

COUNTY: HEREFORD AND WORCESTER

SITE NAME: DOWNTON GORGE

DISTRICT: Leominster

SITE REF: 15WQC

Status: Site of Special Scientific Interest (SSSI) notified (Under Section 28 of the Wildlife and Countryside Act) 1981 as amended. Part of site National Nature Reserve NNR declared (Under Section 19 of the National Parks and Access to the Countryside Act) 1949

Local Planning Authority: HEREFORD AND WORCESTER COUNTY COUNCIL,  
Leominster District Council

National Grid Reference: SO 439739

Area: 66.8 (ha.) 165.1 (ac.)

Ordnance Survey Sheet 1:50,000: 137, 148

1:10,000: SO 47 NE

Date Notified (Under 1949 Act): 1952

Date of Last Revision: 1975

Date Notified (Under 1981 Act): 1988

Date of Last Revision –

#### Other Information:

Site boundary alteration (extension & reduction).

#### Description and Reasons for Notification:

Downton Gorge lies on a stretch of the River Teme within the old county of Herefordshire where its northern boundary borders Shropshire. The gorge itself was formed by the river cutting through a ridge of limestones, siltstones and sandstones of late Silurian age. In the southern part of the site this has resulted in a deep ravine with steep cliffs. In the northern part of the site the river valley is joined by a series of small side valleys (dingles) whose streams drain into the main river. Small flat areas of alluvium occur adjacent to the river where the gorge is at its broadest.

The soils on the lower slopes of the gorge sides are mainly calcareous derived from the underlying limestones and siltstones but on the upper slopes are more acidic where they are leached or underlain by sandstone.

The site has been selected as an example of ancient semi-natural woodland displaying a number of types of woodland, some of which are nationally scarce.

The river is a species rich example of a river flowing over sandstone, millstone or hard limestone. The site is also important for its exposure of Bone Beds of late Silurian age.

#### Biology

The woodlands of the gorge once formed part of the ancient Royal Chase of Bringewood which covered a large area in this part of the Welsh Borders during mediaeval times. Apart from the Downton Gorge woodlands only a few relict fragments of this ancient Chase survive having been destroyed largely by clearance for agriculture in the intervening centuries and latterly by coniferisation since the First World War. Historical records demonstrate a continuity of structure and species composition in the woods at Downton Gorge.

A number of types of woodland can be recognised here, several of which are nationally scarce. Much of the more calcareous parts of the gorge is covered by woodland with sessile oak *Quercus petraea*, ash *Fraxinus excelsior* and wych elm *Ulmus glabra*, together with both large-leaved lime *Tilia platyphyllos* and small-leaved lime *T. cordata*. On the upper slopes where the soils are more acid silver birch *Betula pendula* becomes an important feature. Large-leaved lime is a nationally rare native tree and its association with small-leaved lime and sessile oak in the acidic areas of the woodland is considered one of the more important examples remaining in Britain of this type of woodland. Much of the old

Bringewood Chase was described as wood pasture with many pollard trees. There still remain many fine pollarded oaks and limes throughout the woodland. A variety of other native tree and shrub species also occur including yew *Taxus baccata*, field maple *Acer campestre*, holly *Ilex aquifolium*, hornbeam *Carpinus betulus* and rowan *Sorbus aucuparia*. Wild service-tree *Sorbus torminalis*, a local species in Britain, is present in the steeper parts of the gorge. The shrub layer includes hazel *Corylus avellana*, hawthorn *Crataegus monogyna*, guelder rose *Viburnum opulus*, spindle *Euonymus europaeus* and wild privet *Ligustrum vulgare*.

In the more calcareous areas of the woodland the ground flora is dominated by calcicole lime loving species such as woodruff *Galium odoratum*, dog's mercury *Mercurialis perennis* and enchanter's-nightshade *Circaea lutetiana*.

In the more acidic parts of the woodland these are replaced by bracken *Pteridium aquilinum*, wavy hair-grass *Deschampsia flexuosa* and great wood-rush *Luzula sylvatica*. Additionally any uncommon or local species occur. These include herb-Paris *Paris quadrifolia*, lily-of-the-valley *Convallaria majalis*, southern wood-rush *Luzula forsteri*, violet helleborine *Epipactis purpurata*, tutsan *Hypericum androsaemum* and saw-wort *Serratula tinctoria*. The nationally rare wood fescue *Festuca altissima*, occurs in the steep exposed cliffs of the gorge as does the equally rare rock stonecrop *Sedum forsterianum*.

The gorge cliffs are important for ferns, with 12 species recorded, including such uncommon ones as oak fern *Gymnocarpium dryopteris* and brittle bladder-fern *Cystopteris fragilis*. The site is also important for mosses and lichens. Over 100 species of lichen have been recorded from Downton Gorge which is considered to be a site of national importance for this group of plants. A number of these are typically associated with ancient wood pasture, and one of these, tree lungwort *Lobaria pulmonaria* is only found at one other site in central England. Similarly over 90 species of mosses have been recorded including a number of local and rare species.

The river in the gorge is fast flowing and relatively unpolluted. Its substrate varies from large boulders in the faster flowing sections to gravels and silts in the shallower areas where the river is wider and slower. The aquatic flora is restricted to one or two species such as river water-crowfoot *Ranunculus fluitans* which can survive in the fast current. The margins and small islands however have a much greater diversity. Alder *Alnus glutinosa* and willows *Salix caprea*, *S. cinerea* and *S. fragilis* fringe the bank and a wide variety of riparian plants includes such characteristic species as yellow iris *Iris pseudacorus*, water plantain *Alisma plantago-aquatica* and skullcap *Scutellaria galericulata*.

The fauna includes polecat *Mustela putorius*, badger *Meles meles*, otter *Lutra lutra* and fallow deer *Dama dama*, including specimens of a long haired variety which is confined to this district of the British Isles. Breeding birds include kingfisher *Alcedo atthis*, grey wagtail *Motacilla cinerea*, dipper *Cinclus cinclus* and pied flycatcher *Ficedula hypoleuca*. Buzzard *Buteo buteo* and raven *Corvus corax* have also been recorded in the woodland.

The river supports crayfish *Austropotamobius pallipes*, salmon *Salmo salar*, trout *Salmo trutta* and grayling *Thymallus thymallus*.

The invertebrate fauna is less well known. So far 60 species of beetle have been recorded some of which are associated with the ancient pollards. The butterflies include silver-washed fritillary *Argynnis paphia*.

### Geology

Downton Gorge includes a number of important geological sites, some of which have yielded fossil remains of rare primitive fish. At Bow Bridge rocks of the Ludlow Series are exposed with the Upper Bringewood Formation overlain by the Leintwardine Beds. The Bringewood Formation contains a well preserved fossil fauna and flora including layers

rich in the bivalve mollusc *Rhipidium knighti* and favositid corals. The Leintwardine Beds also contain distinctive fossil fauna and flora assemblages.

At Forge Rough Weir there is a fine exposure of the Ludlow Bone Bed, overlain by sandstones and the Downton Bone Bed. These bone beds contain important fossils, including teeth and spines of Acanthodian and Thelodont fish whilst the intervening sandstones contain invertebrate remains. These rocks illustrate the transition from marine to estuarine conditions at this critical time for fish evolution, during the late Silurian. Castle Bridge Mill Quarry exposes Downton Castle Sandstone of late Silurian age with specimens of the extremely rare *Sclerodus pustuliferus*. This species is very significant in the evolutionary development of these early vertebrates. At Downton Castle Bridge a small exposure of the basal Temeside Shales, also of late Silurian age, yields well preserved head-shields of the fossil fish *Hemicyclaspis*. At Tin Mill Race, a bone bed within the Temeside Shales is exposed. These localities have yielded much scientifically important fossil fish material over many years.