both species of horseshoe bat.

To the north of Burrington Combe is Burrington Ham [38] [ST 48236 58558]. Here lime-loving plants such as common rock- rose, dogwood and wild privet are abundant and many insects such as grasshoppers inhabit the warmer south-facing slopes. Thin strips of limestone heath are present on leached soils close to the top of the combe. Here, limestone grassland gives way to heath vegetation dominated by western gorse, with bell heather and occasional heather. To the north of the prominent Long Rock [39] [ST 47965 58629], which is an outcrop of the Burrington Oolite, there are the remains of Burrington Camp, a small hill fort. The upper slopes of Burrington Ham form a good viewpoint across to Wales and north to the Bristol area, Broadfield Down and the intervening lowlands formed by the softer Mercia Mudstone.

The deep valley north of Burrington Ham is Blagdon Combe [40] [ST 49535 58992]. This large sinuous dry valley is incised over 60 m into the hard Triassic Dolomitic Conglomerate, but ends somewhat anomalously — its upper end ‘hanging’ above Blagdon Lake. Previously thought to be an overflow channel for an ice dammed lake, it is more likely that it was cut by the Congresbury Yeo, which once flowed at a much higher level through here. The river now has eroded a course through the softer rocks in the Vale of Wrington to the north, leaving Blagdon Combe high and dry. At the lower end of the valley is Rickford Rising [41] [ST 48745 59212], a large spring issuing from an impenetrable rift in the Dolomitic Conglomerate. This spring, along with that at Langford, drains all the Burrington caves.

The Dolomitic Conglomerate is well exposed in a series of small roadside crags and old quarries on the hillside south of Blagdon, near Street End [42] [ST 49808 58566].

At the foot of Burrington Combe extending out into the vale is a large well-developed alluvial fan, clearly marked by the contours and shown as head on the map [43] [ST 47646 59613]. This developed at the foot of the gorge, where material washed down the valley was deposited. The fan is made up of Portishead Formation and Carboniferous Limestone debris mixed in with wind-blown sand and slope wash (colluvium). Mapping of the fan surface revealed traces of former channels and lobes associated with deposition during the last glaciation.

To the west of Burrington, a track known as The Link leads from the foot of the combe up past Mendip Lodge Wood and towards Dolebury and Rowberrow. The first part of this track is up the axis of an infilled Triassic valley and exposures of the Dolomitic Conglomerate can be seen in places. On reaching the open moorland [44] [ST 47404 58421] much of the Black Rock Limestone and Avon Group outcrop is completely masked by material washed down from the slopes of Blackdown. However, the contrast between the sandstone heath and limestone woodland is very distinct. Adjacent to the track lies a series of deep sinkholes, some of which take small streams. Four of these contain small caves. The largest,

Rod’s Pot [45] [ST 47219 58389] is popular with cavers. All the caves descend steeply down the dip before ending in chokes. In one of the depressions, Beaker age pottery (2500–600 BC) and earlier Neolithic implements were found.

At the edge of Rowberrow Forest the Hunter’s Brook sinks into Read’s Cavern along the contact between the Black Rock Limestone and the Avon Group [46] [ST 46828 58446]. Above the sink is a cliff of Black Rock Limestone. This short cave, accessible to cavers, was once used by early Iron Age occupants, and their remains were found during an archaeological dig. As with all the Burrington caves, the water reappears at springs in Rickford and Langford.

(Figure 45) Aerial phototograph of the Blackdown area.

(Figure 46) The ‘Rock of Ages’, a crag of Burrington Oolite. The story of the Rev. Toplady sheltering here, prompting his famous hymn, is probably not true.

(Figure 47) The main scarp in Burrington Combe, formed of the Black Rock Limestone.

(Figure 48) Mesolithic cave art in Aveline’s Hole. A series of inscribed crosses can be seen scratched into the rock. Photo © University of Bristol Spelaeological Society.

(Figure 49) Young caver in Goatchurch Cavern. © Peter Glanvill.

(Figure 50) Geological map of the Burrington area showing the caves, springs and postulated underground drainage routes. Adapted from University of Bristol Spelaeological Society Proceedings, 1992.

(Figure 51) The East Twin Brook, flowing off the sandstone uplands of Blackdown.

(Figure 52) The steep south-facing slope of Burrington Combe, a haven for lime-loving plants.

(Figure 53) Fossil brachiopod Syringothyris, common in the Black Rock Limestone.

(Figure 54) The Clifton Down Limestone locally contains fossil corals such as this example of Lithostrotion, a colonial coral now extinct.

(Figure 55) View of Burrington Combe from Blackdown, overlooking the Vale of Wrington to the limestone uplands of Broadfield Down.

(Figure 56) Lower Carboniferous coral (Palaeosmilia murchisoni).

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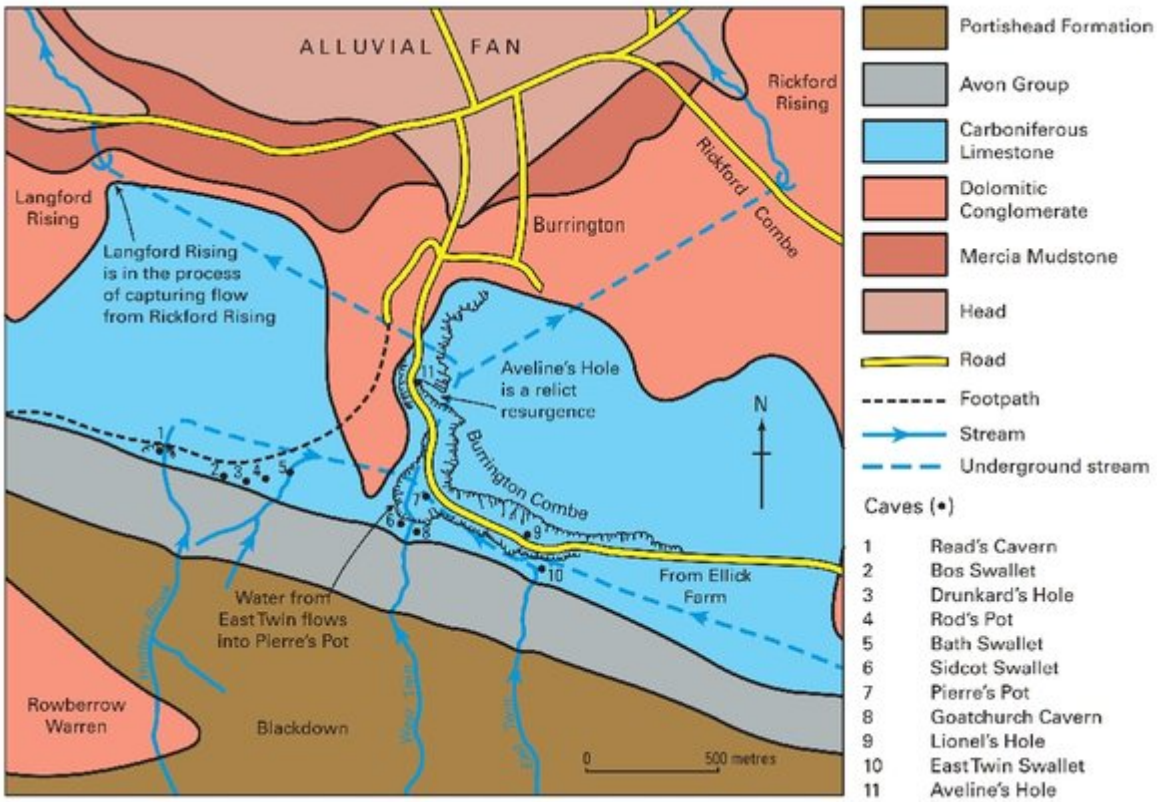

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