

## MAYO - COUNTY GEOLOGICAL SITE REPORT

<b>NAME OF SITE</b>	<b>Uggool (Killary Harbour)</b>
Other names used for site	
<b>IGH THEME</b>	<b>IGH2 Precambrian to Devonian Palaeontology</b>
<b>TOWNLAND(S)</b>	<b>Uggool, Doovilra</b>
<b>NEAREST TOWN</b>	<b>Louisburgh; Leenane</b>
<b>SIX INCH MAP NUMBER</b>	<b>105, 115</b>
<b>ITM CO-ORDINATES</b>	<b>476180E 766520N</b>
<b>1:50,000 O.S. SHEET NO.37</b>	<b>GSI BEDROCK 1:100,000 SHEET NO. 10</b>
<b>GIS Code MO100</b>	

### **Outline Site Description**

Shoreline and inland exposures at the western foot of Mweelrea near the mouth of Killary Harbour.

### **Geological System/Age and Primary Rock Type**

Middle Ordovician age sedimentary rocks, part of the Uggool Member of the Mweelrea Formation. Rocks are green–grey coloured siltstones and slates, and contrast with the mainly red sandstones and conglomerates of the Mweelrea Formation. Fossils are relatively abundant at the site.

### **Main Geological or Geomorphological Interest**

The rocks around Uggool beach have yielded a range of Ordovician marine fossils dating from c. 470 million years ago. The fossils include mainly brachiopods and also a distinctive cephalopod mollusc that has only been identified at this location. Graptolite and trilobite fossils have been found at the site. The brachiopod fauna (Whiterock fauna) at the site is correlated to the North American Ordovician stratigraphy and is critical in showing that the rocks of the NW part of Ireland were once attached to ‘North America’, separated by a large ocean (Iapetus Ocean) from the SE half of Ireland.

A new brachiopod species *Rhysostrophia hibernica*, a new but unnamed species of *Hesperonomiella*, and a new genus and species of orthoconic nautiloid (a cephalopod mollusc), *Ugooloceras oblatum*, have been described from the site.

Most of the fossils are preserved as moulds, but are deformed in the slaty cleavage of these siltstones. Small holes seen in weathered rock exposures represent external moulds of nautiloids that have been leached out.

### **Site Importance – County Geological Site; recommended for Geological NHA**

This County Geological Site is very significant in terms of its palaeontological, biostratigraphical and biogeographical evidence of the NW margin of the Iapetus Ocean in Ireland and should be recognised as a Geological NHA of national importance. The fauna is also a rare biostratigraphical control on the many kilometres thick Mweelrea Formation succession. The site is located within the large Mweelrea/Sheefry/Erriff Complex SAC (001932).

### **Management/promotion issues**

The rock exposures at the back of the remote beach at this very scenic location, coupled with the palaeontological importance of the site make this a very significant geological and palaeontological site in County Mayo. The integrity of site is not deemed to be under significant threat. However any development that could interfere with the fossil bearing exposures should be prohibited. It is necessary to seek permission before attempting to visit the site. The site is not deemed suitable for public promotion.



An overview of the coastal area and site from the summit of Mweelrea, looking west. Uggool beach is the southernmost (left) beach. (Photo: M. Parkes)



Uggool beach viewed looking east. Killary Harbour on right. (Photo: Coastal Helicopter Survey, Office of Public Works, 2003).

