

Permo-Triassic Sandstones, Bristol and Gloucester region

From Earthwise

[Jump to navigation](#) [Jump to search](#)

Green, G W. 1992. British regional geology: Bristol and Gloucester region (Third edition). (London: HMSO for the British Geological Survey.)

Permo-Triassic Sandstones

Although the sandstones forming the lower part of the New Red Sandstone succession have been recognised at depth in scattered boreholes over the eastern and southern parts of the district, their outcrop is limited to a small area on the western faulted margin of the Worcester Basin at Huntley. Elsewhere, they are overlapped at the basin margins by the overlying Mercia Mudstone. Within the region, seismic reflection and borehole evidence indicate that beneath the Gloucester-Vale of Evesham area, where the succession is thickest, the lowest strata comprise the Bridgnorth Sandstone, of possible Permian age. Overlying this is the Kidderminster Formation, of earliest Triassic age. The combined thickness of these two formations varies from about 400 m to 700 m, of which the conglomerates of the Kidderminster Formation account for up to about one-third. At outcrop beyond the district to the north and north-west, the Bridgnorth Sandstone comprises uniform, bright red, strongly cross-bedded dune sandstone. The overlying pebble beds are fluvial in origin and reflect the onset of markedly wetter conditions, consequent on major geographical changes beyond the margins of the region. The succeeding sandstones attain a thickness of some 1000 m, but the available evidence within the region does not permit recognition of the Wildmoor and Bromsgrove sandstone formations, which are distinguished farther north in the Midlands. To the north, the Wildmoor Sandstone is a relatively uniform red sandstone with few pebble layers and may have been partly aeolian in origin. The Bromsgrove Sandstone includes beds of pebbly sandstone and siltstone typically arranged in fining-upward fluvial cycles, and is dull reddish brown in colour, changing to whitish and yellow-brown hues in the upper part of the sequence; the formation was well represented in the Stowell Park Borehole near Northleach.

On the east side of the Worcester Basin an attenuated representative of the Bromsgrove Sandstone overlaps onto the London Platform and is itself overlapped by deposits of the overlying Mercia Mudstone Group farther east. On the west side of the basin, north of the River Severn at Sharpness, the Triassic is represented at outcrop by the Mercia Mudstone Group, which is strongly downfaulted against the Palaeozoic rocks. South of this the Mercia Mudstone Group margin is unfaulted and the limits of the main sandstone sequence beneath are unknown.

The basal sandstone sequence is absent in the Bristol-Mendip district, where the later Triassic rocks have overstepped directly onto the Coal Measures and older rocks. The sandstones reappear to the south within the Central Somerset Basin, which forms part of the south-west England 'province'. Permo-Triassic sequences there, with the exception of the Budleigh Salterton Pebble Beds, which are considered by many to equate with the various 'Bunter' pebble bed horizons of the Midlands, cannot be clearly related to those of the Midlands. The thickest sequence so far proved in the southern area is in a borehole at Puriton, north of Bridgwater, where the lowest strata, not bottomed, comprised 177 m of uniform, brick-red, fine-grained sandstone with green spots and blotches and some inter-bedded siltstone. These are overlain by 65 m of red and grey sandstones with inter-bedded pebble and siltstone layers, and a well-marked basal conglomerate about 4 m in thickness. Some pebbles of Carboniferous limestone occur in this conglomerate, which has been

equated with the Budleigh Salterton Pebble Beds; thus, by definition, the underlying beds are Permian in age. The nearest outcrops of corresponding rocks are outside the region on the west side of the Quantock Hills, where a somewhat similar succession, totalling 230 m in thickness and including a conspicuous representative of the pebble beds up to 30 m thick, is faulted against the Palaeozoic basement.

Retrieved from

http://earthwise.bgs.ac.uk/index.php?title=Permo-Triassic_Sandstones,_Bristol_and_Gloucester_region&oldid=34458

[Category](#):

- [Bristol and Gloucester region](#)

Navigation menu

Personal tools

- Not logged in
- [Talk](#)
- [Contributions](#)
- [Log in](#)
- [Request account](#)

Namespaces

- [Page](#)
- [Discussion](#)

Variants

Views

- [Read](#)
- [Edit](#)
- [View history](#)
- [PDF Export](#)

More

Search

Navigation

- [Main page](#)
- [Recent changes](#)
- [Random page](#)
- [Help about MediaWiki](#)

Tools

- [What links here](#)
- [Related changes](#)
- [Special pages](#)
- [Permanent link](#)
- [Page information](#)
- [Cite this page](#)
- [Browse properties](#)

• This page was last modified on 30 January 2018, at 14:31.

- [Privacy policy](#)
- [About Earthwise](#)
- [Disclaimers](#)

