
Meifod

[SJ 1135 1013]

Introduction

The Meifod district is a classic area, visited several times in the first half of the 19th century by Sedgwick, who established the general succession; collections of fossils made during this time were among those described by M'Coy (in Sedgwick and M'Coy, 1852) and listed by Salter (1873). The area was mapped and the stratigraphy revised by King (1928), who reported a basal Silurian sandstone unconformably overlying Ordovician mudstones in Craig Wen Quarry [SJ 1012 0928], but that junction has subsequently been shown to represent the Rawtheyan–Hirnantian boundary within the Ashgill Series (Brenchley and Cullen, 1984; Brenchley, 1993). There are no formal formation names available for the Silurian rocks of this area, but King (1928) introduced an informal terminology with his 'basal sandstone' designated 'V₁' and the overlying blue silty mudstones assigned to 'V₂'.

The site lies on the north side of the forestry track that leaves the A495 road northwards 5.2 km south-west of Meifod, Powys. The exposures are located on the south-western flanks of Ffridd Mathrafal, 550 m ESE of the farm of Tanhouse (Temple, 1970), and are referable to the V_{2c} subdivision of King (1928). Temple (1970, 1987) collected a prolific fauna from this locality and described the trilobites and brachiopods; from the brachiopod fauna he tentatively suggested a late Rhuddanian age, correlatable with the boundary between the Crychan and Trefawr formations at Llandovery.

This locality is important in displaying the nature of the early Llandovery strata of this marginal portion of the Welsh Basin and for providing a representative suite of the fossils that succeed the typical upper Ordovician *Hirnantia* fauna of the strata below.

Description

The exposures show bedding planes of blue-grey siltstones with interbedded micaceous horizons dipping 57° at 152° (Temple, 1970). Fossils are abundant and mostly well preserved, although many specimens are distorted. Burrows of infaunal organisms are common. Temple's (1970) monograph includes descriptions of the brachiopods *Dolerorthis sowerbyana*, *Schizonema capillatum*, *Ravozetina rava silvicola*, *Resserella llandoveryana*, *Streptis altosinuata*, *Leangella scissa*, *Anisopleurella gracilis*, *Eoplectodonta duplicata undulata*, *Katastrophomena woodlandensis*, *Leptaena valentia*, *Laevicypbomena reedi*, *Plectatrypa gaspeensis*, *Meifodia subundata* and many others in open or equivocal nomenclature, together with representatives of the trilobite families Proetidae, Otarionidae, Illaenidae, Harpidae, Calymenidae, Cheiruridae, Encrinuridae, Phacopidae, Odontopleuridae and Lichidae. Other elements of the biota await systematic description. The brachiopod taxa were re-assessed and redescribed by Temple (1987). The Meifod site is the type locality for several taxa, including the brachiopods *Schizonema capillatum* Temple, 1970, *Ravozetina rava silvicola* Temple, 1970, and *Meifodia subundata* (M'Coy, 1851b).

Interpretation

Ziegler *et al.* (1968b) noted that *Clorinda* was reported as common in the V_{2c} division of King (1928); together with the diverse other brachiopods this suggests an offshore, relatively deep water, shelf setting. The penetrative burrows show that the sea bottom and the upper levels of the sediment were oxygenated. This site is one of the most prolific fossil localities in the lower Llandovery strata of the Welsh Basin and links with the slightly older Rhuddanian site at Gasworks Lane, Haverfordwest and the sites at Scrâch Track and in the Ydw Valley in the type Llandovery area, to provide evidence of the earliest Silurian biota of the basin. There is a need for modern stratigraphical, sedimentological and palaeoenvironmental studies in the Meifod area, and this site will be important in any such investigation.

Conclusions

This site is currently most important for the diverse early Llandovery fauna it has yielded, which has formed the basis of monographical studies of the brachiopods and trilobites (Temple, 1970, 1987). Together with other sites of similar age it provides evidence of the earliest Silurian shelly fauna of the Welsh Basin, which contrasts with the characteristic fauna of the preceding Late Ordovician.

[References](#)