

100
YEARS



Campaign to Protect
Rural England
Shropshire

Geology Walks through Time in Shropshire

As part of CPRE's national centenary celebrations, join us - CPRE Shropshire and the Shropshire Geological Society - for six fascinating 'walks through time' between April and September visiting important geological sites in the county of Shropshire.

Saturday 19 September, 10.30am
Walk 6: Nesscliffe Hill
Permo-Triassic

Summary

For the last walk of this series we are at Nesscliffe hill the most western of a series of Triassic hills that rise from the Shropshire plain North of Shrewsbury.

Most of North and Northeast Shropshire is made up of Permo-Triassic rocks. This period followed the closure of the ocean at the end of the Carboniferous.

A large river flowed from the mountains that had formed in Northern France carrying sand and rocks across southern Britain. And

seasonal lakes formed and dried up leaving salt deposits across Britain. A large sea stretched from eastern Britain into Europe leaving an important economic legacy. Our area was in an arid upland environment with seasonal rivers and desert conditions.

We will be standing on one of the most westerly of a series of rocky Permian sandstone hills, offset by faulting, rising from the north Shropshire plain with escarpments looking south to the much older Shropshire hills and west to the Cambrian mountains over the border in Wales.



Rhynchosaurus and cheirotherium Permian reptiles. To show how far life had evolved by this era. (Taken from P Toghill's "Geology of Shropshire")

CPRE contact: admin@cpreshropshire.org.uk / www.cpreshropshire.org.uk/geology



Well known hills east of Nesscliffe hill are Myddle, Pimhill, then Grinshill and the Hawkstone hills. Permotriassic hills continue in to the Midlands and Cheshire, where the Peckforton hills form a prominent ridge.

The Permo-Triassic Era

The Permotriassic era was a long period of dry desert conditions followed the final closure of the Iapetus and Rheic Oceans - indeed all the continent fused together for many millions of years to form the supercontinent of Pangea at the end of the Carboniferous era. These then began to erode, sending vast amounts of debris, rock and sand north in braided rivers. This dumped iron covered material throughout Britain from the bright red pebble filled deposits seen extensively on the Devonshire coast (see p4) and further north in several basins formed among older rocks in Somerset, Worcestershire and the Midlands and Shropshire.

The Permo-Triassic Extinction event

These basins extend as far north as Scotland. At the end of the Permian era (290 to 248 Mya) there was a mass extinction event when 95% of all life went extinct on Earth.

Life recovered a little during the Triassic (248 to 206 Mya), but another extinction event occurred at the end of this era.

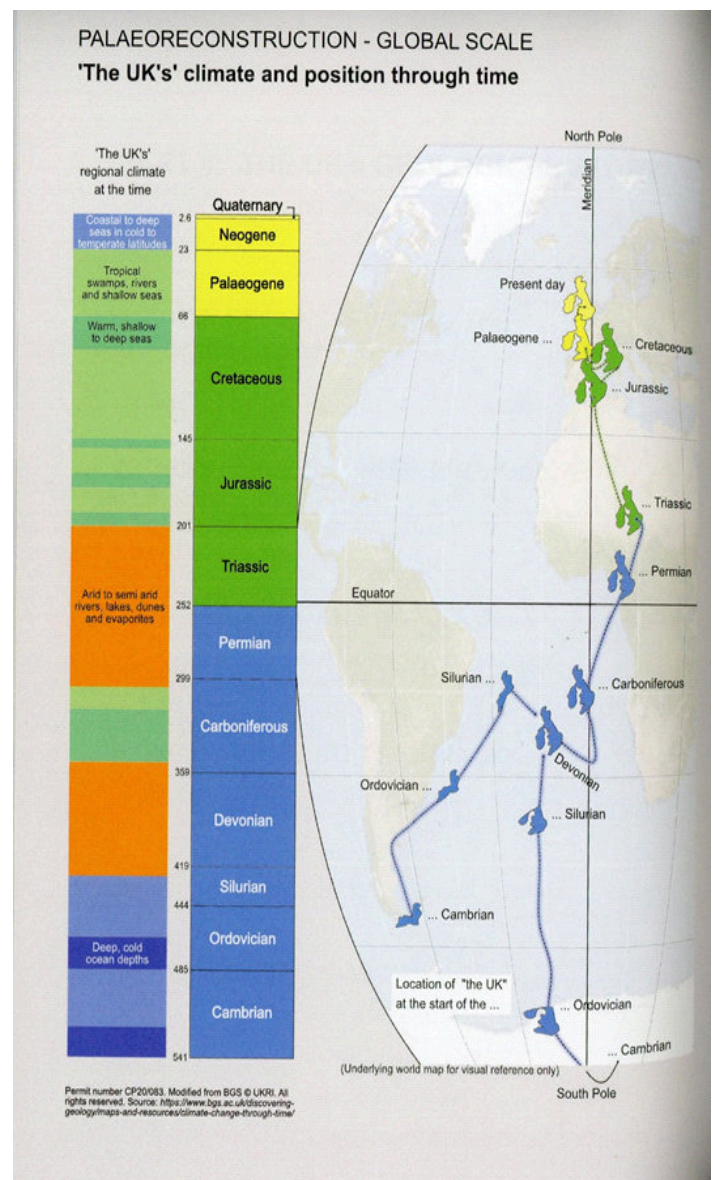
The rocks we see today were laid down by these rivers, when pebbles are intermingled with the sandstones (seen in the Bridgnorth area) and by wind blown, solidified dunes. Large salty lakes occurred intermittently, which dried out and formed the evaporites of salt, gypsum and alabaster found in large quantities which became economically important (for the chemical industries, especially in Cheshire and for salt mining in Droitwich and east Cheshire).

Fossils are rare but do occur and early reptile footprints and bones, have been found at Grinshill (Rhynchosaurs and chirotheria - see p1).

At this time, Shropshire was an arid upland area, much like western USA currently.

During the walk we will cross the important hillfort and will hear about the excavations in recent years from our local expert, Rodney Farmer, who worked on them.

We will also hear from Kevin Voyce, a hydrogeologist with the Environment Agency, who will tell us about the Shropshire groundwater scheme, which utilises the porous sandstones as a reservoir for groundwaters which feed the Severn and provide water for many in the county.



From Geology for Walkers by Steve Peacock

Walk location and practicalities

The walk will start at the Pines car park* (what three words: [dissolve.suits.melon](#)) and climb slowly up to the Hill fort and Oliver's point where fine views across the county will allow us to put these rocks in the context of the Shropshire basin. The walk is around 2 miles in length.

From there we will walk down the slope to the southern edge of the woods and follow the path down to below the large quarry where features of the rocks are visible. There will be an option to visit Kynastone cave. Then you can either climb the steep cut path beside the cave and return along the crest or return to the car park round the base of the hill.

Shropshire Geological Society's, Phil Bradshaw, will replace Mike Streetly who is away this month .

We hope to continue to do more 'Walks through Time' next year as they have proved very popular. Keep an eye on our website and social media for information on this next year!



NOT the lower car park by the minor road north from Nesscliffe, but at the crest of the hill after turning right after that car park.

Other CPRE events

Meantime, do come to our Centenary event ([Hedgerows in Hills](#)) at Acton Scott Heritage Farm on 24/25 October where our Geology exhibit will be on display.

Consider [joining CPRE](#) (now 100 years old!) to help us go on doing what we can to protect our precious countryside - or offer to volunteer for us? We need all the help we can muster as the threats multiply, especially as the current impasse with the Shropshire Local Plan continues.

Our [Hedgerow Heroes project](#), now in its sixth year, needs hedge planting volunteers this winter!

CPRE Shropshire is the Campaign to Protect Rural England. National CPRE celebrates its Centenary in 2026.

Help us by joining us a member or becoming a volunteer!

More at
www.cpreshropshire.org.uk/get-involved

See our Geology talks at
www.cpreshropshire.org.uk/geology-talks



Permian rocks in Devon (Teme estuary) showing the brecchiated pebbles in red sandstone brought by rivers from the south and general cliff scenery.