

MICROMORPH BRACHIOPODS FROM THE VISEAN (CARBONIFEROUS) OF NORTHWEST IRELAND

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Micromorph brachiopods are usually overlooked due to the difficulties of extracting them from massive carbonate rocks. Therefore our knowledge of these forms is based mainly on silicified and acid-etched specimens, which are commonly exquisitely preserved. However, non-silicified minute brachiopods can also be obtained by surface collecting and disaggregation of bulk samples from weathered shale and limestone as is the case of a relatively diverse assemblage recovered from the Visean (late Asbian) Meenymore Formation, which is exposed in the Gleniff outlier, County Sligo, northwest Ireland. Much of this lithostratigraphic unit was deposited in restricted environments associated with tidal flats, with several horizons of stromatolites, dolomicrites and evaporites. The fauna from the Meenymore Formation of the Gleniff outlier is characterised by small fossils, including brachiopods, molluscs, notably ammonoids, nautiloids, gastropods and rostroconchs, a varied fauna of echinoderms (including microcrinoids, small blastoids, and the disarticulated ossicles of asteroids, ophiuroids, echinoids, holothuroids, cyclocystoids and ophiocistioids), and ostracodes and rare trilobites. Corals and bryozoans are extremely poorly represented in terms of both numbers of individuals and of taxa. Many of the fossils are encrusted with a micrite crust, which is probably microbial in origin. The brachiopod assemblage includes 14 micromorph species and juveniles of larger species, in which spire-bearers (Athyridida, Spiriferida and Spiriferinida) represent 40 % of the whole assemblage with six species but, in terms of numbers of specimens, the orthotetides, represented only by *Drahanorhynchus*, are the most abundant. Most of the species are left in open nomenclature as only few specimens shows internal features. Due to the good preservation of some delicate structures (*e.g.* spines in *Globosochonetes*, *Drahanorhynchus*, *Nucleospira*, and *Crurithyris*), it seems likely that the Gleniff assemblage represent an *in situ* accumulation, although time-averaged. The reasons for the large percentage of micromorph taxa of brachiopods in the Gleniff fauna, which is mirrored by the echinoderms, are difficult to explain. It is unlikely to be a consequence of abnormal salinity, because both echinoderms and brachiopods are largely stenohaline. What is notable about the fauna is that most of the sessile benthos were epifaunal suspension feeders confined to the lowest epifaunal tier of the spectrum of tiering.

