

Site Name: Bryniau Pica

Grid Reference: SN 802659

RIGS Category: Aesthetic & Scientific

Earth Science Category: Quaternary & Geomorphology

Geology 1:50,000:

RIGS Statement of Interest:

Bryniau Pica is an upland rain-fed mire situated at an altitude of c. 455 m OD, on the watershed between Teifi Pools and the Claerwen Reservoir. The site covers approximately 60 hectares. Pollen, radiocarbon and stratigraphic evidence from the site provides one of the most significant dated records of vegetational and environmental changes since the last glaciation, at the onset of the Holocene (c. 10,000 years Before Present (BP)) in upland Wales. It provides an important comparison site of conditions in the uplands of central Wales, with those prevalent at the nearby lowland site of Tregaron Bog.

Pollen analysis of the deposits at Bryniau Pica has shown that open birch woodland dominated the landscape during the early Holocene. From c. 9000yrs BP there was a rapid expansion in hazel, followed shortly after by the arrival of oak and elm, and marked the beginnings of a landscape dominated by mixed deciduous woodland. The occurrence of charcoal fragments in the peat deposits reveals the first indications of small-scale clearance of the landscape by humans at c. 8600yrs BP, during the early Mesolithic. An expansion of alder c. 7350yrs BP suggests the onset of damper conditions in the vicinity of the site. This was followed by a rapid expansion in heathland c. 6100yrs BP, and a reduction in woodland cover, with increasing evidence of human activity from the late Mesolithic onwards, and includes a very clear record of the 'classical' elm decline at the onset of the Neolithic period (c. 5000yrs BP). More extensive woodland clearance is evident from the mid-late Bronze Age (c. 3275yrs BP), with an open landscape firmly established by the Iron Age (c. 2450yrs BP), and by the Roman period c. 1965yrs BP the pattern of vegetation probably closely resembled that of the present-day landscape.

During the Medieval period (12th Century) wool production was an integral part of the Cistercian monastic economy at Strata Florida Abbey. Due to its proximity to Strata Florida, the upland pastures at, and surrounding, Bryniau Pica were a principal resource for the Cistercian monks, and were used for grazing cattle and, more significantly, large flocks of sheep. It is probable that the intensification of grazing during this period was responsible for severe erosion of the mire. In areas where the mire surface remains intact a detailed environmental and vegetational history of this period is likely to be well preserved.

The site is also significant for providing evidence of volcanic ash (tephra) deposition in the uplands of Central Wales. A tephra layer of probable Icelandic origin has been recorded at a depth of 286-288 cm in the Bryniau Pica deposits (Buckley 2000). An age of c. 5875 yrs BP has been suggested for this event, which correlates with similar deposits found in Scotland and northern Ireland.

Surveyed by: S.E. Jones