South Malverns to Cleeve Hill

A joint WGCG & EMGS Field Trip

Leader: Nick Chidlaw

11-13th September 2026

This residential field trip will take in some classic UK geology.

Day 1 (PM): Beginning with a 4km circular walk in the southern Malvern Hills stopping at Gullet Quarry and exposures to the north on Swinyard Hill and Broad Down. We will take in the breathtaking beauty of the area along the walk. The classic exposure at **Gullet Quarry** is now inaccessible for safety reasons. The site is still worth visiting and studying the geology from a distance. (text and diagrams of the exposures will be provided). In the main face, the Late Precambrian Malverns Complex (680 – 565 million years old) is exposed comprising of quartz mica schists with granite and dolerite veins and local quartz pegmatites. The Malverns Complex was formed in an island arc setting. An angular unconformity can be seen with the overlying Silurian Wyche Formation, formed by an Early Silurian marine transgression following the end of the Late Ordovician glaciation, the significance of which will be discussed.

On the west rim of **Broad Down,** we will get to examine part of the Warren House Formation, a 566-million-year-old suite of submarine mafic and felsic volcanic rocks. These were formed in a similar tectonic setting to the Malverns Complex, then thrust westwards onto the top of the Malverns Complex during the Variscan Orogeny.

Day 2 (AM): Westbury Garden Cliff provides an important sedimentological record of changing environments from terrestrial, hypersaline sabkha plains (Mercia Mudstone Gp) to shallow marine (Penarth Gp). The red rocks that make up most of the lower part of the cliff are known as the Branscombe Mudstone Formation; the overlying buff and green-grey layers belong to Blue Anchor Formation. Penarth Group strata, above the Blue Anchor Formation, were formerly well-exposed here, but have become overgrown.

Day 2 (PM): Hock Cliff is located on the banks of the River Severn near Fretherne, and represents the finest (Lower Sinemurian) Blue Lias Formation and basal Charmouth Mudstone Formation section in the Severn Basin. It differs substantially in thickness from correlative strata on the Dorset coast, north Somerset coast and the Bristol–Bath area, thereby providing information on regional differences in subsidence rates.

Day 3: On Cleeve Common (near Cleeve Hill) is the highest point of the Cotswolds hill range at 330 m. Both Cleeve Hill and Common are famous for exposing the most complete and thickest sequence of Middle Jurassic *Inferior Oolite* limestones in Britain, including some not seen anywhere else.

Tewkesbury is the focal point for this trip. Participants need to arrange their own accommodation. To cover the leaders' expenses, the price will be £5 for a half day (Friday) and £10 per full day. Total trip £25. More details can be found at: https://www.wgcg.co.uk/event/emgs-and-wgcg-joint-residential-field-trip-nick-chidlaw/
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