
**A Welsh Meguma? Comparison of the
Meguma Supergroup of Nova Scotia with the
Harlech Dome succession of North Wales**

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The Meguma Supergroup of southern mainland Nova Scotia is an Early Cambrian to Early Ordovician deep-water peri-Gondwanan succession. The base is not seen, but isotopic and geochronologic evidence suggest broadly 'Avalonian' basement. The lower part of the succession (Goldenville Group) comprises relatively quartz-rich, thickly bedded turbidites and interbedded green slates. Abundant turbidite structures indicate sedimentation continuously below wavebase, and the great thickness of the succession attests to major subsidence. The trace fossil *Oldhamia* indicates Early Cambrian age. At the top of the group the stratigraphy is more diverse; alternating finer and coarser units show enrichment in manganese and spectacular bioturbation. A rare trilobite-bearing horizon indicates Middle Cambrian age. A unit of manganiferous laminated slate marks the transition into the overlying Halifax Group. The overlying Cunard Formation comprises rusty-weathering black pyrite-rich slate, siltstone, and sandstone with turbidite structures. Higher parts of the group possibly show a transition to shallower water conditions, with more abundant trace fossils, and rare Tremadocian graptoloids. The group is overlain with angular unconformity by the Early Silurian White Rock Formation.

The succession in the Harlech Dome in North Wales is also an Early Cambrian to Early Ordovician deep-water peri-Gondwanan succession. Underlying basement is not seen but drilling has revealed 'Avalonian' volcanics in the subsurface. The lowest part of the Harlech Grits Group comprises Early Cambrian cross-bedded, probably deltaic sandstones which pass up into fully marine slates. The overlying Rhinog Formation consists of relatively quartzose thickly bedded turbidites and green slates. Abundant turbidite structures indicate sedimentation continu-

ously below wavebase, suggesting significant subsidence. At the top of the group the stratigraphy is more diverse; alternating finer and coarser units show enrichment in manganese and spectacular bioturbation. Rare trilobite fragments indicate Middle Cambrian age. A unit of carbonaceous laminated slate marks the base of the overlying Mawddach Group. The overlying Maentwrog Formation comprises rusty-weathering black pyrite-rich slate, siltstone, and sandstone with turbidite structures. Trilobites indicate Late Cambrian age. Higher parts of the group show a clear transition to shallower water conditions above wavebase, with linguloid brachiopods and trilobites indicating Tremadocian age. The group is unconformably overlain by the Early Ordovician Rhobell and Aran volcanic groups.

Lithological and chronological analogies between the two successions are striking. However, significant differences include: (1) the greater thickness of the Meguma succession; (2) the presence of shallow marine to non-marine strata at the base and top of the Harlech succession; (3) the possible presence of an unconformity between the two groups in Harlech; and (4) the presence of volcanics near the base and top of the Welsh succession. Nonetheless, the similarities indicate closely similar evolution for the two basins, and would be consistent with deposition in connected parts of a peri-Gondwanan rift system.