

But as the Scotch fossils occur in a parallel of latitude 200 miles north of Moel Tryfaen, it becomes a question whether the more southern aspect of the Welch fauna is due to geographical position, or to its having originated before or after the extreme refrigeration of the glacial period. In Massachusetts, on the east coast of North America, it is well known that Cape Cod divides abruptly a northern from a southern province of mollusca, and there may have been a similar sudden change from an arctic to a more southern fauna somewhere between Scotland and North Wales.

We are indebted to Mr. R. D. Darbishire, F.G.S., for having formed a collection of no less than fifty-four species of mollusca from the above-mentioned drift of Moel Tryfaen. A complete list of these will be found in the 'Proceedings of the Manchester Literary and Philosophical Society for 1863-4,' p. 177.

In a letter to the author, dated November 13, 1863, the same naturalist observes—

'Besides *Balanus Hameri*, and traces of a sponge (*cliona*), I have obtained shells of fifty-four species of mollusca, all of which appear to be now living in British or more northern seas, or, including three characteristically arctic variations, fifty-seven forms of shells.

'Of these, eleven are well known as exclusively of the arctic division of the present seas, including—

Tellina proxima, Brown
Astarte borealis and *A. crebricostata*
Leda pernula
Natica clausa
Trophon scalariformis and *T. Gunneri*
Dentalium abyssorum

Four are arctic species, which still survive within British limits:—

Astarte elliptica and *A. compressa*
Trichotropis borealis
Trophon clathratus = *Fusus Bamffius*

Of the whole list, thirty-seven species are now living in the Irish Sea, including nineteen of wide general range north and south of these islands.

Amongst the latter, the more abundant are—

Tellina solidula
Cardium edule and *C. echinatum*
Turritella communis
Murex erinaceus
Nassa reticulata
Mytilus edulis