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PATTERING HOLES CAVE: A MASS MOVEMENT CAVE IN THE TRIASSIC SANDSTONES OF ST BEES, CUMBRIA

by

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ABSTRACT

A mass movement cave from the Triassic rocks of St Bees Head in Cumbria is described. This is the first such cave described from the area and the first to be found in Triassic strata in the north of England.

DISCUSSION

Sandstones of Triassic age form the headland of St Bees Head to the south of White-haven on the Cumbrian coast. The sandstone beds have a distinctive red colouration and being well bedded and jointed have been used as dimension stone in many of the buildings in the local towns and villages. The well jointed nature of the rock mass has resulted in a coastline of vertical cliffs well known for being home to colonies of cliff nesting birds. The coastline is also popularly with walkers as the coast to coast long distance footpath parallels the cliff top.

The vertical nature of the cliffs and the presence of fallen blocks at the few places the cliff foot is accessible suggests block fall and block topple to be important processes in cliff retreat. In recent times the cliffs around St Bees village to the south of the headland have become notorious for mass movement processes which have resulted in the diversion of the coast to coast path. These, however have been a result of mass wasting in the sediments of a glacial retreat moraine which abuts the cliffs in this area (Barwise, 2011).

When following the coast path from St Bees village northward towards White-haven the cliffs faces south for the 500 m before swinging around to face to the west (Figure 1). At this point a 2 m high scarp with a trench on the on the seaward side departs inland from the cliff bearing directly east for 200 m before turning south. At this

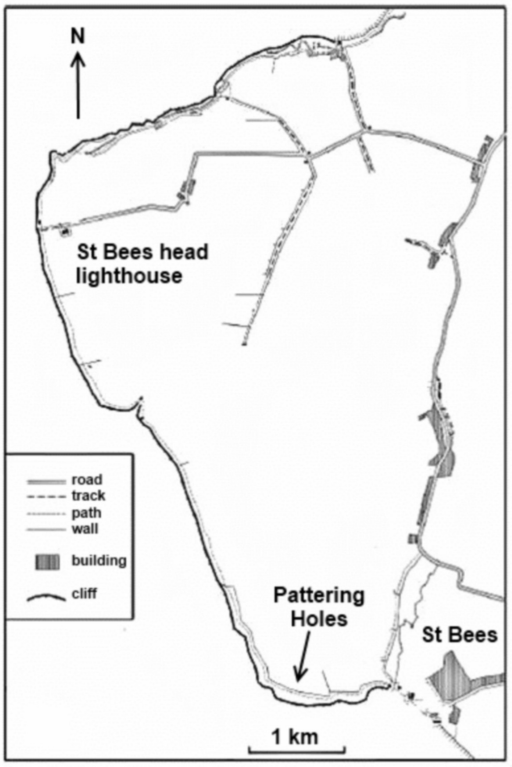

Figure 1. *Location of Pattering Holes, St Bees, Cumbria.*

Figure 2. *Looking into the cave from the northern entrance.*

point a fenced enclosure marks the position of the cave (NGR NX 9536 1192). The cave is aligned north-south, 2 m wide by 8 m high with parallel walls of red sandstone. The roofed section is 15 m long with entrances at both the northern and southern ends (Figure 2). The cave can be traversed with care as it has and been utilised for the dumping of farm refuse. A possible deeper continuation to the south is presently blocked by organic agricultural debris. The trench continues to the south before losing definition as the cliffs are approached. The trench, scarp and hollow features are known as Pattering Holes and are interpreted as a landslip feature by Shipp (1992). In absence of a name for the cave it is hereby referred to as Pattering Holes Cave.

This is the only mass movement cave so far known in the St Bees area and the first to be recorded in Triassic strata in the north of England (Murphy and Cordingley 2010). Further evidence of mass movement in the form of depressions and trenches aligned parallel to the cliff face can be seen close to the cliff edge suggesting more caves may be found in the vicinity.

REFERENCES

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