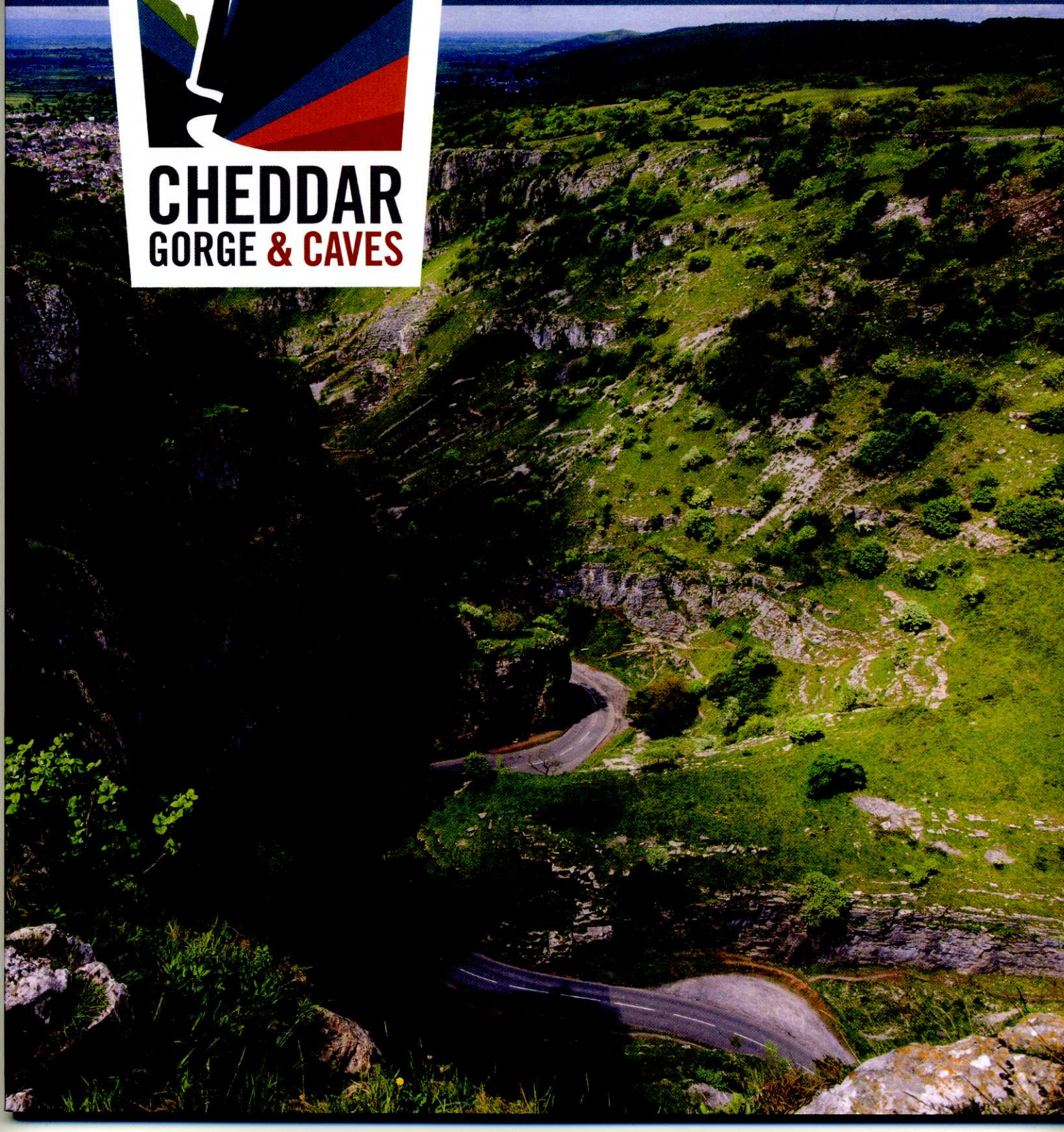
CHEDDAR GORGE & CAVES

GUIDEBOOK



When plants and creatures living in the sea died, their shells and skeletal remains, that contained calcium carbonate, sank to the sea floor. Over time, the remains built up forming a layer of karst carboniferous limestone hundreds of metres thick.

Great earth movements, such as earthquakes, forced sections of rock upwards, to create what we now know as the Mendip Hills. This exposed land was weathered and eroded to such an extent that the old red sandstone beneath the limestone was also exposed to the elements.

During the Triassic Period (251-201 million years ago) many of the valleys on the edges of the hills became filled with the eroded sandstone and limestone. This became a cement-like mixture (dolomitic conglomerate) when combined with water, containing calcium and magnesium salts. As a result, the gaps between the hills were filled in, transforming the Mendip Hills into a levelled plateau.

In the Jurassic Period (200-145 million years ago), the sea returned once more, depositing younger rocks on top of the limestone and dolomitic conglomerate. Once again, overtime, the sea retreated and these younger rocks were worn away by erosion.

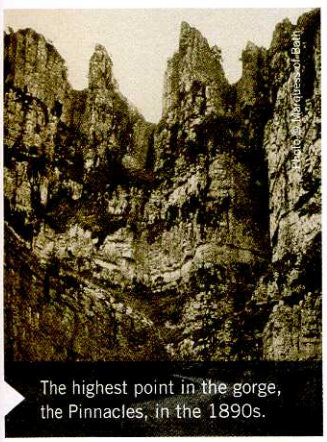
This was then followed by the Pleistocene Epoch (last one million years), when ice ages occurred in Britain with sheets of ice reaching as far south as the Mendips. These were separated by interglacials (warmer periods of time). During the interglacials, the permafrost (ground that remains at or below freezing point) and any ice held in fissures between the limestone rock and layers would melt, releasing boulders and gravel along with it.

This process occurred after each ice age and gradually carved out a river bed known today as the River Yeo. Eventually, the river eroded vertically downwards into the rock, cutting deeper into the land to reach sea level resulting in the 450ft, three mile long gorge we see today. The River Yeo then sank to the lower reaches of Gough's Cave leaving the gorge as a dry valley. From time to time, the River Yeo will rise during, or following, heavy rainfall flooding Gough's Cave.

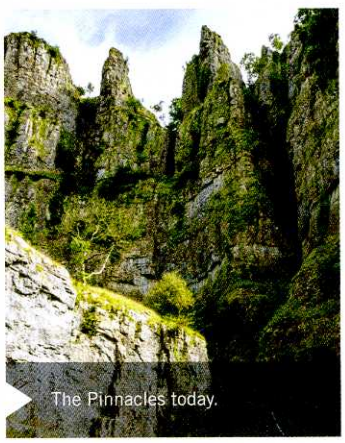
The River Yeo river system is the largest in Britain and rises through 18 separate springs. Its source is a spring at Charterhouse at the top of the gorge and it emerges around 45 metres below the entrance to Gough's Cave.

Left: The River Yeo (shown here above ground) is one of the largest underground rivers in Britain.

Below: The white arrow watermark on Gough's Cave wall, just past the Skeleton Pit, indicates the height flood water will rise to before it flows out of the cave entrance.



The highest point in the gorge, the Pinnacles, in the 1890s.



The Pinnacles today.