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# Cwm-Coed-Aeron

[SN 8338 3889]–[SN 8375 3903]

## Introduction

This is a key stratigraphical site in the international type area for the Llandovery Series. It comprises a well-exposed trackside section, extending from 150 m to 400 m west of Cwm-Coed-Aeron, in the Crychan Forest. It is situated in the northern part of the Llandovery type area, on the eastern limb of the Cefn-y-gareg Syncline, close to the axial plane trace (Figure 3.23). The section, which displays strata of the upper part of the Trefawr Formation and the lower Rhydings Formation, of Aeronian age, was logged by Cocks *et al.* (1984) as their transect i3. The sandy mudstones of the Trefawr Formation pass gradually and conformably into laminated muddy sandstones and sandstones of the Rhydings Formation. This formational boundary is coincident with the boundary between the Middle Llandovery (B) and Upper Llandovery (C), as used by Jones (1949). Jones considered this boundary to be unconformable, and an angular unconformity is indeed developed at this level towards the Pen-y-waun fault belt to the south of Cwm-Coed-Aeron (Cocks *et al.*, 1984). However, the transitional relationship seen at this GCR site confirms the conclusion of Cocks *et al.* (1970) that the period represented by this unconformity was not long.

## Description

Grey sandy mudstones of the upper 25 m of the Trefawr Formation are exposed at this locality and have yielded the graptolite *Orthograptus amplexicaulis*. Cocks *et al.* (1984) also reported the sandstones of the Rhydings Formation to contain *Orthograptus* cf. *bellulus*, *Rastrites* aff. *linnaei*, and specimens of *Glyptograptus* and *Monograptus*. These graptolites, together with those found low in the Rhydings Formation at other localities including Trefawr Track, suggest that the base of the *sedgwickii* Biozone is only a few metres above the base of the formation.

Cocks *et al.* (1984, table 3) recorded brachiopods at several levels within the upper Trefawr Formation in this section; the fauna is diverse, but numbers are generally low. Dominant taxa are *Meifodia* sp., *Clorinda undata*, *Plectatrypa* sp. and *Eoplectodonta* sp.. Rare echinoderm plates and bryozoans also occur. Small numbers of brachiopods were also reported from the Rhydings Formation, including *Meifodia* sp., *Triplesia* sp., and *Katastrophomena* sp..

## Interpretation

The environment of deposition of both formations was interpreted by Cocks *et al.* (1984) to be on a marine pro-delta lobe, with the coarsening in the Rhydings Formation representing a shallower facies. The diverse *Meifodia*-dominated brachiopod assemblage of the upper Trefawr Formation is comparable with that seen at a similar level in the nearby Trefawr Track section, and is consistent with a relatively distal setting.

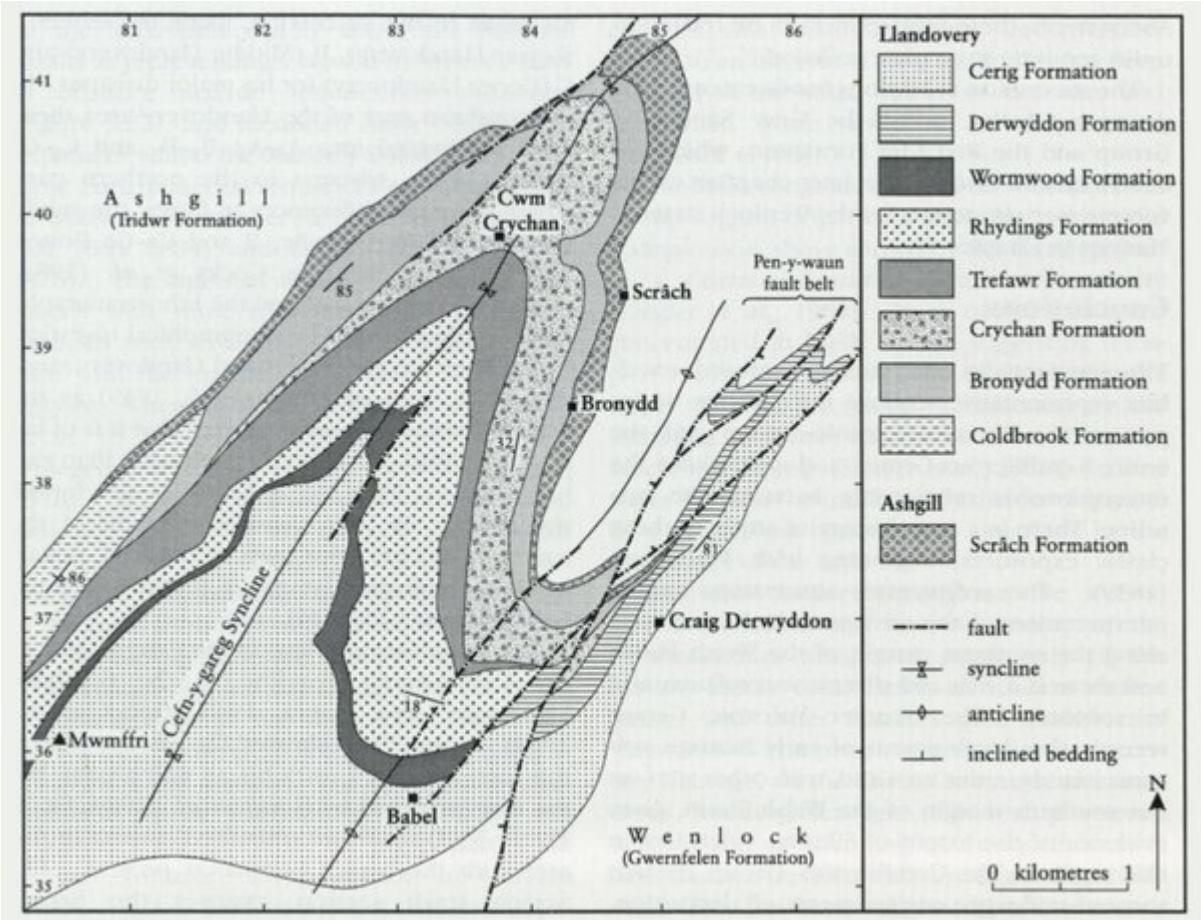
The network of sites of Scrâch Track, Trefawr Track and Cwm-Coed-Aeron are all close to each other, and together give a full coverage of the stratigraphical, sedimentological and faunal sequence in the Rhuddanian to mid-Aeronian of the northern part of the Llandovery type area.

## Conclusions

This is one of a set of sites in the Crychan Forest in the northern part of the type Llandovery area that together give a full coverage of the stratigraphy, sedimentological history and faunal development in the lower to middle Llandovery of this internationally important region. It comprises good trackside exposures displaying strata of the Trefawr Formation and the lower part of the Rhydings Formation, both units of Aeronian age. The key contribution of this section is that it demonstrates a transitional relationship between the Trefawr and Rhydings formations, showing that the sedimentary record is fully preserved. It also yields characteristic fossils, particularly brachiopods and graptolites, of the Aeronian

strata of this part of the Welsh Basin.

References



(Figure 3.23) Geological map of the northern part of the type Llandovery area (after Cocks et al., 1984).