

Berwick Educational Association

Rocks, fossils and landscapes of Berwickshire

A series of three lectures

By Alison Tymon

Fridays 3rd, 10th and 17th

August 2018 2.00 – 4.00pm,

William Elder Building,

56 -58 Castlegate, Berwick



Introduction

Much of the geological activity in this area is related to two major mountain building events: the Caledonian mountain building which took place during the Ordovician period and finished with a tectonic plate collision which affected the rock structures in Berwickshire and north Northumberland; the Variscan mountain building during the Carboniferous period, which took place largely in southern Europe but which had very dramatic peripheral effects on our coastline.

I have divided this course into three sections which are based around the two mountain building events. During this time there was considerable volcanic activity, with remnants still seen in the Cheviot area, the Eildon Hills, and at Eyemouth and St Abb's Head. A variety of sedimentary rocks from greywackes, conglomerates, sandstones, mudstones, limestones and coals were formed during the many millions of years of erosion of the mountains. The sedimentary rocks contain fossils of plants and animals which are recognised to be of great significance in the evolution of life.

Friday 3rd August Silurian and early Devonian: covering the enigmatic Coldingham and Linkim Beds; the greywackes of Berwickshire; the nature of the Caledonian plate collision and the associated granites at Priestlaw and Cockburn Law; the variety of coastal cliff profiles produced by greywackes.

Friday 10th August Devonian and early Carboniferous: the end of the Caledonian mountain building; the unconformity at Siccar Point; the subsequent igneous activity of the Cheviot granite and lavas and the St Abbs and Eyemouth volcanoes; the sedimentary rocks formed by the erosion of the mountains over 60 million years, including the conglomerates of the Reston Group; the upper Devonian sandstones and calcretes of Pease Bay; cliff profiles at St Abb's Head and Eyemouth.

Friday 17th August Carboniferous-early Permian: tropical wetlands, deltas and shallow seas in which the sediments which became sandstones, mudstones, limestones and cementstones were deposited; volcanic activity of the Kelso lavas and the Eildon Hills; frequent sea level changes giving cyclothems; evidence of life in the seas and on land, shown by tetrapod bones, the Foulden Fish Bed and the plant beds of Berwickshire; the Variscan mountain building and igneous activity; the Berwick Monocline which tilted and folded the Carboniferous rocks; the cliff profiles from Burnmouth to Cocklawburn.

Reference:

Death of an Ocean; a Geological Borders Ballad by Euan Clarkson & Brian Upton
2010

The cost of the course is £18 including refreshments. All are welcome and no previous knowledge is assumed.

[To book online, please click here.](#) If you supply us with your personal data (name, address or email), we will hold this in accordance with our [privacy policy](#).

To book by mail, please fill in the booking form below, and mail to BEA, 7 Ravensdowne, Berwick-upon-Tweed TD15 1HX along with a cheque in favour of Berwick Educational Association. If you have any queries, please email berwickea@gmail.com or phone Cian McHugh on 01289 303254

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(Rocks and fossils)

