
Craig-y-Fro Quarry, Powys

[SN 972 207]

Potential ORS GCR site

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Introduction

Craig-y-Fro Quarry is a classic Old Red Sandstone fossil plant site, the occurrence of well-preserved early Devonian land plants from here being the first recorded in southern Britain (Heard, 1926, 1927). It is already an established GCR site for its Palaeozoic palaeobotany (Cleal and Thomas, 1995) and only a brief summary is presented here. The quarry has yielded one of the best-preserved Devonian floral assemblages in Britain and is the type locality for several new species discovered by Professor Dianne Edwards. It is situated by the A470, 10 km south-west of Brecon, Powys, and 1 km north-west of the Storey Arms Centre (Figure 5.28). Various known as 'Brecon Beacons Quarry' and 'Storey Arms Quarry', Cleal and Thomas (1995) gave it the geographically more precise name 'Craig-y-Fro Quarry'. It lies near the top of the Senni Formation of the Lower Old Red Sandstone, about 60 m below the junction with the overlying Brownstones Formation. A brief geological description was given by Robertson (1932). Edwards and Richardson (1978) provided a detailed description of the section (Figure 5.29) and its plant and miospore assemblages. Hassan (1982) also reported on the miospore assemblages from the site.

Description

The quarry exposes up to about 14 m of beds that dip 12° to the south-east. They consist mainly of massive, lenticular, channelized green sandstones, with siltstone interbeds that are truncated by erosion surfaces at the base of the overlying sandstones. (Figure 5.29) (from Cleal and Thomas, 1995) is based on the section recorded by Edwards and Richardson (1978). Four plant-bearing horizons were recorded by these authors. The lowest lies about 7 m above road level and has yielded the type specimen of *Goslingia breconensis*. A silty sandstone 2 m above contains *Cooksonia*, *Drepanophycus* and *Zosterophyllum*. An exposure of a weathered siltstone above the quarry at its southern end has yielded a new possible zosterophyll, *Tarella trowenii*. The overlying sandstone has yielded another new zosterophyll, *Deheubarthia splendens*. The macroplant taxa obtained from the quarry are detailed by Cleal and Thomas (1995) and summarized by Wellman *et al.* (1998).

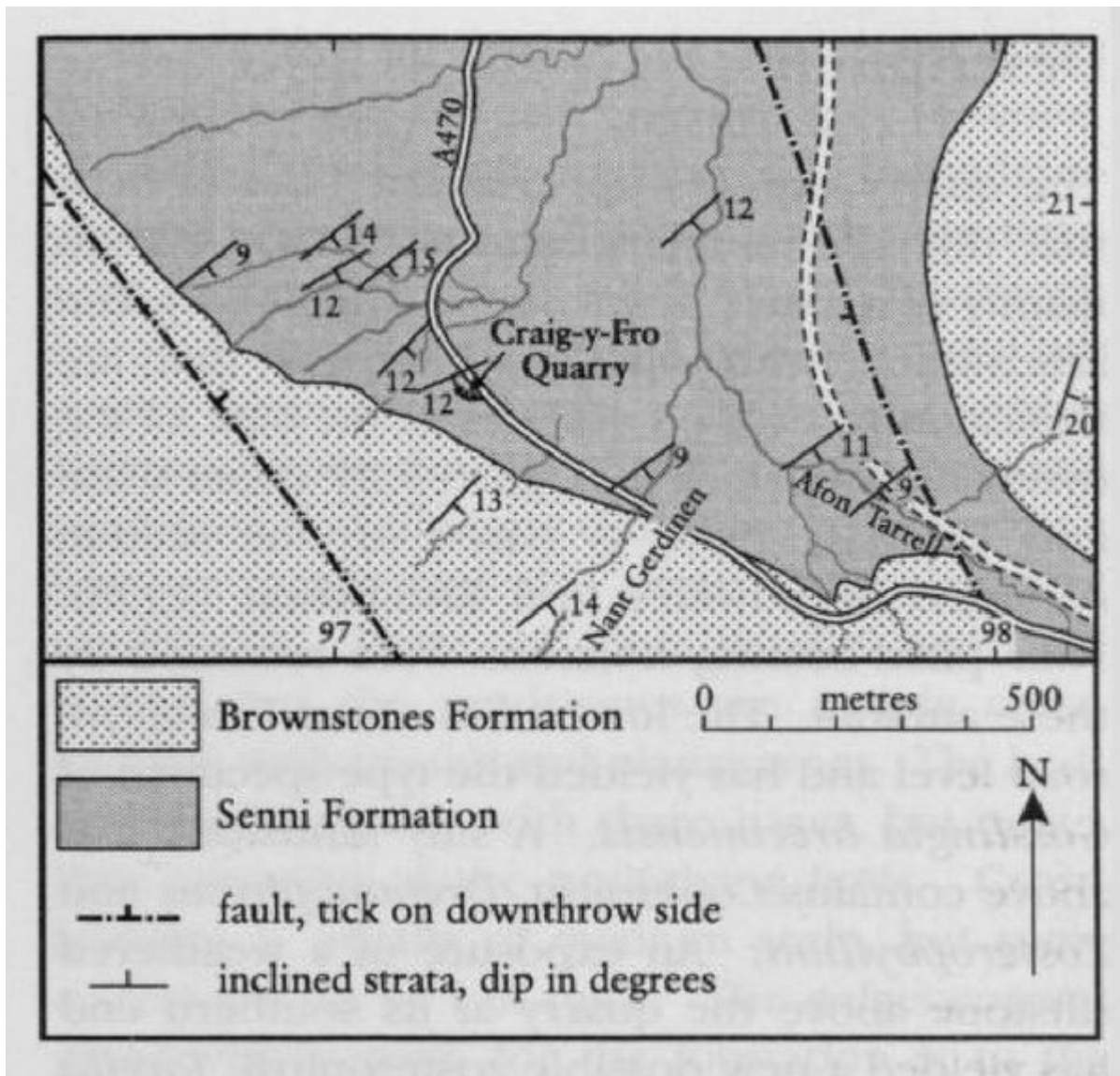
Interpretation

Cleal and Thomas (1995) discuss the significance and importance of the macroplant assemblages. Miospore assemblages belong to the *polygonalis–emsiensis* biozone, providing a Pragian age (e.g. Wellman *et al.*, 1998). The strata are interpreted as the deposits of a high-energy, braided fluvial system, with most of the fine-grained floodplain sediments being reworked during subsequent fluvial incision and channel migration (Thomas, 1978; Owen, 1995). The green colour of the rocks and the preservation of the plants points to relatively high water-table levels and perhaps a more humid, wetter climate. Red-brown mudstones with calcrete nodules and intraformational conglomerates with calcrete clasts above the section point to re-establishment of more arid conditions.

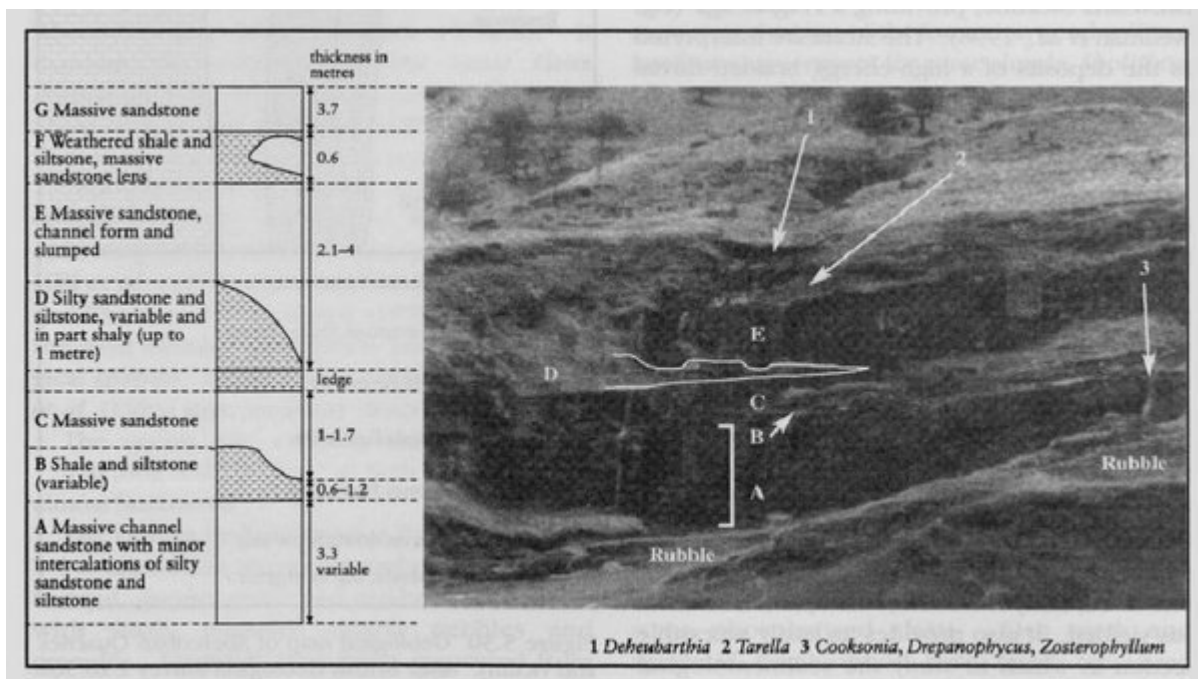
Conclusions

Craig-y-Fro Quarry is a site of national importance, its conservation value lying in the well-preserved, Early Devonian, fossil-plant remains it has yielded. It also provides an easily accessible section in which to study the sedimentological features of the Senni Formation.

References



(Figure 5.28) Geological map of the area around Craig-y-Fro Quarry. After British Geological Survey Scale Sheet SN 92SE (1973).



(Figure 5.29) Graphic log and view of Craig-y-Fro Quarry. After Cleal and Thomas (1995, fig. 4.16). Numbers (1), (2), and (3) are three of the main plant beds. (Photo: D. Edwards.)