

SITE NOTIFIED TO THE SECRETARY OF STATE ON 19 AUGUST 1988

COUNTY: DERBYSHIRE,
STAFFORDSHIRE

SITE NAME: DOVE
VALLEY AND BIGGIN DALE

DISTRICT: DERBYSHIRE DALES,
STAFFORDSHIRE
MOORLANDS

SITE REF: 15 WKK

Status: Site of Special Scientific Interest (SSSI) notified under Section 28 of the Wildlife and Countryside Act, 1981, as amended.

Local Planning Authority: PEAK PARK JOINT PLANNING BOARD, Derbyshire Dales District Council, Staffordshire Moorlands District Council

National Grid Reference: SK 157506,
SK 147595

Area: 669.6 (ha.) 1654.6 (ac.)

Ordnance Survey Sheet 1:50,000: 119

1:10,000: SK 15 NW, SW,
NE, SE

Date Notified (Under 1949 Act): 1954

Date of Last Revision: 1972

Date Notified (Under 1981 Act): 1988

Date of Last Revision: –

Other Information:

Part owned by National Trust. Site boundary alteration (extension & reduction). Site mentioned in 'A Nature Conservation Review' edited by D A Ratcliffe, Cambridge University Press 1977.

Description and Reasons for Notification:

The Carboniferous Limestone massif of the Peak District is one of the most important in Britain, lying in latitude and altitude between the Mendips and the Craven area of Yorkshire. The limestone is cut by valleys, the 'dales', which expose areas of high geological interest and support a wide range of wildlife habitats, particularly woodland, scrub and grassland.

Those areas of woodland that are regarded as being oldest are dominated by ash *Fraxinus excelsior* and wych elm *Ulmus glabra*. The best examples of this type of woodland in Britain are found in the Peak District and the Mendips. Growing on north and north west facing slopes, these woodlands are late-leafing and cast a light shade in spring, thus supporting a very rich shrub and ground flora which in places is dominated by bryophytes.

Some dales contain a particularly open type of hazel *Corylus avellana* scrub (described as 'retrogressive') which occurs on very poor soils but has an exceptionally rich flora.

A wide range of grassland occurs in the dales, varying according to the soil, aspect and intensity and type of grazing. The extensive calcareous dale-side grasslands are generally dominated by meadow oat-grass *Avenula pratense* and glaucous sedge *Carex flacca* with a very rich flora.

Other habitats in the dales include rock outcrops and scree and several dales, a series of stages in scree colonisation by plants can be found.

The great majority of the dales are dry but a few have streams on the surface, some of which are present only in winter. In some areas the streams are fed by lime-rich springs.

The Dove Valley which includes Mill Dale, Wolfscote Dale and Biggin Dale, runs north/south for 12 km at the southern end of the Peak District National Park. It has long been recognised as one of the most visually attractive areas in Britain with its pinnacles and precipitous valley sides clothed with ancient woodlands and floristically rich grasslands. It is also an area of considerable geological and ecological interest, containing important examples of ancient semi-natural woodland dominated by ash and elm, calcareous grasslands and a range of screes and rock outcrops. The River Dove rising on the Millstone Grit of Axe Edge, adds diversity to the interest of the site as it flows through the valley.

The Dove valley is of geological importance for its karst landscape and Dinantian stratigraphy.

Biology

The Dove Valley ashwoods are considered to be amongst the finest in Britain. They are east facing, very steep and contain a very great variety of species. The tree canopy contains ash and wych elm with rowan *Sorbus aucuparia*, field maple *Acer campestre* and both small-leaved lime *Tilia cordata* and the nationally scarce large-leaved lime *T. platyphyllos*. The shrub layer is rich with a considerable amount of hazel and abundant dogwood *Cornus sanguinea*, guelder rose *Viburnum opulus*, buckthorn *Rhamnus catharticus* and bird cherry *Prunus padus*. The presence of some pedunculate oak *Quercus robur* is of particular interest as it suggests a link between the Derbyshire ashwoods and oakwoods of more westerly distribution. Within the woodland there are substantial rock outcrops with an abundant growth of yew *Taxus baccata* and occasional rock whitebeam *Sorbus rupicola*.

The woodland ground flora is dominated by dog's mercury *Mercurialis perennis*, tufted hair-grass *Deschampsia cespitosa* and hart's-tongue *Phyllitis scolopendrium*. Within the wood are extensive areas of mountain currant *Ribes alpinum* and occasional plants of mezereon *Daphne mezereum*, wood barley *Hordelymus europaeus* and wood fescue *Festuca altissima* all of which are nationally restricted.

Over large parts of the dale sides there is a mixed scrub of hawthorn *Crataegus monogyna* with ash, which includes many of the woodland shrubs particularly hazel and buckthorn as well as dog-rose *Rosa canina* and blackthorn *Prunus spinosa*.

The grasslands range from those on deep, rich, moist soils on the floor of the dale, through shallow, stony calcareous soils on the dale slopes, to leached soils round the upper edges of the dale. The dale floor grasslands include wet areas dominated by meadowsweet *Filipendula ulmaria* and marsh thistle *Cirsium palustre*. Cuckooflower *Cardamine pratensis* is particularly abundant providing food for the caterpillars of a large population of orange-tip butterflies *Anthocaris cardamines*.

The calcareous limestone grasslands of the dale slopes are dominated by meadow oat and glaucous sedge, with the nationally scarce limestone bedstraw *Galium sternerii* abundant in places. In Biggin Dale, flea sedge *Carex pulicaris* is characteristic of a very local variant of this community. Other nationally rare species that occur include pale St John's-wort *Hypericum montanum* and field garlic *Allium oleraceum* in the species rich grasslands throughout the dale, whilst hutchinsia *Hornungia petraea* is present on the rock outcrops and on moister screes with pockets of soil, hoary whitlowgrass *Draba incana*, wall whitlowgrass *D. muralis* and narrow-leaved bitter-cress *Cardamine impatiens* are found.

In Biggin Dale red hemp-nettle *Galeopsis angustifolia* is present on the dry screes, and the nationally scarce Jacob's ladder *Polemonium caeruleum* occurs in deeper soil pockets on the dale sides.

On the upper edges of the dale, the soils are acidic through leaching out of the lime. There are large areas of common bent *Agrostis capillaris*, with patches dominated by sheep's sorrel *Rumex acetosella*.

On rock outcrops in Dove Dale the species of smaller ferns are abundant and these include rusty-back *Ceterach officinarum* and green spleenwort *Asplenium viride*, both species that are very local in the Peak District.

Dove Dale is the richest site in the Peak District for lichens, in particular for saxicolous (rock-loving) species. *Clathroporina calcarea* which occurs on vertical limestone crags was originally described from material from Dove Dale and Gloucestershire. *Solorina spongiosa* and *Verrucaria murina* are rare throughout the Midlands, while several other species occur at only a few sites in the Peak District. Some corticolous (bark loving) species of importance are present in the Dove Dale ashwoods.

The Dove Dale ashwoods support an unusually high density of breeding birds which include redstart *Phoenicurus phoenicurus* and willow tit *Parus montanus* although there are no particularly uncommon species. Great spotted woodpecker *Dendrocopos major* occurs where elms have died and the green woodpecker *Picus viridis* is frequently present on the dale side grasslands where ant hills are abundant. Species of more local distribution include sparrowhawk *Accipiter nisus* and lesser whitethroat *Sylvia curruca*.

On Bunster Hill, Iron Tors and other south facing slopes, many uncommon micro-moths have been found including one for which this is the only site in Britain. Two larger moth species that occur in the dale, feathered ranunculus *Eumichtis lichenea* and light feathered rustic *Agrotis cinerea* are more commonly found in coastal grasslands. Several rare moths are known from the Dove Dale ashwoods, in particular Blomer's rivulet *Discoloxia blomeri*, a species whose larvae feed on developing elm seeds. This species is still quite abundant here although decreasing nationally. Butterflies are well represented including the uncommon white letter hairstreak *Strymonidia w-album* and green hairstreak *Callophrys rubi*.

Geology

Dove Dale is the most extensive and spectacular active limestone gorge in Britain. The main river maintains its permanent flow across the limestone outcrop because of its large external catchment area, while the tributary valleys are by contrast entirely dry. The meandering pattern of the river valley and gorge is uniquely controlled by resistant reefs within the limestone, which are so hard that the river has cut around rather than through them. Geologically, the reefs are of great interest since, unlike most reefs, they are without obvious 'frame builders' – the marine organisms such as corals which build up the reef by their growth and by accreting lime and other organisms around them. The origin of these unbedded reefs is a controversial and still unresolved subject and Dove Dale will undoubtedly feature in future research to resolve this problem.