

ceous rock or otherwise hardening and altering them in proportion to their proximity to the point of contact. The results are the conspicuous red and oblong rock locally known as the "Frenchman's Barn," the breakwater of Arisaig pier, the hardening and tilting of the slate and shale near the Frenchman's Barn and the prevailing disorder of the Arisaig Section.

When we again meet with volcanic rock, it assumes the form of beds of amygdaloid associated with the lower carboniferous conglomerate at McCara's Brook.* This rock has suffered much from denudation as is evident from the horizontal section on the beach; a large mass has been dislodged by the frosts of last winter and it is evident that after a number of years it will entirely disappear and the present picturesque appearance of this part of the section be materially affected or destroyed.

The distorted shale at Doctor's Brook contains fossils, but these are by no means abundant or of a superior grade. After a strict search I have found a bed of *Lingula* of two or three varieties, associated with a group of a small species of *Orthis*. In another place, I got the casts of a delicately striated shell resembling a compressed *Chonetes*, an impression of the aster of a small crinoid joint, and at some distance to the south I met with one or two *Lingula cuneata*? one specimen of which measures from the umbo to the base 9 lines, and a shell of a different kind, resembling in shape *Clidophorus concentricus*, but having the surface marking *reticulated*. I will take an early opportunity of transmitting the cast of this and duplicates of the others for determination. These fossils were found in situ, and they lie at right angles to the slaty fracture.

The masses of trap, the Frenchman's barn and the rugged crags at the mouth of Doctor's Brook, shew that in this region the volcanic action has been very violent and the fossiliferous strata have been so distorted that there is for a considerable distance southward no appearance of stratification remaining. The lofty banks of shale present this aspect until we reach a point in the brook where a Plutonic rock again appears, there is then an interval and the shale then appears to dip at a certain angle and in a uniform direction. This igneous rock appears to indicate the

* For a detailed notice of this place see *Journal of Geological Society* Vol. 1. p. 239.