
Birdshill Quarry

[SN 6014 2312]

Introduction

This locality, about 3 km west of Llandeilo, is of historical significance, and important because it is the only place where the Birdshill Limestone, a unique limestone facies in the Ordovician of Wales, is exposed. Recognized by Murchison (1839) and Phillips (1848), the locality has long been known for its abundant shelly fossils.

The term 'Birdshill Limestone' was first applied by Thomas (in Strahan *et al.*, 1907, p. 31), who gave an extensive list of trilobites, brachiopods and other fossils from the quarries. Like the Crûg Limestone (see Crûg Farm site report), it has yielded a rich conodont fauna, first described by Bergström (1964, 1971), who recognized 18 species here. He considered it to be the lateral equivalent of the Shoeshook Limestone, as did Shirley (1936) and George and Pringle (1948). Price (1973b, 1984), on the basis of the trilobite fauna, argued for a low Ashgill (Cautleyan) age but noted that the different facies made exact correlation with the Shoeshook Limestone difficult. More recent work on the conodonts by Orchard (1980) supported a low Ashgill age, within the *superbus* conodont zone, and he suggested, contrary to many earlier opinions, that the Birdshill Limestone might be slightly older than the Crûg Limestone. Latterly, Savage and Bassett (1985) made extensive new conodont collections, with abundant specimens of *Amorphognathus ordovicicus*, and placed the Birdshill Limestone in the *ordovicicus* Zone; they found no evidence for a *superbus* age and concurred with earlier assessments for a late Pusgillian–early Cautleyan age.

Birdshill Quarry is the type locality for the brachiopods *Retrorsirostra retrorsa* (Salter) and *Hebertella llandeiloensis* Foerste (the latter considered by Cocks (1978, p. 52) to be the brachial valve of the former), the bivalve *Ambonychia triton* (Salter) and the trilobite *Gravicalymene convolva* Shirley.

Description

The Birdshill Limestone is exposed in disused quarries 3 km west of Llandeilo, along the side of a track 200 m north-west of Birdshill Farm. It lies in a fault-bounded area WNW of Dynevor Park, and according to the map by Thomas and Pringle (fig. 11 in Pringle and George, 1948) is underlain by Mydrim Shales and succeeded by the Slade and Redhill Formation. The limestone, like that at Crûg, is shelly and coarse-grained but differs in being a much paler grey. It has yielded trilobites including *Decoroproetus piriceps* (Ingham), *Harpidella tridens* (Ingham), *Acidaspis magnospina* Stubblefield, *Atractopyge* cf. *verrucosa* (Dalman) and a *Tretaspis* that is probably *T. moeldenensis moeldenensis* Cave; this association is indicative of a late Pusgillian or Cautleyan age (Price, 1984, p. 103). The conodont fauna, dominated by *Amorphognathus ordovicicus* Branson and Mehl with common *Prioniodus* sp. and *Rhodesognathus elegans* (Rhodes), supports this age. No modern account of the brachiopods has been given.

Interpretation

Like Crûg Quarry, Birdshill has yielded a rich conodont fauna, one of the few horizons of this age in Britain to have done so. Having elements in common, the Birdshill and Crûg limestones are evidently of about the same age, although the latter has a richer conodont fauna, including *Aphelognathus rhodesi* (Lindström), which is lacking in the Birdshill Limestone and which is possibly a useful index of the Pusgillian Stage (Savage and Bassett, 1985, p. 690). The faunal differences may be a result of slightly different age or facies. Both deposits may correlate with the lower part of the Shoeshook Limestone, which is in a more argillaceous facies. Like the Crûg, the Birdshill Limestone was probably deposited in shallow water.

Conclusions

This site is unique, being the only exposure of a limestone facies that complements that at Crûg Farm. It is an early Ashgill conodont-rich horizon, of which there are few other examples in Britain. It also has a rich shelly fauna showing striking contrasts with that of the approximately coeval Sholeshook Limestone.

[References](#)