

NAT 1.2 Biodiversity Importance of the Lower Carrant Valley

1.2 Biodiversity

As part of its work, KCT has commissioned a series of ecological surveys, including a long term study of the invertebrate fauna of the Kemerton Estate by P. Felton Whitehead. This has given rise to two noteworthy papers in the *Journal of the Royal Agricultural Society* 'The Invertebrate Fauna of the Kemerton Estate Worcestershire, Part I: Terrestrial Habitats' 1995 and 'ditto, Part II: Arboreal Habitats and Beggarboys Wetland' 1996. KCT is an active contributor to the Worcestershire Biological Records Centre. As a consequence of the Trust's work, detailed biological records for most taxonomic groups are available for Bredon Hill and the Lower Avon and Carrant Valleys.

Carrant Brook and its tributary the Waterlet Brook are ecologically important and together they have been designated as a **Worcestershire Local Site (ref SO93/04)**. However, KCT is concerned with the whole Carrant Valley and in particular that part of it which we have identified for special protection. The detailed accounts of species and habitats are given below, with particular attention given to those identified in Section 41 of the Natural Environment and Rural Communities Act 2006. Where species or habitats are shown in underlined type, these are of principal importance as identified in NERC Act. Other species and habitats are of local importance (in the Gloucestershire or Worcestershire Biodiversity Action Plan).

1.2.i Birds

The valley has nesting lapwing and curlew. KCT only has precise records for fields belonging to the Kemerton Estate, which show there have regularly been up to four nesting pairs of lapwing using the three arable fields bordering the Waterlet Brook when the cropping is suitable. However, anecdotal evidence from the Overbury Estate indicates that four pairs regularly nest on the brook side meadow to the east of the B4079. In addition, there are further pairs nesting on the Kemerton Estate on the north side of Kinsham higher up the terrace which are available to reinforce the population in the valley itself. In 2009, there were records of 18 pairs nesting in the Carrant Valley, plus four unsuccessful pairs at neighbouring Kemerton Lake, according to the most recent report we have: *Breeding Waders in the Severn and Avon Vales (Gloucestershire & Worcestershire) Summer 2009 (Mike Smart)*. **This makes the Carrant Valley the most important inland breeding site in the Severn and Avon Vales for lapwing, and therefore of considerable significance nationally.**

In winter, there are large flocks of lapwing and golden plover. Up to 850 of the latter were recorded in December 2001, which is regarded as regionally significant by the RSPB. The level for international significance is 2,000. (Frank Lucas, RSPB Central Office *pers.comm*).

The following species are found in healthy breeding populations: song thrush, skylark, linnet, reed bunting, bullfinch, starling, dunnet, marsh tit and yellowhammer, while lesser spotted woodpecker, which locally is associated with old orchards, is also probably present. Grey partridge and turtle dove have declined and may no longer be breeding. Corn bunting and tree sparrow have not bred for two or three decades although they have both been recorded in recent winters and may return. Marsh warblers used to breed in the Aston Mill Gravel Pit but have not been recorded in recent years. The uncommon species quail bred in 2001.

1.2.ii Mammals

Otters use the Carrant and Waterlet brooks, which provide a gateway for the recolonisation of the Cotswolds by otters which have spread down the Severn valley from Wales. Otter is listed in Annex II of the European Habitats and Species Directive. It is hoped that with the recolonisation by otters, there will be a reduction in feral American Mink which will permit the re-establishment of water vole, another Section 41 species, which is facing extinction. The brown hare used to be abundant in the valley although there seems to have been a recent decline. There is a healthy population of polecats and harvest mice. KCT carries out regular bat surveys on the Worcestershire side of the valley and has recorded nine species in the last four years including noctule, soprano pipistrelle, brown long eared and lesser horseshoe. The other five species, as for all bat species, are protected under the European Habitats and Species Directive (listed in Annex IV).

1.2.iii Amphibians and Reptiles

Great crested newt has often been recorded from Kinsham, most recently in 2001, and there must be potential for spread into pools in the floodplain, which the Carrant Project should recognise and provide for. This species is protected under the European Habitats and Species Directive (listed in Annex II) . Common toad breed in very large numbers at Kemerton Lake and are found throughout the valley. Grass snake and slow-worm are also recorded.

1.2.iv Invertebrates

A report from P. Felton Whitehead which he prepared for the Tewkesbury Local Plan Inquiry is attached (**Attachment NAT 1.3**). There is a large and varied invertebrate fauna including at least one rare dead-wood beetle species that Mr Whitehead wishes to keep confidential, and which the report does not mention. However he does not attempt to list the hundreds of species he has recorded in the valley, but rather uses particular examples to assess the quality and condition of the landscape. As well as being important in their own right these beetles provide an insight into the history of the

landscape, which is an area of knowledge where Mr Whitehead is a recognised authority. He states (page 2) **'We have long contended that the Carrant valley is internationally important from the standpoint of archaeology and cultural history, and this view would now appear to be gaining support.'** While this evidence was produced nearly twelve years ago we still regard it as being relevant.

1.2.v Plants

Grasslands. Most of the grasslands along the valley have received some degree of agricultural intensification although many of them are now in Countryside Stewardship schemes which will prevent further fertilising or spraying with herbicides. However there are some fields which are partially unimproved and which have examples of semi-natural Lowland Meadows of types MG5 and MG4 as classified in the National Vegetation Classification -see *British Plant Communities Volume 3 Grasslands and montane communities. J.S. Rodwell et al.*

These are plant communities typical of ancient hay meadows, with MG5 found on dryer land and MG4 found in the floodplain. The latter (which is characterised by the presence of greater burnet *Sanguisorba major* allied to meadow foxtail *Alopecurus pratensis*) is particularly threatened and **is listed for protection in Annex I of the European Species and Habitats Directive**. The former is the typical traditional hay meadow of the English Midlands and is estimated to have declined to less than 2% of its pre-WW2 area. It is spectacularly beautiful when its many species of wildflower are in bloom and the example in Kemerton parish on the northern bank of the Waterlet Brook, which has been recently nominated as **Worcestershire Local Wildlife Site (ref SO93/13)**, contains 86 species of flowering herbs as well as adders tongue fern and many species of fungus.

These residual areas give grounds for hope that, with the new management required under the Higher Level Stewardship scheme, much of the other grassland in the valley will gradually return to a semi-natural 'unimproved' condition. Certainly the populations of obviously attractive plants such as cowslips are increasing. The Carrant Valley grasslands should be seen as contributing to the national resource of Lowland Meadows.

1.2.vi Hedgerows

The hedges in the valley are very rich in terms of the number of woody plant species they contain. This is to be expected since many of these hedges are of great age, and there is a correlation between age and species diversity. Ancient and/or species-rich hedgerows are recognised as being of special importance. All parish boundary hedges were surveyed in 1996 and found to contain between ten and fourteen different woody species including the relatively scarce buckthorn and spindle. (*Kemerton Estate*

Hedgerow Survey. Damian Offer Autumn 1996). Individual veteran trees (a Local Habitat in the Gloucestershire BAP) with a rich invertebrate fauna were white willow, English elm (stool), crack willow and field maple. There were younger examples of English oak and the native black poplar.

1.2.vii Arable Land

The weeds of arable land are some of the most endangered of British plants and arable field margins are a Habitat of Principal importance. The alluvial soils of the valley do not have the potential for some of the rare species which occur on the limestone of Bredon Hill. However some relatively uncommon species have been identified in the margins of arable fields in unsprayed headlands managed under the Countryside Stewardship Scheme. These include the yellow-sapped subspecies of long-headed poppy, round-leaved fluellen, rye brome and henbit deadnettle, and provide a suitable site for the introduction of shepherds needle, which is present elsewhere on the Kemerton Estate.

1.2.viii Relation to other sites of Nature Conservation Importance.

The lower Carrant Valley should not be seen in isolation. Much of its ecological interest both actual and potential stems from its proximity to other important sites. Those in Gloucestershire are already recorded in the Local Plan as Sites of Special Scientific Interest or Key Wildlife Sites. However those in Worcestershire are not. The photograph in **Attachment NAT1.2a** includes the Kinsham (now renamed as Kemerton) Lake Nature Reserve (the lake shows as pale blue) which was only completed in 1999 but is already a **Worcestershire Local Site (ref SO93/12)**. It is regarded as one of the best bird watching sites in the county and has recorded the first Worcestershire records for two rare migrant species of dragonfly, the red-veined darter and lesser emperor. The Aston Mill gravel pit to the south-east of it has already been mentioned as a previous site for marsh warbler. One mile to the west, Bredon's Hardwick gravel pit is one of the most important sites for breeding waders in the Severn Vale survey area, as is Upham Meadow SSSI (Glos) which can be seen on the extreme left edge of **Attachment 1.2a**. Opposite this, on the east bank of the Avon, Bredon's Norton Meadows SSSI have unimproved MG4 grassland, with breeding waders. All of these sites exchange populations of birds with the Carrant Valley and will provide a source of new breeding stock if additional suitable habitat becomes available.

Bredon Hill SSSI (at the top of **Attachment NAT 1.2a**) has been designated a **Special Area of Conservation** under the European Species and Habitats Directive for its internationally important assemblage of beetles living in dead wood, in particular the Violet Click Beetle. There is the possibility of insects from there moving to veteran trees in the Carrant Valley, and one rare dead-wood species has already been

recorded - see above. The other SAC for this species is Dixton Woods on the Gloucestershire side of the valley.

1.2.ix The Carrant Catchment Restoration Project

KCT is currently leading a landscape scale conservation project, in collaboration with the Worcestershire and Gloucestershire Local Biodiversity Action Partnerships, the Environment Agency, Buglife, local businesses and landowners. The aim of the scheme is to enhance the whole catchment of the Carrant Brook. The *Carrant Catchment Restoration Project* will have a number of biodiversity objectives related to water quality, and riparian habitat and species conservation. **However, the project's most important objective in European terms is the linking of the two Special Areas of Conservation (SAC) at Dixton Wood and Bredon Hill, which have some of the best assemblages of invertebrates associated with ancient trees in Britain.** The project will be focussing on the veteran tree resource across the Carrant Vale; including veteran willows and mature orchard trees (we are pleased to note that Tewkesbury Borough Council has put Tree Preservation Orders on many such trees in the lower Carrant valley). Using funds provided by the Environment Agency an enhanced Phase 1 survey has been undertaken. This will enable the project to identify the important habitats, which may be individual trees.

As a first stage, the Trust and the Environment Agency are developing plans for enhancing the Carrant and Waterlet Brooks where they cross the Kemerton Estate, with a view to repairing some of the damage done when the brooks were deepened and straightened. The larger project will involve other landowners in restoring the biological richness of the Carrant Valley. The project will necessarily have to take place on both sides of the county boundary.



< Bredon Hill SSSI

< Bredon's Norton Meadows

< Upham Meadow

< Kinsham Lake

< Aston Mill