

**CYNGOR CEFN GWLAD CYMRU  
COUNTRYSIDE COUNCIL FOR WALES**

SITE OF SPECIAL SCIENTIFIC INTEREST CITATION

**POWYS**

**BACH HOWEY GORGE**

<b><u>Date of Notification:</u></b>	1994, 1997
<b><u>National Grid Reference:</u></b>	SO 112430
<b><u>O.S. Map:</u></b>	1:50,000 Sheet number: 148 1:10,000 Sheet number: SO 14 SW
<b><u>Site Area:</u></b>	24.9 ha

**Description:**

The Bach Howey Gorge contains extensive tracts of broadleaved woodland supporting an unusually wide variety of plant communities, some of which are rare in mid and west Wales, while others are uncommon in Radnorshire. Much of this woodland has been subjected to very little past disturbance due to the steep valley sides. The variety of woodland vascular plants in the gorge is exceptional and there are several uncommon species. The riverside rocks and trees support important lower plant communities. A wide range of bird species breed in the gorge and there are important assemblages of woodland invertebrates. The river provides additional interest and supports important populations of Atlantic salmon *Salmo salar* and otter *Lutra lutra*.

This wooded gorge extends along the Bach Howey River from its confluence with the River Wye near Llanstephan to a point below Pwllperran Farm, 3 kilometres upstream. The river cuts through a variety of Silurian rock types. There are extensive exposures of grey flat-bedded siltstones that form cascades at the lower end of the gorge. Further up the gorge are exposures of calcareous silty mudstones and sandstones. The cliffs below Craig Pwll-du exhibit further variation, including deposits of highly fractured fossiliferous limestone and a series of overlying red and green siltstones and marls. There are two large waterfalls in this part of the gorge. The upper end of the gorge is less precipitous and the rock exposures here are more localised. Soils of the gorge vary greatly in response to geology, topography and drainage. Such variation has led to the development of a rich variety of plant communities.

Occasional pockets of deep alluvial soil occur on level ground next to the river. They support woodland dominated by ash *Fraxinus excelsior*, with occasional alder *Alnus glutinosa* and field maple *Acer campestre* over a shrub layer of hazel *Corylus avellana* and wych elm *Ulmus glabra* with occasional goat willow *Salix caprea*. The ground beneath is dominated by carpets of ramsons *Allium ursinum*, but several other characteristic plants occur here, such as dog's mercury *Mercurialis perennis*, lesser celandine *Ranunculus ficaria*, cleavers *Galium aparine*, lords-and-ladies *Arum maculatum*, alternate and opposite-leaved golden-saxifrage *Chrysosplenium alternifolium* and *C. oppositifolium*, enchanter's-nightshade *Circaea lutetiana* and the moss, *Eurhynchium praelongum*. This type of woodland is uncommon in mid and west Wales.

The higher river banks and lower slopes of the gorge support further areas of ash woodland, with frequent field maple, wych elm, hazel and hawthorn *Crataegus monogyna* and a range of other

trees and shrubs, including holly *Ilex aquifolium*, crab apple *Malus sylvestris*, bird cherry *Prunus padus* and blackthorn *Prunus spinosa*. Where the soil is damp and compacted, tufted hair-grass *Deschampsia cespitosa* and bluebell *Hyacinthoides non-scripta* are abundant, along with a range of other species, including yellow archangel *Lamiastrum galeobdolon*, barren strawberry *Potentilla sterilis*, the mosses *Atrichum undulatum* and *Thuidium tamariscinum* and locally uncommon plants such as toothwort *Lathraea squamaria* and herb-paris *Paris quadrifolia*. This combination of species is rare in mid and west Wales. Elsewhere the soil is lighter and characteristic plants include dog's mercury, herb-robert *Geranium robertianum*, the moss *Eurhynchium striatum*, common nettle *Urtica dioica* and soft shield-fern *Polystichum setiferum*.

The base-rich rock outcrops in the steeper parts of the gorge support an open canopy of ash and wych elm and a range of other trees and shrubs, including yew *Taxus baccata*, the locally rare wild service-tree *Sorbus torminalis* and small-leaved lime *Tilia cordata*. Here the ground flora includes species such as wood false-brome *Brachypodium sylvaticum*, wood sage *Teucrium scorodonia*, wood melick *Melica uniflora* and a variety of ferns, including hart's-tongue *Phyllitis scolopendrium* and hard shield-fern *Polystichum aculeatum*. On the shaded side of the gorge, below Craig Pwll-du, the nationally scarce wood fescue *Festuca altissima* grows in some abundance. Woodland of this type is rare in Radnorshire.

The deeper, damper soils on the north-west facing slopes of the upper gorge are more neutral in character and support woodland dominated by pedunculate oak *Quercus robur* over a shrub layer of hazel, holly, hawthorn and rowan *Sorbus aucuparia*. The ground flora here is characterised by abundant bramble *Rubus fruticosus*, honeysuckle *Lonicera periclymenum*, creeping soft-grass *Holcus mollis* and greater stitchwort *Stellaria holostea*, along with frequent wood-sorrel *Oxalis acetosella*, broad buckler-fern *Dryopteris dilatata*, male fern *D. filix-mas*, hairy wood-rush *Luzula pilosa* and the moss, *Thuidium tamariscinum*. There are numerous wet flushes within the oak woodland at the top end of the gorge. Here alder is the dominant tree and the ground flora is characterised by the presence of plants such as meadowsweet *Filipendula ulmaria*, creeping buttercup *Ranunculus repens*, opposite-leaved golden-saxifrage, wild angelica *Angelica sylvestris* and lady-fern *Athyrium filix-femina*.

Where soils are slightly drier and more acidic, the north-facing slopes are characterised by woodland dominated by sessile oak *Quercus petraea*. On the slightly deeper soils there is a well-developed shrub layer of hazel, rowan and holly and a ground flora of abundant creeping soft-grass, bramble and ferns *Dryopteris spp.* and frequent wood-sorrel, honeysuckle and mosses such as *Dicranum scoparium* and *Thuidium tamariscinum*.

On the steepest slopes the soils are thinner and have been leached of minerals. The shrub layer is sparser here, but sessile oak remains the dominant tree. Where the canopy is closed, casting dense shade, there are well developed moss carpets with species such as *Rhytidiadelphus loreus*, *Polytrichum formosum*, *Hylocomium splendens*, *Pleurozium schreberi*, *Plagiothecium undulatum* and *Dicranum scoparium*. Common associates include wavy hair-grass *Deschampsia flexuosa*, broad buckler-fern, bramble, wood-sorrel, honeysuckle and the locally uncommon oak fern *Gymnocarpium dryopteris*. This type of woodland is rare in eastern Wales, being characteristic of areas of 'atlantic' climate along the western side of Britain.

Where the soil is driest and the canopy more open, such as on the western facing slopes below the old castle site, the ground flora is dominated by bilberry *Vaccinium myrtillus* with frequent wavy hair-grass and mosses, and occasional slender St. John's-wort *Hypericum pulchrum*, goldenrod

*Solidago virgaurea*, heath speedwell *Veronica officinalis* and southern wood-rush *Luzula forsteri*, the latter a rare species in Wales.

Notable among the diverse bryophyte flora of the gorge are the western Atlantic species *Jubula hutchinsiae*, *Plagiochila spinulosa* and *Dicranodontium denudatum*. Dry, shaded crevices support the prothallial stage of the Killarney fern *Trichomanes speciosum*, and sunny rock outcrops support the nationally scarce liverwort, *Targionia hypophylla*. Ancient pollard-like oak trunks provide a habitat for a number of lichens confined to long undisturbed sites in mid Wales, such as *Biatora sphaeroides*, *Enterographa crassa* and *Arthonia spadicea*.

The river below the falls is an important spawning area of Atlantic salmon and supports a good population of otters. Breeding holts are often located in the roots of large trees at the water's edge. The River Wye and its tributaries, including the lower Bach Howey, is a nationally important site for both these species. A wide range of bird species breed in the gorge including sparrowhawk, buzzard, nuthatch, wood warbler, tree pipit and dipper.

The invertebrate fauna of the gorge is also of great note. In particular, the land molluscs are exceptional with forty-five species recorded to date. This total includes seven of the nine British molluscs considered to be indicative of undisturbed primary woodland, namely *Acicula fusca*, *Vertigo substriata*, *Leiostyla anglica*, *Spermodea lamellata*, *Phenacolimax major*, *Limax cinereoniger* and *Zenobiella subrufescens*. Such an assemblage provides compelling evidence that the gorge has remained largely undisturbed through its history. In addition, *A.fusca* and *P.major* are nationally scarce species. As with the flora, the molluscan assemblage displays a mixture of biogeographical elements; Atlantic species such as *S.lamellata*, *L.anglica*, *Z.subrufescens* and *Ashfordia granulata* are all largely confined to the west of Britain in their world distributions. By contrast, *Cochlodina laminata* and *Helicigona lapicida* show a more continental distribution in Europe and are here approaching their western limits.

Other elements of the fauna have not received such detailed study, but here also there is much of interest. For example, the nationally rare pill woodlouse *Armadillidium pictum* is present at one of only nine known recent British sites. The beetles are also of interest, with ten nationally scarce species recorded. These include several species, such as *Ischnomera sanguinicollis*, *Selatosomus bipustulatus*, *Hylecoetus dermestoides*, *Phloiophilus edwardsi* and *Stenostola dubia*, associated with undisturbed woodland sites with abundant dead wood habitats.

### **Remarks:**

The site supports the following species covered by EC Directive 92/43/EEC on the conservation of natural habitats and wild flora and fauna:

Common otter *Lutra lutra* - Annex II & IV  
Atlantic salmon *Salmo salar* - Annex II & IV

Otter is also listed in Schedule 5 of the Wildlife and Countryside Act 1981, as amended.

*This document is NOT a definitive legal version and has been formatted, updated and partially edited for use on the CCW Web site. This document should not be used in any legal proceedings, public enquiry or any other hearing or appeal. If you require a full legal copy of the document please contact CCW in writing.*