



Title: Resistance is futile

Location: Sea Arch. "Bwa Gwyn" near Rhoscolyn, Anglesey.

This coastal area shows how even very hard metamorphic rocks – quartzite - that originally formed 479-502 million years ago can be weathered, and eroded by sea action. The rock has very big cracks in it which makes weathering easier. The fact that china clay was extracted from the cliff top illustrates this.

Waves are able to attack the lines of weakness to create sea caves. There is a sea cave which has a huge rock flute in the roof indicating wave attack and weathering, to the side of the arch. The photograph illustrates how the sea continues to attack this section of coast from all sides. Caves forming on such a narrow promontory will have their backs cut through relatively quickly as has happened here, making the roof of the arch more vulnerable. It is possible that the roof will collapse eventually.

The two major lines of weakness leading from the top corners of the arch clearly show why it is this size and shape. Wave attack here is mainly hydraulic action and corrosion. Air in hollows and cracks is trapped by waves as they hit the rock; it exerts a lot of pressure that further weakens the rock which will eventually break away. Waves also carry particles that are hurled against the rock and scratch it, and so erode it.

In the far distance is Holyhead Mountain, the highest point on Anglesey, and, at 220m, would not be considered a mountain by many people.