

Introduction

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The South Gloucestershire Biodiversity Action Plan (BAP) has been drawn up collaboratively with a range of partners, including nature conservation organisations, parish councils, local wildlife groups and members of the public.

Its main aim is to contribute towards safeguarding and benefiting the species and habitats making up the Plan and to provide an identity and focus for nature conservation work throughout South Gloucestershire.

It will be used internally within the Council – in making planning decisions, in formulating policy and in all other relevant areas of the authority's work – and externally, working cooperatively and in partnership with other organisations and the wider community of South Gloucestershire.

The BAP will also help inform the production of South Gloucestershire Council's Local Development Framework in the coming years: and provides a mechanism in which to contribute towards meeting both Local Agenda Agreement targets, national policy and legislation, including the recent Natural Environment and Rural Communities (NERC) Act 2006.



1 Introduction

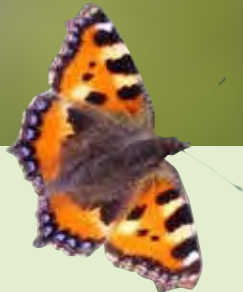


“ My vision for South Gloucestershire in 2015 is that the challenges have been faced and the opportunities seized, to ensure that those who live and work in South Gloucestershire are enjoying, respecting and contributing to a rich and growing biodiversity.

”

*Quote from Councillor Brian Allinson
Executive member for Planning Transport and Strategic Environment 2007*





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- Bath Asparagus



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References and Acknowledgements

Vision:

***An environment
that is protected
and enhanced
for future
generations.***

*Our Area Our Future
- Community Strategy*

Introduction

In South Gloucestershire biodiversity is all around us: from urban parks and gardens to the Cotswold Hills Area of Outstanding Natural Beauty and the internationally protected Severn Estuary.

The wildlife in South Gloucestershire ranges from the critically rare to the commonplace. It also contains a diverse array of types of habitats, including ancient woodland, to rivers, to coastal saltmarsh to hay meadows, with a wide range of underlying geology.

At the 1992 'Earth Summit' in Rio, the UK Government signed up to the Global Biodiversity Convention and promised to provide action for our threatened UK plants and animals to significantly reduce the decline of biodiversity.

The UK government has also signed up to 'Countdown 2010' and joined the global pledge to halt the loss of biodiversity by 2010.

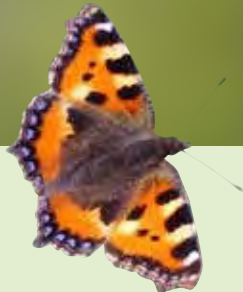
The Biodiversity Action Plan will help meet these pledges at a local level and sets out the action required to protect, enhance and restore our biodiversity between now and 2015.

The targets set out in this document will not be easy and will require cooperation from everyone – local residents, landowners, businesses, nurseries, contractors and wildlife organisations.

Conservation work has, of course, been going on for many years now in South Gloucestershire, undertaken by a wide range of people. The Biodiversity Action Plan will provide a framework to coordinate and prioritise this work to conserve and enhance our invaluable natural heritage.

“ The purpose of Local Biodiversity Action Plans is to focus resources to conserve and enhance biodiversity by means of local partnerships, taking account of both national and local priorities

UK Biodiversity Steering Group Report 1995



The Biodiversity Partnership

This Biodiversity Action Plan has been drawn up by South Gloucestershire Council in partnership with a range of local wildlife organisations, national experts and knowledgeable local enthusiasts.

Two groups meet regularly and make up the biodiversity partnership.

- 1. Wider Partnership**
- 2. Topic Group**

The Wider Partnership is made up of organisations with a wider perspective on biodiversity, both regionally and nationally:

- Avon Biodiversity Partnership
- Avon Wildlife Trust
- Bristol Regional Environmental Records Centre
- Cotswold Area of Outstanding Natural Beauty Conservation Board
- Natural England
- Environment Agency
- Farming & Wildlife Advisory Group
- Forestry Authority
- Gloucestershire Wildlife Trust
- Forest of Avon
- RSPB
- South Gloucestershire Council

The Topic Group is open to anyone and includes local wildlife enthusiasts, interested residents, parish councils and others.

A full list is available in Section 4, References and Acknowledgements.

New members are always welcome.





Biodiversity - What is it?

“ Biodiversity is the Variety of Life ”

...Which includes mammals, birds, fish, reptiles, amphibians, invertebrates, fungi and plants – and the woodlands, grasslands, rivers and seas on which they all depend including the underlying geology..

Why is it important?

We are of course part of this ‘web of life’ and depend on it for our existence.

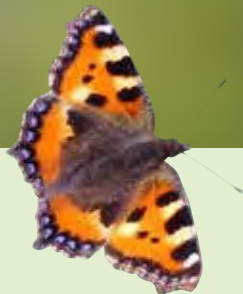
Food shelter and a place to breed are the basic requirements for life. Geology provides fuel (coal, oil and peat), building materials (bricks, stone etc) and the terrain for woodlands and pasture, which in turn provide fruit, crops and grazing.

Biodiversity also enriches our lives, be it a spring walk along a flower filled lane, or a robin in full song in an urban garden.

However, in the last century, 100 UK species have become extinct. 1,200 species are currently on the UK priority list and the effects of these losses could be dramatic.

Think, for example, of what would happen if we lost our bee populations. Crops and flowers would not be pollinated and food supplies would start to fail.

South Gloucestershire is one of the fastest growing economic areas in the country with a population growth of 20% in the last 20 years. This pressure of growth continues, with the draft Regional Spatial Strategy proposing c.30,000 new dwellings in South Gloucestershire by 2026. Continued rapid development is undoubtedly a major threat to biodiversity. However, sustainable development is a core policy of the UK Government and this includes the protection and enhancement of wildlife within development.



Planning and the Law

As well as moral obligations, there are legal duties towards biodiversity.

There is a raft of legislation and planning guidance to help ensure that wildlife is protected. Among the key pieces of legislation are:

The Habitats Directive

EU Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna, implemented in Britain by the Conservation (Natural Habitats &c) Regulations 1994. This identifies and gives legal protection to sites of European significance (e.g. Severn Estuary) and protection to species under Annex 2 (e.g. otters, bats, great crested newts etc).

Wildlife and Countryside Act 1981

Amongst other things, this identifies and gives legal protection to SSSIs and key species such as bats.

The Protection of Badgers Act 1992

Countryside and Rights of Way (CROW) Act 2000

This updates and strengthens many of the elements of the Wildlife and Countryside Act 1981. Section 74 covers 'species of principal importance for conservation of biological diversity'.

Natural Environment and Rural Communities (NERC) Act 2006

Section 40 states: "Every public body must, in exercising its functions, have regard, so far as is consistent with the proper exercise of those functions, to the purpose of conserving biodiversity". This means that, in law, local authorities have a responsibility towards wildlife in discharging their duties.

The Planning & Compulsory Purchase Act 2004

This sets out the legal framework for the protection of biodiversity in the planning and development process.



Introduction



National Planning Policy

Planning Policy Statement 9: Biodiversity and Geological Conservation (PPS9) outlines the Government's objective to ensure the conservation of the abundance and diversity of Britain's wildlife: to minimise the adverse effects on wildlife where a conflict of interest is unavoidable; and to meet its international responsibilities and obligations for nature conservation. PPS9 sets out how internationally, nationally and locally important habitats and species of biodiversity importance should be protected in the planning and development process, including those species and habitats of principal importance for biological diversity under Section 74 of the CROW Act 2000.

Regional Planning Policy

The draft Regional Spatial Strategy sets out planning policy for South West England. This will replace Regional Planning Guidance Note 10 for the South West and the Joint Replacement Structure Plan when adopted.

Local Planning Policy

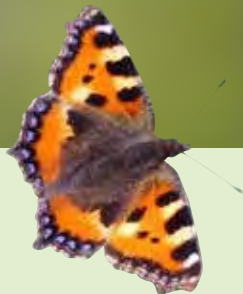
Policies L6, L7, L8 and L9 of the South Gloucestershire Local Plan relate to nature conservation. Policy L9 of the South Gloucestershire Local Plan includes a commitment to preparing a BAP and sets out the Council's policy on biodiversity:

'Development which would directly or indirectly have an adverse effect on a nationally or internationally protected species of flora or fauna, or species or habitats listed in national, regional or local Biodiversity Action Plans, will not be permitted unless any damaging effects are capable of being avoided, overcome or offset by mitigation measures'.

This is supported by planning guidance on the natural environment including:

- Trees
- Biodiversity and the Planning Process

The South Gloucestershire Local Development Framework will incrementally replace the Local Plan in the coming years.



Sustainability and Climate Change

It is now widely acknowledged that climate change may at least in part be caused by the misuse and overuse of the world's natural resources. One element in countering these changes is to live more sustainably and biodiversity can be one of the key indicators for sustainable development.

Sustainable development is at the centre of decision-making in South Gloucestershire Council. It underpins all other goals, policies and processes and provides a framework for integrating economic, social and environmental concerns.

The sustainable management of farm land in South Gloucestershire plays an absolutely vital role in the action for biodiversity. DEFRA's Environmental Stewardship Agreements provide financial incentives for wildlife-friendly measures and has a range of benefits for the local landscape and biodiversity. There are a variety of different schemes including Entry Level Stewardship (ELS), Higher Level Stewardship (HLS) and Organic Entry Level Stewardship (OELS) (www.defra.gov.uk/erdp/schemes). Uptake in South Gloucestershire has already been high.

The aim of the Entry Level Scheme is to encourage a large number of farmers across a wide area of farmland to deliver simple yet effective environmental management.

- The scheme requires a basic level of environmental management
- Five year agreements provide payment of £30 per hectare, per year across the whole farm
- There is a wide range of over 50 options to choose from (e.g. hedgerow management, stone wall maintenance, low input grassland, buffer strips, and arable options) to cover all farming types (DEFRA)

The National Farmers Union (South West) said; "Every farmer is encouraged to join the entry level scheme. The local and national initiatives in local food and procurement are also to be encouraged for the benefits they bring for biodiversity and a balanced appreciation of the countryside".



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Introduction



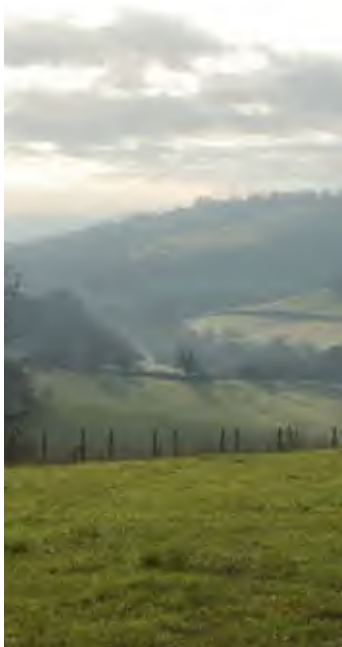
A healthy landscape that can support a rich diversity of wildlife requires a well connected network of habitats. Linking habitats, such as hedgerows allow species to move and are often referred to as 'wildlife corridors'. Species are thus able to disperse and colonise new habitat, avoid hazards, mix genes and move with potential changes to the climate.

South Gloucestershire Council has a Climate Change Action Plan www.southglos.gov.uk/climatechange

Enhancing and linking habitats at a landscape scale is being promoted regionally via the South West Nature Map initiative. The key areas suggested for South Gloucestershire can be viewed at www.swenvo.org.uk

Designated Sites for Nature Conservation in South Gloucestershire





Looking towards the future

The BAP is an on-going process. It may take many years to reach our vision and it is thus important to monitor both the action for biodiversity across South Gloucestershire and its effectiveness.

The Biodiversity Partnership will need to review the Action Plan throughout its lifetime. New habitats and species may need to be added and sections may need to be edited or removed. The partnership will also need to continue to utilise existing funding and explore new funding opportunities to deliver the actions set out in this Plan.

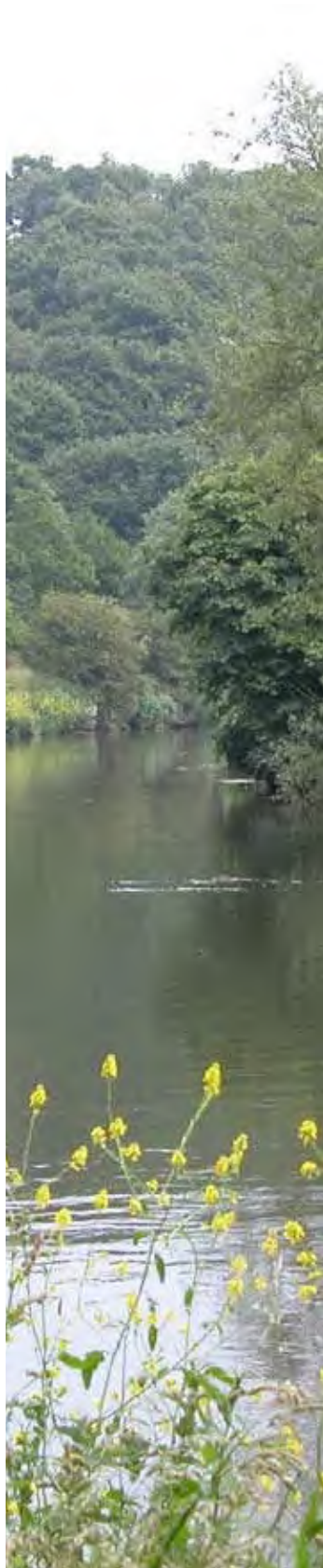
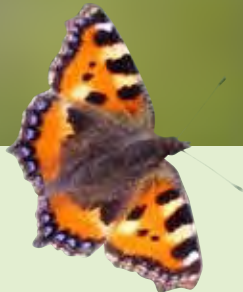
This is likely to include opportunities from:

- Local Authority grants
- Sponsorship and support from business
- DEFRA incentives including Environmental Stewardship
- Aggregates Levy
- Lottery Funding
- Natural England grants
- Landfill Tax
- Section 106 Agreements with developers
- Volunteer help

BARS Action towards meeting the targets set out in the Plan can be reported to Regional and National lead partners through the on-line Biodiversity Action Reporting System (BARS) which is publicly available.

BRERC The Bristol Regional Environmental Records Centre holds all biodiversity records for the former Avon area. All members of the Biodiversity Partnership share data with BRERC.





SGC South Gloucestershire Council has a range of targets and indicators to monitor biodiversity in South Gloucestershire.

- Indicators within the Local Development Framework
- 'Quality of Life' indicators
- Local Area Agreement indicators 2006-2009 www.southglos.gov.uk
- The NERC Act 2006 will require an audit of local authority action for biodiversity
- National performance indicator on biodiversity

NE Natural England (formerly English Nature) monitors the condition of Sites of Special Scientific Interest (SSSI) within South Gloucestershire.

The South Gloucestershire Biodiversity Action Plan has information, targets and action tables on seven key habitats, seven UK priority species and eight locally important species.



These seven habitats were agreed by the Biodiversity Partnership to reflect the most important range of habitats found in South Gloucestershire.

- **Arable farmland**
- **Broadleaf woodlands**
- **Hedges and field margins**
- **Old meadows and pastures**
- **Orchards**
- **Ponds, rhymes, rivers and water bodies**
- **Saltmarsh and grazing flood plain**

The action plans are broad and incorporate types of habitat identified by the government as national priorities – please see the UK BAP website www.ukbap.org.uk.

The habitats occur throughout South Gloucestershire. In urban areas, school grounds, old, mature gardens, open space, churchyards and allotments all form part of a mosaic of habitats and are covered by one or more of the habitat action plans (for example, churchyard grassland falls within 'Old Meadows & Pastures'): or interlink with one or more of the species action plans (e.g. allotments and slow-worms). Such sites are recognised as being invaluable for wildlife and their sympathetic management is encouraged through the BAP.

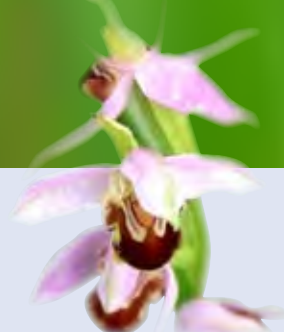
Domestic gardens - particularly old, large, mature gardens – can provide valuable habitat for a number of the species included within this Plan, such as hedgehog, song thrush and slowworm. Avoiding the loss of gardens to development and encouraging their sympathetic management is critical in retaining wildlife within the urban environment and, as such, is something to be actively encouraged.

By protecting such habitats we will be protecting the range of species that rely on them.

Action will be monitored through the Biodiversity Action Reporting System (BARS) www.ukbap-reporting.org.uk.

Records will be held by the Bristol Regional Environmental Record Centre www.brerc.org.uk.

2 Habitats



Arable Farmland

COVERS UK PRIORITY HABITAT- CEREAL FIELD MARGINS

Introduction

Arable fields are home to many threatened species of plants, invertebrates and birds, including some that are widely known, such as skylark.

Definition

Arable farmland covers managed field systems growing cereals, roots, legumes, oil seeds, etc, for human or livestock consumption. The woods, hedges, walls and ditches which all form part of this landscape and mosaic of habitats are covered by other plans.

Current status

The former Avon area has approximately 5,500 ha of arable land (DEFRA 2004). Arable field margins produce low crop yields, and due to current grants available can be managed for wildlife at little or no economic cost. The current resource of "wildlife-friendly" arable field margins in S Glos is unknown, but the potential for creation is great.

Distribution

One of the richest areas is found on the Cotswold plateau which falls predominantly into South Gloucestershire - from Marshfield to Hawkesbury Upton and east to Acton Turville, although there is also value and potential in other areas.

Why is there an Action Plan?

Arable farmland provide nesting and feeding sites for many birds (including corn bunting, grey partridge, tree sparrow and skylark) and thousands of species of invertebrates. Birds are a useful and obvious indicator of wider species decline.

Annual arable flowers ('arable weeds') are even more dependent on arable farmland, being often restricted to the crop margin. Some 300 species of arable plants can be found in these fields and arable wild flowers are of conservation concern because of enormous national declines in their distribution and abundance.



Associated Action Plans

*South Glos:
Hedges and Field Margins, Woodlands, Ponds, Rhines, Rivers and Water Bodies*

*Avon BAP:
Arable Farmland*

*SWBAP:
Arable Farmland*

*UKBAP:
Cereal Field Margins*

Current factors causing decline

- Agricultural intensification and use of chemicals
- Inappropriate arable reversion and a shift from spring crops to autumn sown crops which result in a loss of winter stubble
- Development
- Reduction in crop rotation and less mixed farming
- Ploughing up to the base of the hedge reducing the marginal habitat
- Deliberate management of field margins to keep them “neat and tidy”
- Removal or neglect of field boundary hedges to make larger arable fields; with associated loss of a large area of quality field margin
- Lack of awareness and lack of data (public and in-house)

Current Local Action

- Environmental Stewardship Entry Level Scheme contains management options for ‘Arable Land’ and ‘Buffer Strips and Field Margins’
- Under the Food and Environmental Protection Act 1985 it is illegal to spray pesticides into hedge bases, unless there is a specific label recommendation or a specific off-label approval.
- Advice and support for landowners from the Farming and Wildlife Advisory Group, National Farmers’ Union and British Association for Shooting and Conservation.

The aim of the Arable Action Plan is to protect, restore and enhance arable farmland habitat and to safeguard the rare species that rely upon it.

TARGETS: *(See table of actions Table 1)*

FROM THE AVON BIODIVERSITY PARTNERSHIP BAP

www.avonbiodiversity.org.uk

- 1 Maintain and enhance the quality of arable farmland and where possible restore degraded areas**
- 2 Monitor the extent and quality of resource**
- 3 Increase awareness of the importance of arable farmland and wildlife-friendly management**

2 Habitats



- What can you do as an individual?**
 Join the British Trust for Ornithology (BTO) or RSPB; help with the Bristol Bird Count; or join a local flora recording group.
- What can you do as a farmer/ landowner?**
 Leave 6m margins around field edges. Consider implementing the relevant Environmental Stewardship 'Arable Land' and 'Buffer Strips & Field Margins' options (ELS, HLS and OELS).
- What can you do as a developer?**
 Carry out the appropriate surveys on arable land and design development sympathetically to benefit arable wildlife. Follow the 'Biodiversity and the Planning Process' planning guidance.

TABLE 1: Arable Farmland Actions 2006 – 2015

Arable Farmland Actions 2006 – 2015	Target	Date	Lead	Other partners	Measurable output
Priority action (Local Area Agreement Target) Year 1 establish a baseline figure for delivery on this habitat in partnership with DEFRA / FWAG & landowners. Years 2 onwards work to deliver this figure in partnership.	LAA		SGC		
1. Ensure that the loss of arable farmland to development is minimised and as far as possible, mitigated, in line with Regional Spatial Strategy and Local Development Framework policies.	1	Ongoing	SGC (DC)		
2. Continue to promote relevant arable options of agri-environmental schemes.	1	Ongoing	FWAG	SGC (NE) AWT	Number of farms in schemes (or hectareage)
3. Focus on areas of high biodiversity (e.g. barn owl sites) to increase the network of field margins.	1	Ad hoc			Length of hedgerows planted (km)
4. Campaign for and advise on reduced use of pesticides and fertilisers on field margins	1	Ongoing	Soil Association		Guidance note or other publicity
5. Review SNCI criteria to ensure important arable sites are identified and designated	1	By 2007	BTO, SGC (NBE)		Review completed
6. Initiation of at least one farmland Common Bird Census, one small mammal survey, one invertebrate survey and one botanical survey for a whole farm.	2		BTO MS		Census completed and results to BRERC

Abbreviations: AWT– Avon Wildlife Trust, BTO – British Trust for Ornithology, FWAG – Farming and Wildlife Advisory Group, GCT – Game Conservancy Trust, MS – Mammal Society, SGC – South Gloucestershire Council, DC – Development Control Team, NBE – Natural and Built Environment Team



Broadleaf Woodlands

**COVERS UK PRIORITY HABITATS –
‘MIXED DECIDUOUS WOODLAND’, ‘WET WOODLAND’,
‘LOWLAND BEECH AND YEW WOODLAND’**

Introduction

Trees and woodlands are important to the landscape of the district and to residents’ quality of life. Woodland in South Gloucestershire is predominantly in small fragments, with the notable exception of Lower Woods near Wickwar which is the largest area of ancient semi-natural woodland in the former county of Avon.

This Action Plan relates to all broadleaf woodlands but particular emphasis is placed on ‘ancient and semi-natural woodland’ – that which has been continuously wooded since at least 1600 or has a characteristic ground flora (15 or more indicator species).

Veteran trees within woodland are covered in this Plan. Veteran trees growing within hedgerows are covered under the Hedgerows and Field Margins Action Plan.

Current Status

Broadleaved woodland comprises 46% of South Gloucestershire’s semi-natural habitat (source: Biodiversity in South Gloucestershire 2000).

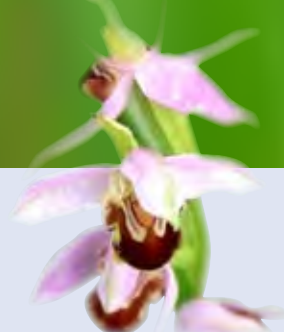
SSSI woodlands in South Gloucestershire include Bishop’s Hill Wood, Bodkin Hazel Wood in Petty France, Cleeve Wood in Hanham, Lower Woods in Wickwar and Monk’s Wood in St Catherine Valley.

The Forestry Commission estimate that 41% of ancient woodland over 2 hectares in South Gloucestershire (29% of all woodland) is under sympathetic management via a management agreement of some sort.

Distribution

The bulk of South Gloucestershire’s broadleaved woodland lies within Lower Woods, the River Avon corridor, the limestone ridge running from Almondsbury to Thornbury and the limestone escarpment of the Cotswolds. There are small areas of wet woodland at Roundhouse Wood in Hill, Tockington Park Wood and Groves Gully, Rockhampton.

2 Habitats



Why is there an Action Plan?

Ancient woodland is a fragile, diverse and irreplaceable ecosystem. Some of the most endangered species in the country are associated with this type of woodland, including bats, dormice and nightingales. Veteran trees are also invariably found in ancient woodland, which are important habitats for insects, lichens, fungi, birds, bats and dead-wood invertebrates.

Broadleaf woodlands in or close to urban areas are often well used by the public, which in turn introduces pressures from human traffic, recreation etc.

Current factors causing decline

- Neglected management
- Deer browsing, grey squirrels damaging young trees
- Historically Dutch elm disease has removed elm from woodlands
- Unsympathetic use of woodland for game rearing
- Stock sheltering in woodland
- Habitat fragmentation
- Nutrient enrichment and herbicide drift
- Loss to development
- Pressure from adjacent land uses – development, recreational use, trampling, vandalism, intensive agriculture
- Lowering water tables (wet woodland)
- Visitor pressure

Current Local Action

- The Forest of Avon is a community forest initiative covering much of the South Gloucestershire area. Since 1992, a million trees have been planted in Avon, areas of woodland have been opened up to the public, education programmes on woodland carried out and a Wood Products Co-op run. 'Wood School' started in 2006. www.forestofavon.org.uk
- Woodland Focus Group under Avon BAP
- Forestry Commission – Woodland Grant for management schemes, collating information
- Tree Life Centre, Grimsbury Farm, Kingswood
- South Gloucestershire Council biodiversity and tree grants
- Ancient woodlands in South Gloucestershire are designated as Sites of Special Scientific Interest (SSSI) or Sites of Nature Conservation Interest (SNCI).



Associated Action Plans*South Glos:**Wild Service Tree, Bath Asparagus, Dormouse, Bullfinch**Avon BAP:**Woodland, Dormouse**SW BAP:**Ash-maple woodland**UKBAP:**Broadleaved, mixed and yew woodland, wet woodland, lowland beech and yew woodland*

- Environmental Stewardship Entry Level schemes has management options for 'Trees and Woodlands'.

The aim of the Broadleaf Woodland Action Plan is to restore and enhance woodlands through appropriate management and reduced fragmentation.

TARGETS: *(See table of actions Table 2)***FROM THE AVON BIODIVERSITY PARTNERSHIP BAP**www.avonbiodiversity.org.uk

- 1 Increase the area of woodland in favourable condition**
- 2 Extend the range of woodland, especially by linking key woodlands through woodland or hedgerow planting**
- 3 Monitor condition and quality of resource**
- 4 Increase awareness of the value of woodland for biodiversity and promote best practice in management**

- **What can you do as an individual?**
Get involved with Forest of Avon events or tree warden scheme; get involved with your nearest Local Nature Reserve or local wildlife group.
- **What can you do as a farmer/landowner?**
Sign up to the Environmental Stewardship 'Trees and Woodland' management options (ELS, HLS, OELS). Ensure all woods have good hedgerow links that are managed sensitively.
- **What can you do as a developer?**
Retain all areas of woodland, linking hedgerows and trees on development sites. Manage or facilitate the management of these sympathetically for wildlife.

2 Habitats

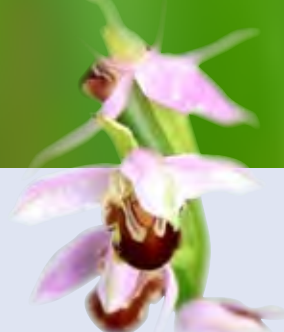


TABLE 2: Broadleaf Woodland Actions 2006 – 2015

Broadleaf Woodland Actions 2006 - 2015	Target	Date	Lead	Other partners	Measurable outcome
Priority action (Local Area Agreement Target) Year 1 monitor quality of resource by listing sites (inc. ha) with active management plans where action is taking place. Year 2 onwards work in partnership with local communities to extend the range of woodland and area of well managed woodland.	LAA		SGC		
1. Ensure that the loss of broadleaf woodland to development is minimised and mitigated in line with Regional Spatial Strategy and Local Development Framework policies. Where development borders woodland, establish buffer zones to reduce impacts.	1	Ongoing	SGC (DC)		
2. Continue to promote woodland creation and management using relevant woodland options of agri-environmental schemes, Forestry Commission Woodland Grant Scheme and other grants.	1	Ongoing	NE, FWAG, AWT, FC	SGC (NBE) FoA	Number of woodland grants awarded, ha of land in Env. Stewardship
3. Promote and/or implement dormouse friendly management for woodland in appropriate areas	2	2006-08		FC, FoA, SGC, GWT, AWT, BTCV, NT, Leyhill Prison	Advice given, land in appropriate management
4. Use local provenance tree stock in planting schemes	3	Ongoing	SGC (NE) FoA	BP	Guidance
5. Promote the use of locally produced wood and wood products	4	Ongoing	FoA	BP	Publicity
6. Continue woodland education programmes, community events and training events on woodland management e.g. coppicing	4	Ongoing	FoA, GWT		Number of people involved

Abbreviations: AWT – Avon Wildlife Trust, BP – Biodiversity Partnership, BRERC – Bristol Regional Environmental Records Centre, BTCV – British Trust for Conservation Volunteers, DOYD – Dormouse on your Doorstep, NE – Natural England, FoA – Forest of Avon, FC – Forestry Commission, FWAG – Farming and Wildlife Group, GWT – Gloucestershire Wildlife Trust, SGC – South Gloucestershire Council, DC – Development Control Team, NBE – Natural and Built Environment Team.





Hedges, Dry Stone Walls and Field Margins

COVERS UK PRIORITY HABITAT – ‘HEDGEROWS’

Introduction

Hedges are the primary habitat for plants and animals in some parts of South Gloucestershire - for example, in urban areas or on intensive arable or dairy farms. Both hedgerows and dry stone walls can be of great age and historical and community significance. With the farming practices of the late 20th century and expansion of development, South Gloucestershire has seen significant hedgerow removal and deterioration in management.

The UKBAP includes all hedgerows consisting of 30% or more native species. The old definition, still used in the Hedgerow Regulations 1997, is ‘ancient and/or species-rich hedges’ – i.e. those that contain five or more woody species in a 30 metre length or support a national Priority species (e.g. dormouse, greater horseshoe bat); or those existing before 1845. South Gloucestershire has many of both these types of hedges and the Regulations protect those hedges that meet a strict set of criteria. Other hedgerows are not legally protected, although they may well be valuable for local wildlife.

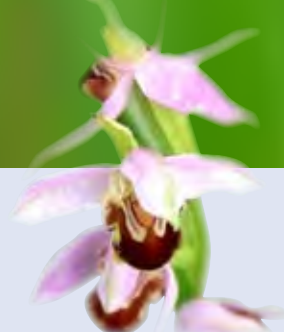
Current status

Avon is estimated to have 200 km of dry stone walls (Countryside Commission) and South Gloucestershire has an estimated 14,000 hedgerows, totalling approx 500km in length.

Ancient/species-rich hedgerows and field margins are listed as a habitat of principle importance for the conservation of biological diversity in Britain under Section 74 of the CROW Act 2000.

There are no figures on hedgerow loss for the South Gloucestershire area. It may be reasonable to assume that the national picture of hedgerow decline is true of South Gloucestershire (300,000km UK loss since 1945). Although few hedgerows are now removed, loss continues through neglect. Removal of dry stone walls has occurred in our area but as it does not require consent from the Council hence the scale of loss has not been monitored.

2 Habitats



Distribution

Hedges are found throughout South Gloucestershire in urban and rural areas. Limestone dry stone walls are typical of the Cotswolds; and Pennant sandstone walls feature widely across South Gloucestershire.

Why is there an Action Plan?

Boundary systems have become vital for the survival of many plants and animals once found across the wider countryside, both as refuges, mechanism of dispersal and habitats in their own right. Hedges can be hundreds of years old and can often contain some of South Gloucestershire's rarest flora or fauna, including dormice and veteran trees. In urban areas, hedges can often be the only reminders of the former countryside. Even where not especially old or species-rich, they are important for their visual attractiveness and in decreasing air pollution.

Dry stone walls are also typical of parts of the district. Although the range of plants and animals which use dry stone walls is fairly limited, they can provide a habitat for lichens, mosses, stonecrop, saxifrage, ferns and a variety of higher plants. Our walls are Oolitic limestone (Cotswold areas), Carboniferous limestone (Chipping Sodbury), or Pennant sandstone (Winterbourne and Frampton Cotterell).

Ditches, banks and field margin provide undisturbed cover for nesting birds and over-wintering invertebrates, a food source for nectar feeding insects and year round feeding for foraging birds.

Current factors causing decline

- Loss of hedgerows, walls and field margins through agricultural change and development
- Failure to replace lost hedgerows and field margins
- Lack of maintenance and loss of traditional skills
- Unsympathetic management practices such as annual hedgerow cutting or flailing, cutting in bird breeding season
- Fragmentation resulting in loss of connectivity
- Loss of hedgerow trees, particularly veteran trees, without replacement
- Incorporation of hedgerows into development and their subsequent decline
- Ploughing close to hedge/wall bases
- Use of herbicides, pesticides and fertilisers nearby



Associated Action Plans

*South Glos:
Arable Farmland,
Woodland, Old
Meadows and Pastures,
Bullfinch, Song Thrush,
Dormouse, Hedgehog,
Glow Worm, Bath
Asparagus*

*Avon BAP:
Hedgerows, Dormouse*

*Cotswold AONB Priority
Habitat List:
Hedgerow, Dry stone
walls*

*SWBAP:
Species-rich
Hedgerows*

*UKBAP:
Ancient and Species
- rich Hedgerows*

- Lack of appreciation of value to wildlife.
- Lack of protection and enforcement.

Current Local Action

- Environmental Stewardship Entry Level scheme contains management options for 'Boundary Features, Buffer Strips and Field Margins'. These include hedges, dry stone walls and field margins.
- Advice to farmers by FWAG and Avon Wildlife Trust in relation to agri-environment schemes
- Hedge laying and dry stone walling training from the Council and Cotswolds AONB
- Recording scheme for ancient trees run by The Woodland Trust and Ancient Tree Forum, including those in hedgerows, fields, woods and gardens.
- Avon Wildlife Trust's veteran tree project in Cromhall and Tytherington Parishes in 2006.

Field Boundaries Project

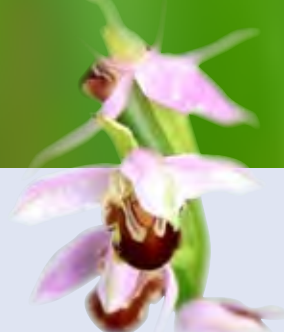
South Gloucestershire and Bath & North East Somerset Councils have run this project jointly since 1996 to maintain and enhance hedgerows and dry stone walls. It has collected a great deal of data on hedgerows and has resulted in:

- Audit/ base-map of species-rich hedgerows from project data
- Detailed ecological survey data for pilot hedgerow system
- Trained volunteers able to monitor and survey key BAP species in field boundaries
- Guidance leaflet
- Educational CD Rom
- Improved management of hedgerows throughout the project area

The 2006 Cotswold Hedgerow Survey was lead by the Bristol Regional Environmental Records Centre and surveyed the hedges in five Cotswold parishes.

The aim of this Plan is to highlight the fact that field boundaries and margins are an important habitat for South Glos. As such, they require consideration and management in order to both support biodiversity and act as corridors enabling species movement.

2 Habitats



TARGETS: (See table of actions Table 3)

FROM THE AVON BIODIVERSITY PARTNERSHIP BAP

www.avonbiodiversity.org.uk

- 1 Halt the loss of hedgerows, dry stone walls and field margins (aim for a net gain)**
- 2 Maintain and enhance the quality of current hedgerows, dry stone walls and field margins through appropriate management and protection**
- 3 Create or restore new hedges, uncultivated field margins and dry stone walls on appropriate sites**
- 4 Monitor the condition and extent of hedgerows and dry stone walls**
- 5 Increase awareness of the ecological and social value of hedgerows, dry stone walls and field margins and encourage their wildlife-friendly management**

- **What can you do as an individual?**

Plant new lengths of hedgerow, particularly those providing links to existing hedges. Help plant, manage or survey hedges in the locality with your local wildlife group. Take part in hedgerow management training courses.

- **What can you do as a farmer/landowner?**

Cut hedges only every 2 or 3 years; leave cutting as late in the year as possible. Plant up gaps or new lengths of hedge with a local native hedgerow mix. Consider implementing the relevant Environmental Stewardship 'Boundary Feature' option (ELS, HLS, OELS).

- **What can you do as a developer?**

Retain and enhance any existing hedgerows, or create new ones, in or around or between development sites and manage (or facilitate the management of) these sympathetically for wildlife.

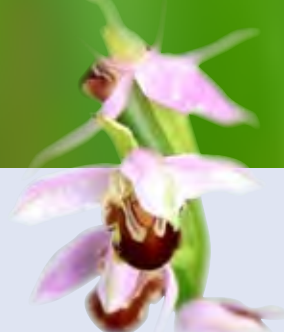


TABLE 3: Hedges, Dry Stone Walls and Field Margins Actions 2006 – 2015

Hedges, Dry Stone Walls and Field Margins Actions 2006 – 2015	Target	Date	Lead	Other partners	Measurable outcome
Priority action (Local Area Agreement Target) 3km of hedges and /or dry stone wall restored, managed or planted each year.	LAA		SGC		3km achieved
1. Ensure that the loss of boundary features to development is minimised and mitigated in line with Regional Spatial Strategy and Local Development Framework policies, by producing supplementary planning document (SPD), applying Hedgerow Regulations 1997 and placing Tree Preservation Orders on relevant hedgerow trees.	1	Ongoing	SGC (DC)		SPD
2. Continue to promote hedgerow, wall and field margin creation and management using relevant options of agri-environmental schemes, grants, events and training in traditional skills.	1	Ongoing	FWAG AWT CAONB SGC (NBE) BTCV		
3. Manage, share and use hedgerow and dry stone wall data from the Field Boundaries Project to target action and seek to continue the parish surveys of walls and hedges.	2	Ongoing	SGC (NBE)	BANES BRERC CAONB	Publish data, surveys ongoing
4. Raise awareness of the importance of boundary features for biodiversity and heritage, including their sensitive management. Encourage wallers, hedgers, farmers, contractors and the general public to send wildlife records to BRERC.	4	Ongoing	SGC (NBE), CAONB, FBP AWT BRERC		Number of events, survey results to BRERC
5. Ensure that South Gloucestershire remains a focus area the Cotswold AONB.	5	Ongoing	SGC (NBE)	BP	South Gloucestershire has a Board Member
6. Continue Woodland education programmes, community events and training events on woodland management e.g. coppicing	4	Ongoing	FoA GWT		Number of people involved

Abbreviations: AWT – Avon Wildlife Trust, BANES – Bath and North East Somerset, BP – Biodiversity Partnership, BSBI – Botanical Society of the British Isles, BRERC, Bristol Regional Environmental Records Centre, BTCV – British Trust for Conservation Volunteers, DOYD – Dormice On Your Doorstep, NE – Natural England, FC – Forestry Commission, FBP – Field Boundaries Project, FWAG – Farming and Wildlife Advisory Group, GWT – Gloucestershire Wildlife Trust, SGC – South Gloucestershire Council, DC – Development Control Team, NE – Natural and Built Environment Team

2 Habitats



Old Meadows and Pastures

COVERS UK PRIORITY HABITATS – ‘LOWLAND MEADOWS’, ‘LOWLAND CALCAREOUS GRASSLAND’, ‘LOWLAND DRY ACID GRASSLAND’

Introduction

Grassland is extremely common in both the urban and rural parts of South Gloucestershire, although much of it is not particularly rich in flowers or of value to wildlife. Nonetheless, remnants of traditional flower-rich grasslands still remain, some of which have been in continuous management for hundreds of years.

As well as meadows, which have been cut for hay, and pastures, which are grazed, this Action Plan includes other mown grassland where this has significant botanical interest such as roadside verges, footpath and cycle path edges, recreational sites, commons and old churchyards (the areas of grazing and marshland alongside the Severn Estuary are dealt with as part of the Saltmarsh Action Plan.)

‘Improved’ grassland has been fertilised or re-seeded with more vigorous types of grass. “Unimproved” has not been fertilised and is generally associated with the most species-rich and valuable grasslands, typically containing an array of scarce and declining plant species.

- Calcareous grassland – growing on limestone e.g. Cotswold area
- Acid grassland – growing on acid soil or heath, such as the fragments left on Siston Common
- Neutral grassland – growing on neutral soils: the traditional lowland ‘hay meadow’ e.g. Wapley Bushes LNR

Current Status

The majority of South Gloucestershire's species-rich grassland is grazed (by cattle or sheep) and is designated as either SSSIs or Sites of Nature Conservation Interest (SNCI). The conservation status of roadside verges and other species rich grassland in the district is not currently recorded, although certain verges are treated as “conservation areas” for management purposes by South Gloucestershire Council.





Distribution

Species-rich grassland sites are scattered across the district but there are concentrations on the Cotswold scarp, Tytherington, Wapley (including Wapley Bushes LNR) St.Catherine's Valley (including 170ha SSSI of unimproved calcareous grassland and neutral pasture) and at Lower Woods SSSI (neutral/wet grassland). The network of commons in South Gloucestershire also contains areas of species-rich unimproved grassland – for example, at Kingrove, Siston, Sodbury and Hawkesbury. The grassland sites near you can be viewed at the DEFRA geographical information website (www.magic.gov.uk) - one of the most botanically diverse road verges in South Gloucestershire contains four species of orchids.

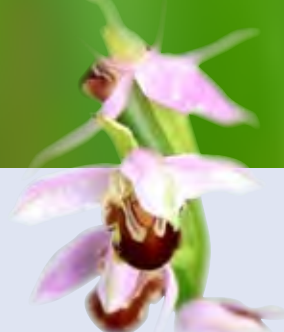
Why is there an Action Plan?

The extent of classic 'lowland hay meadows' in England and Wales have declined dramatically over the last 70 years, largely because of changing agricultural practices. Unimproved grassland of all kinds is now fragmented and generally in small pockets. The botanical interest can include dyer's greenweed, green-winged orchid, greater burnet and pepper saxifrage: lowland meadows/pastures are also important habitats for skylark, lapwing and other farmland birds, including barn owls. They are also vital for butterflies such as brown argus, grasshoppers and other invertebrates and animals such as brown hare.

Current factors causing decline

- Lack of continuous management (especially a lack of appropriate grazing);
- Lack of fencing etc to facilitate grazing;
- Overgrazing;
- Increase in equiculture (horses);
- Agricultural intensification including addition of fertilisers, ploughing and re-seeding, drainage and conversion to arable;
- Habitat fragmentation;
- Uneconomic to manage small areas of hay meadow;
- Lack of awareness of value;
- Direct or indirect loss through development;
- Motorbike scrambling, 4 wheel drive damage & other recreational uses;
- Road building/widening/junction improvements;
- Mowing during flowering season;
- Dumping, storage of materials, pollution, salt spray on road verges.

2 Habitats



Associated Action Plans

S.Glos:

Glow Worm, Barn Owl, Bithynian Vetch, Hedges and Field Margins, Saltmarsh and Floodplain Grazing

Avon BAP:

Species-rich Grassland

Cotswold AONB priority habitats:

Unimproved Grassland

SW BAP:

Calcareous Grassland, Unimproved Neutral Grassland

UKBAP:

Lowland Meadows, Lowland Calcareous Grassland, Lowland Dry Acid Grassland

Highways Agency BAP: Grassland Features;

Current Local Action

- Environmental Stewardship Entry Level scheme contains management options for 'Lowland Grazing'
- Advice to farmers by FWAG and Avon Wildlife Trust in relation to agri-environment schemes
- Some churchyards have well managed species-rich grassland areas
- Some road verges are known to be good grassland sites
- Well managed wildflower areas on many Local Nature Reserves and community reserves
- Local surveys by members of the 'Botanical Society of the British Isles' www.bsbi.org.uk

South Gloucestershire Resource Estimates and Restoration Targets

(source: Review of the South West Biodiversity Targets, BRERC 2005)

	Maintenance target (Ha)	Restoration target (Ha)	Restoration target (Ha)	Restoration target (Ha)
		By 2010	By 2020	By 2030
Lowland meadows	14		255	425
Lowland dry acid grassland	1		0	0
Lowland calcareous grassland	136	113	338	563
Total	151	113	593	988

The aim of the Old Meadows and Pastures Action Plan is to identify our key grassland sites to ensure they can be protected, restored and enhanced.

TARGETS: (See table of actions Table 4)

FROM THE AVON BIODIVERSITY PARTNERSHIP BAP

www.avonbiodiversity.org.uk

- 1 Maintain and enhance quality and extent of existing known resource through appropriate management and protection**
- 2 Secure favourable condition of SSSI grassland by 2010**
- 3 Create or restore species-rich grassland on appropriate sites (113ha by 2010 and 593ha by 2020)**
- 4 Map all known meadows and pastures and survey them by 2009**
- 5 Increase appreciation, public use, enjoyment and 'stewardship' of old meadows and pastures**





- **What can you do as an individual?**
Take part in grassland surveying training days. Join your local wildlife group. Help run your Local Nature Reserve. Try creating a small wildflower area in your garden using native wildflower species.
www.floralocale.org.
- **What can you do as a farmer?**
Consider implementing the relevant Environmental Stewardship 'Lowland Grazing' options (ELS, HLS, OELS).
- **What can do as a developer?**
Retain and enhance existing species rich grassland on or near development sites. Create new areas of species-rich grassland within development. Manage or facilitate the management of these areas sympathetically for wildlife.

2 Habitats

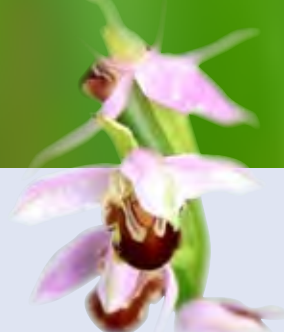


TABLE 4: Old Meadows and Pastures Actions 2006 – 2015

Old Meadows and Pastures Actions 2006 – 2015	Target	Date	Lead	Other partners	Measurable outcome
Priority action (Local Area Agreement Target) ensure 1 ha of roadside verge/churchyard species-rich grassland safeguarded and brought into sympathetic management per year.	LAA		SGC		
1. Ensure that the loss of species-rich grassland to development is minimised and mitigated in line with Regional Spatial Strategy and Local Development Framework policies.	1	Ongoing	SGC (DC)		
2. Promote enhancement and management of species-rich grassland using relevant agri-environmental schemes and other grants.	1	Ongoing	NE, FWAG, AWT	SGC(NBE)	Ha of land in stewardship
3. Collect and collate existing information on the location of species-rich grassland.	1	2008	BRERC	Avon BAP, BP	Report
4. Designate all grassland of suitable quality as SNCI so that the sites are recognised and protected by Local Plan policy.	1	2006-15	SGC (NBE)	Avon BAP CAONB	SNCI review
5. Secure the uptake of positive management with owners and occupiers of all SSSI grasslands to achieve favourable conservation status.	3	2007	NE		% of sites in 'favourable' condition
6. Seek funding for a local grazing scheme project	3	2006	Avon BAP	NE, FWAG	investigate
7. Organise training in creation of meadows and promote the use of locally sourced wildflower seeds.	4	Ongoing	SGC (NBE)	Flora locale	
8. Promote increased public awareness of flower rich meadows and pastures with co-ordinated programme of open days, interpretation, talks, training, 'Green Gyms'.	4	2006-9	BP		Number of events with AWT, NE, FWAG, CAONB, DEFRA, BTCV, HOT, BHS
9. Ensure Council managed sites are in appropriate management and raise staff and user awareness - roadside verges, churchyards, amenity grass, commons etc.	2,3	2007	SGC (H/NBE) HA	BRERC, BP 'Wildroots' SGC (SHEP)	Map and investigate funding

Abbreviations: Avon BAP – Avon Biodiversity Partnership, AWT – Avon Wildlife Trust, BHS – British Horse Society, BP – Biodiversity Partnership, BRERC – Bristol Regional Environmental Records Centre, BTCV – British Trust for Conservation Volunteers, CAONB – Cotswolds AONB, NE – Natural England, FWAG – Farming and Wildlife Advisory Group, HA – Highways Agency, HOT – Hawk and Owl Trust, SGC – South Gloucestershire Council, DC – Development Control Team, T – Transport, LP – Local Plans Team, NBE – Natural and Built Environment Team





Orchards

COVERS UK PRIORITY HABITAT - 'TRADITIONAL ORCHARDS'

Introduction

Gloucestershire is a nationally important county for orchards and traditional orchards are also a feature of parts of the South Gloucestershire landscape. In South Gloucestershire these are most commonly apple, cider or plum orchards but can include pear, perry, damson or cherry.

Current status

75% of Gloucestershire's 'old' orchards have been lost in the last 50 years. While there are no comparative figures, with the pressure of development, this figure might be even higher in South Gloucestershire.

Distribution

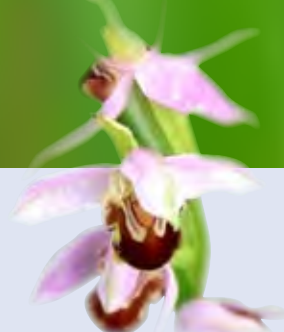
Our remaining orchards are mainly small collections of trees alongside farmhouses and small holdings, most commonly in the Severn Vale area. Remnants of old orchards (sometimes just single trees) can be found throughout Winterbourne, Frampton Cotterell, Coalpit Heath; and from Kingswood to Bitton, including of course Cherry Orchard.

Why is there an Action Plan?

There are up to 7,000 varieties of fruit trees recorded in Britain alone, yet a modern commercial orchard is unlikely to have more than nine varieties. South Gloucestershire even has its own plum variety particular to the Frampton Cotterell/Winterbourne area – 'the Frampton plum'. Maintaining this diversity of varieties in orchards is now widely recognised as being crucially important.

Orchards are also important for cultural and historic reasons, as well as helping maintain a mosaic of habitats in the landscape. Once there would have been an orchard close to virtually every farm to provide fruit and shelter for young lambs and calves. Our local orchards also supplied fruit to the Robinsons' Jam factory in Brislington. The majority of South Gloucestershire's 'old' orchards have been lost to neglect, grubbing up and development.

2 Habitats



Old orchards may have occupied the same site for hundreds of years, often escaping agricultural “improvements” and providing habitat for a wide variety of wildlife:-

- The short-lived fruit trees produce lot of decaying wood for insects and hole-nesting birds
- The fruit provides a source of food for birds and insects in the autumn and winter
- The blossom is a good source of nectar for bumblebees, butterflies and insects
- They often have other habitats such as hedges, ponds and unimproved grassland associated with them which can support wild daffodils, cowslips and orchids and are important for overall biodiversity

Traditional orchards can support many animals and birds including dormice, hares, greater horseshoe bats, great crested newts, barn owls, woodpeckers, bullfinches, tree sparrows and song thrushes, rare insects such as noble chafer and stag beetle, and plants such as mistletoe.

Associated Action Plans

*South Glos:
Bullfinch, Old Meadows
and Pastures*

Current factors causing decline

- Development
- Lack of awareness
- Old trees incorporated into gardens (often unmanaged or felled)
- Alternative farming practices are more profitable

Current Local Action

- Environmental Stewardship contains management options for ‘Orchards’ in the Higher Level Stewardship scheme.
- Community orchards in Thornbury, Mangotsfield, Grimsbury Farm and Frampton Cotterell
- Farming & Wildlife Advisory Group are providing advice to landowners
- Gloucestershire Orchard Group www.orchard-group.uklinux.net/glos
- Orchard Festival days run by the Local Food Partnership
- Local Food Partnership
- Biodiversity Action Grant – for planting fruit trees on traditional root stock
- Common Ground www.commonground.org.uk is a small charity supporting local distinctiveness and community orchards www.england-in-particular.info/orchards





The aim of the Orchards Action Plan is to protect, restore and create orchards through community sites, promotion of local produce and promotion of local fruit varieties.

TARGETS: (See table of actions Table 5)

- 1 Prevent further loss of old orchards**

- 2 Where appropriate restore, enhance and create new orchards**

- 3 Monitor the extent of old traditional orchards and establish a monitoring system to record change in habitat quality**

- 4 Increase awareness of the importance of orchards for wildlife and their wildlife-friendly management amongst landowners and the public**

- **What can you do as an individual?**
Plant a fruit tree or trees of an appropriate local variety. Encourage your parish council to plant trees on public open space. Buy local fruit or fruit from the UK; support your local shops and farmers markets.
www.southgloslocalfood.org

- **What can you do as a farmer/landowner?**
Protect or restore a traditional Gloucestershire orchard with advice and support from the Gloucestershire Orchard Group
www.orchard-group.uklinux.net/glos.
Consider implementing the relevant Environmental Stewardship 'Orchard' options (HLS)

- **What can you do as a developer?**
Retain and enhance existing orchards and/or create new community orchards. Include local variety fruiting trees in new planting schemes. Manage or facilitate the management of these sympathetically for wildlife

Ref. Chris Wedge DEFRA - Glos Orchard Group

2 Habitats

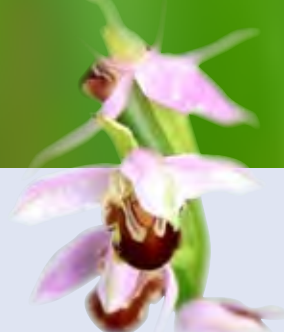


TABLE 5: Orchard Actions 2006 – 2015

Orchard Actions 2006 - 2015	Target	Date	Lead	Other partners	Measurable outcome
Priority action (Local Area Agreement Target) 1 new community orchard management plan per year.	LAA		SGC		Management plans
1. Ensure that the loss of orchards to development is minimised and mitigated in line with Regional Spatial Strategy and Local Development Framework policies, including the use of Tree Preservation Orders for important orchards.	1	Ongoing	SGC (DC)	SGC (NBE)	
2. Continue to promote the creation and management of orchards using relevant agri-environmental schemes, grants, events and training in traditional skills such as pruning and grafting.			NE, FWAG, SGC (NBE) GOG BTCV		Number of farms or hectares in schemes with orchard options
3. Investigate opportunities for new community orchards containing local fruit varieties in major site development as part of S106 agreements	2	Ongoing	SGC (DC) SGC (legal)	SGC (NBE)	Number of new community orchards
4. Establish extent of orchards in S Glos by 2010 and investigate methods of monitoring.	1,3	By 2010	BRERC	SGC (NBE)	Map produced
5. Promote produce from local orchards	1,4	Ongoing	LFP		Number of events and publications
6. Promote the 'Frampton Plum' and investigate propagating new trees	2,4	By 2015	Champion		Number of trees planted
7. Involve the South Glos Heritage Forum in orchard heritage	4	By 2009	SGHF		Number of projects

Abbreviations: BRERC Bristol Regional Environmental Records Centre, FWAG – Farming and Wildlife Advisory Group, GOG – Gloucestershire Orchard Group, LFP – Local Food Partnership, PC – Parish Councils, SGC – South Gloucestershire Council, DC – Development Control Team, NBE – Natural and Built Environment Team, SGHF – South Glos Heritage Forum





Ponds, Rhines, Rivers and Water Bodies

DOES NOT INCLUDE ANY UK PRIORITY HABITATS

Introduction

Water is an important resource for wildlife and South Gloucestershire is fortunate in that it has more ponds (both natural and man-made) than the rest of the former Avon area.

- “Ponds” includes garden ponds, fishponds, and ponds that dry out for part of the year
- “Rhines” are water filled ditches
- “Rivers” include the Frome and all smaller rivers, streams and brooks
- “Water bodies” encompasses all kinds of standing water, reservoirs, lakes, flooded quarries
- The Severn Estuary is included in the Saltmarsh/ Coastal Floodplain Grazing Marsh Action Plan

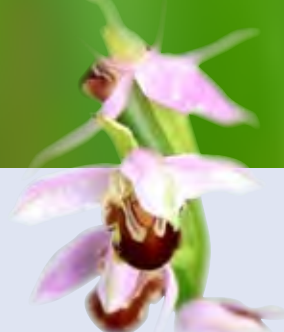
Current Status

75% of ponds in the UK (over a million) are thought to have been lost in the last 100 years (Wildfowl and Wetlands Trust and Pond Action 1993), with many having disappeared as they have become redundant as livestock drinking ponds.

The Phase One vegetation survey of the former Council areas of Northavon and Kingswood undertaken in 1990 showed there to be a total of 11.3 hectares of standing open water in South Gloucestershire but this is believed to be a considerable under-estimation. A Great Crested Newt survey in 2004 found that many ponds were drying out and in need of restoration.

Water quality in the district’s rivers has been improving and otters are spreading out along the Rivers Avon and Severn. While no rivers are designated SSSIs but many have SNCI status, including the Avon, Boyd and Frome, various small urban brooks and rural ditch systems.

2 Habitats



Distribution

Ponds are found throughout South Gloucestershire. Rhines are characteristic of the low-lying land by the estuary, having been dug in the past to manage water levels in naturally marshy areas. The rhines are connected to the estuary by 'Pills' - tidal creeks with water levels controlled by sluices. These pills and their mud banks - such as at Aust, Littleton, Oldbury and Hill - are also included in this Action Plan. Numerous streams and tributaries flow from the Cotswolds scarp, mostly south into the River Avon. Small rivers flow westward to the estuary from another ridge near Almondsbury. Some of our largest local water bodies are within quarries.

Why is there an Action Plan?

Aquatic habitats are very sensitive to man-made changes and as a result, aquatic species are among the most threatened in the country.

Aquatic habitats often contain open water, shallow areas, marginal vegetation, boggy areas and overhanging trees, which together provide a range conditions for a wide diversity of plants and animals such as great crested newts, otters and water voles, the latter having a core population at Avonmouth. Water voles have been recorded recently from such scattered locations such as Severnside, Horton, Yate and Pucklechurch.

The 2003 Water Framework Directive requires improvements to river basin management on a catchment scale as well as wetlands and other aquatic environments. The majority of the watercourses in South Gloucestershire are at risk of not meeting the WFD targets, including the Rivers Frome, Boyd and Avon and Siston and Bradley Brooks (Environment Agency).



Associated Action Plans

*South Glos:
Saltmarsh/Coastal
Floodplain Grazing
Marsh, Adder's tongue
Spearwort, Tassel
Stonewort, White-
Clawed Crayfish, Great
Crested Newt*

*Avon BAP:
Watercourses and
Floodplain, Standing
Open Water, Severn
Estuary, Water Vole*

*Cotswold AONB Priority
Habitat List:
Rivers and Streams*

*SW BAP:
Standing Open Water,
Rivers and Steams,
White-clawed Crayfish,
Water Vole*

*UKBAP:
Eutrophic Standing
Water, Water Vole,
Otter, White-Clawed
Crayfish*

Current factors causing decline

- Neglect
- Physical changes such as drainage and filling in of ponds
- Pollution from pesticides, fertilisers and soil erosion
- Inappropriate management - e.g. rhine clearance, silting up, loss of bank side vegetation
- Abstraction
- Direct effects from development
- Alien species (exotic pond plants, Japanese knotweed, mink, signal crayfish)
- Indirect effects from development - e.g. increased water demand, run off, pollution
- Recreational uses - e.g. boats, disturbance from dogs

Current Local Action

- Environmental Stewardship Entry Level scheme contains management options for 'Boundary Features' (including ditches) and 'Buffer Strips and Field Margins' (including ponds)
- Lots of excellent garden ponds, school ponds and ponds on reserves
- Environment Agency pollution control
- Wessex Water-funded species work
- British Association for Shooting and Conservation work with landowners and clubs
- Management of water bodies on LNRs
- Encouraging buffer zones on agricultural land
- Otter recording (voluntary)
- Avon/Frome partnership
- Avon 'Pondways' Project: successful HLF bid by Avon Wildlife Trust for an officer to co-ordinate a pond survey project until 2009 focussing on great crested newts and local communities.

The aim of the Ponds, Rhines, Rivers and Water Bodies Action Plan is to protect, restore and enhance water habitats.

2 Habitats



TARGETS: (See table of actions Table 6)

FROM THE AVON BIODIVERSITY PARTNERSHIP BAP

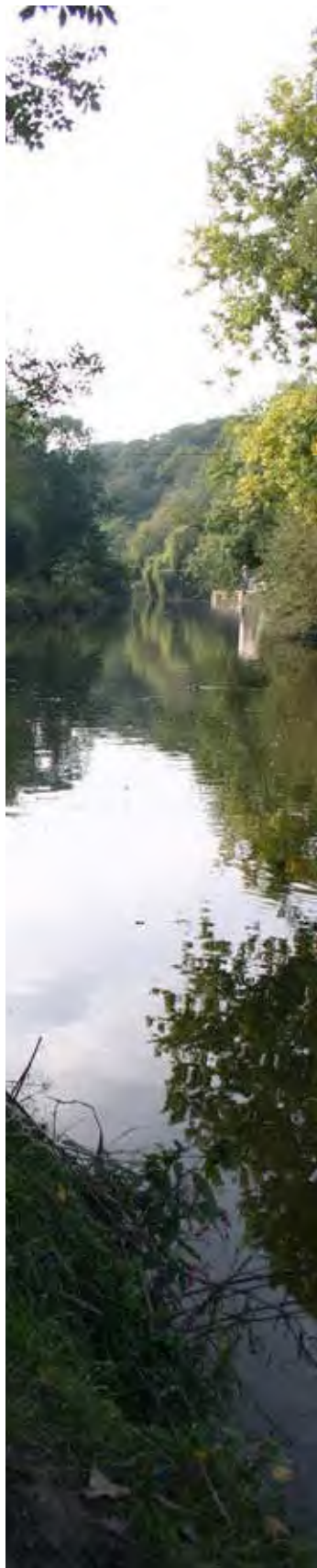
www.avonbiodiversity.org.uk

- 1 **Maintain and enhance the condition of ponds, rhines, rivers and water bodies**
- 2 **Promote the restoration of current sites and the creation of new ponds, ensuring both are then favourably managed**
- 3 **Monitor extent and condition of ponds, rhines, rivers and water bodies**
- 4 **Raise awareness of the wildlife importance of ponds, rhines, rivers and water bodies**

TABLE 6: Ponds, Rhines, Rivers and Water Bodies Actions 2006 – 2015

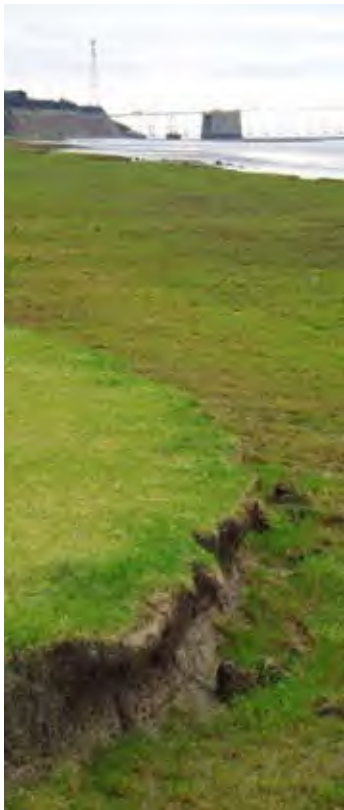
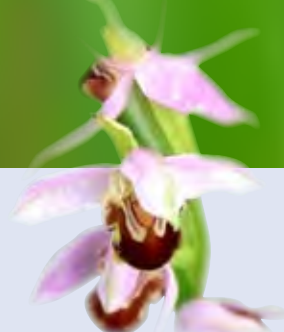
Ponds, Rhines, Rivers and Water Bodies Actions 2006 – 2015	Target	Date	Lead	Other partners	Measurable outcome
Priority action (Local Area Agreement Target) 1 pond/rhine restored/ created/ enhanced per year.	LAA		SGC		1 achieved
1. Ensure that the loss of ponds, ditches and other water bodies due to development is minimised and mitigated in line with Regional Spatial Strategy and Local Development Framework policies, suitably buffered by adjoining habitat. Encourage the creation of new wildlife ponds (SUDS) within development.	1	Ongoing	SGC (DC)		Number new developments incorporating ponds, Ha of land in Env Stewardship
2. Continue to promote creation and management of ponds and other water bodies using relevant options of agri-environmental schemes and other grants.	1	Ongoing	NE, FWAG, AWT SGC(NBE)	WW EA	Number of ponds receiving SG biodiversity grants per year
3. Seek funding and support to carry out surveys and provide training opportunities for volunteers: <ul style="list-style-type: none"> • pond survey and training ('PondWays' project and NARRS) • water vole recording in the Severn Estuary floodplain • survey species-rich rhine • otter recording 	4	2006	AWT BRERC SGC(NBE)	BP EA	Number of surveys and records
4. Publicise dangers posed by release of invasive aquatic species and provide advice on control and eradication.	1,2	Ongoing	EA		

Abbreviations: AWT – Avon Wildlife Trust, BRERC – Bristol Regional Environmental Records Centre, EA – Environment Agency, NE – Natural England, FWAG – Farming and Wildlife Advisory Group, NE – Natural England, SGC – South Gloucestershire Council, DC – Development Control Team, NBE – Natural and Built Environment Team, WW – Wessex Water



- **What can you do as an individual?**
Create a new pond in your garden, allotment, school ground or park. Keep fish out of existing ponds. For advice www.pondlife.org
- **What can you do as a farmer/landowner?**
Retain field ponds and manage them sympathetically for wildlife and prevent their loss from siltation or excessive vegetation. Ensure water quality is good - avoid heavy management or chemical spraying near water. Consider implementing the relevant Environmental Stewardship options (ELS, HLS, OELS).
- **What can do as a developer?**
Retain and enhance existing ponds, ditches and other water features within development. Create new ponds as part of SUDS. Maintain good quality habitat surrounding water bodies. Manage or facilitate the management of these areas sympathetically for wildlife.

2 Habitats



Salt marsh / Coastal floodplain grazing marsh

COVERS UK PRIORITY HABITATS – COASTAL SALT MARSH, COASTAL AND FLOODPLAIN GRAZING MARSH

Introduction

The saltmarsh and coastal floodplain along the Severn Estuary is nationally and internationally important for wildlife. Saltmarsh and coastal flood plain grazing marsh consists of vegetated areas home to a range of salt tolerant (halophytic) species of plants, which are regularly immersed by the tides and are mostly managed through grazing.

Current status

The Severn Estuary has c1100 ha of saltmarsh with 25% of it being of prime conservation interest.

Why is there an Action Plan?

Since late prehistory, saltmarsh has been significantly reduced by land claim. The most recent surveys in England estimate the total extent of saltmarsh to be approximately 45,500 ha, concentrated in the major estuaries such as the Severn Estuary (UKBAP).

Saltmarsh and its associated mudflats are home to a diverse range of notable invertebrates and plant life as well as fish such as salmon, sea trout, river and sea lamprey, twaite and allis shad. They are of key importance for wading birds and wildfowl - they act as high tide refuges for birds feeding on adjacent mudflats; as breeding sites for waders, gulls and terns; and as a source of food for passerines (song birds) particularly in autumn and winter. Grazed saltmarsh is also used as winter feeding grounds by large flocks of wild ducks and geese and an estimated 60,000 wild fowl use the Severn Estuary each year, including internationally important species such as Berwick's swan and European white-fronted goose.

A monthly bird count was carried out along the Avon saltmarsh in 2004 and counted 55,566 birds of 72 different species, once again highlighting the importance of protecting and managing this habitat www.severnsidebirds.co.uk.



Current factors causing decline

- Historical agricultural intensification, land drainage and flood defence works leading to loss of habitat and hydrological continuity
- Industrial and agricultural pollution leading to eutrophication
- Groundwater and surface water abstractions
- Large scale floodplain development pressures and disturbance including recreation
- Decline in grazing and traditional management

Future Threats

- Unknown effects of global warming and climate change
- Possible future effects from barrage construction and wind turbines

Current Local Action

- Environmental Stewardship Higher Level scheme contains 'Intertidal Coastal' Options
- Severn Estuary is one of 27 major UK saltmarsh sites designated as a Special Protection Area (SPA) under the EC Birds Directive
- Designated as an international RAMSAR site
- Candidate Special Area of Conservation (SAC)
- Specific areas of saltmarsh within South Gloucestershire are designated as a Site of Special Scientific Interest (SSSI) or a Site of Nature Conservation Interest (SNCI)
- Severn Estuary Partnership is an independent, estuary-wide initiative led by local authorities and statutory agencies working in partnership with all those involved in the management of the estuary www.severnestuary.net
- Local Food Partnership promoting local produce of the Estuary
- Biodiversity Action Grant

Associated Action Plans

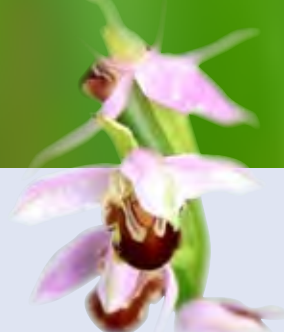
*South Glos:
Old Meadows &
Pasture, Ponds, Rhines,
Rivers and Water
Bodies*

*Avon BAP:
Saltmarsh, Severn
Estuary, Standing Open
Water, Reed Beds and
Sedge Beds, Species-
rich Grassland*

*SWBAP:
Coastal Floodplain
and Grazing Marsh,
Estuaries*

*UKBAP:
Coastal Saltmarsh,
Coastal Floodplain and
Grazing Pasture,
Mudflats, Littoral
Sediment, Rivers and
Streams*

2 Habitats



The aim of the Saltmarsh/Coastal Floodplain Grazing Marsh Action Plan is to restore and enhance the estuary habitats.



TARGETS: (See table of actions Table 7)

FROM THE AVON BIODIVERSITY PARTNERSHIP BAP

www.avonbiodiversity.org.uk

- 1 Maintain and enhance the quality of saltmarsh/grazing marsh and where possible restore the degraded areas**
- 2 Monitor the condition of existing resource**
- 3 Raise awareness of the importance of coastal saltmarsh**

UK target: to create 100ha of new coastal saltmarsh each year.

TABLE 7: Saltmarsh/Coastal Floodplain Grazing Marsh Actions 2006 – 2015

Actions	Target	Date	Lead	Other partners	Measurable outcome
Priority action (Local Area Agreement Target) One action each year to safeguard existing areas of saltmarsh etc - e.g. scrub clearance, 'wetting up', removal of tipped waste, controlling motor biking etc.	LAA		SGC		
1. Ensure that the loss of salt marsh to development is minimised and mitigated in line with Regional Spatial Strategy and Local Development Framework policies. Where development borders saltmarsh require buffer zones to reduce impacts.	1	Ongoing	SGC (DC)		
2. Continue to promote saltmarsh creation, enhancement and management using relevant options of agri-environmental schemes and other funding.	1	Ongoing	NE, FWAG, AWT, SGC(NBE)	WW, EA	Ha of land in Env Stewardship
3. Promote produce of Severn farmers through the Local Food Partnership. Support grazing through the Local Food Partnership 'food celebrations'.	3	Ongoing	LFP		One event per year
4. Map habitat and condition.	2	By 2007	ABP	BRERC	Map
5. Raise awareness of the habitats and species by designation of a Local Nature Reserve. Provide wildlife walks and talks for the public.	3	2008	SGC(NBE), AWT-Thornbury Branch	NE	Designation and at least one event per year.
6. Continue South Glos representation on the Severn Estuary Partnership and take part in partnership events	3	Ongoing	SGC(NBE)	all	One event per year

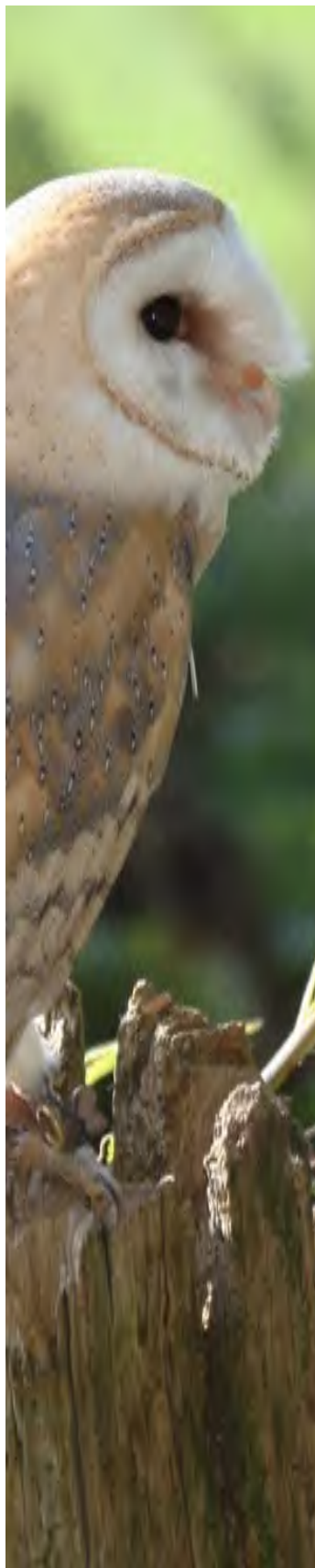
Abbreviations: AWT – Avon Wildlife Trust, ABAP – Avon Biodiversity Action Partnership, BRERC, Bristol Regional Environmental Records Centre, NE – Natural England, FWAG – Farming and Wildlife Advisory Group, SGC – South Gloucestershire Council, DC – Development Control Team, NBE – Natural and Built Environment Team



- **What can you do as an individual?**
Record estuary wildfowl and flora and pass on records to BRERC www.brerc.org.uk. Keep dogs under control when using coastal footpaths. Join your local wildlife group; help with management on local voluntary activities. Remove any litter.
- **What can you do as a farmer/landowner?**
Consider implementing the relevant Environmental Stewardship options (HLS).
- **What can do as a developer?**
Manage or facilitate the management of these areas sympathetically for wildlife. Provide full and proper surveys to inform the legislative procedures required for all estuary development proposals.

Species

3



UK Priority species:

- **Bullfinch**
- **Dormouse**
- **Great Crested Newt**
- **Lesser Horseshoe Bat**
- **Song Thrush**
- **Tassel Stonewort**
- **White-clawed Crayfish**
- **Hedgehog**

These species were chosen by the Biodiversity Partnership as being both important for South Gloucestershire and important nationally.

Local species:

- **Adder's Tongue Spearwort**
- **Barn Owl**
- **Bath Asparagus**
- **Bithynian Vetch**
- **Glow Worm**
- **Slow-worm**
- **Wild Service Tree**

Although not nationally important, these species were chosen by the Biodiversity Partnership as being locally vulnerable and significant within South Gloucestershire. The list was also chosen to reflect species that can be easily identifiable, that will inspire action and that reflective a healthy ecosystem.

All action will be monitored through the Biodiversity Action Reporting System (BARS) www.ukbap-reporting.org.uk.

Records will be held by the Bristol Regional Environmental Records Centre www.brerc.org.uk.

Species uk priority



Bullfinch

(PYRRHULA PYRRHULA)

Introduction

The bullfinch was once a common UK species, with families of half a dozen or so birds being seen regularly in domestic gardens, feeding on plant seeds or developing tree or crop buds. Until relatively recently, they were still regarded as a 'pest' species by fruit-growing farms.

Ecology

The bullfinch is a rotund, medium to large-sized finch, with a powerful black bill. It frequents habitat rich in buds, berries and seeds and is thus usually found in woodland, orchards, old mature gardens and amid farmland, where they are closely associated with hedges.

Male birds are handsome and highly distinctive, with a rose-red chest, black cap, black wings and tail and a white rump and wing bars. Females have a brownish-pink chest with a brown mantle and are less striking. The call is a low, sad, piping 'deu-deu' or 'phew'.

The nest is twiggy and cup-shaped, built of moss and twigs, and usually located amongst scrub or hedgerows. A clutch of 4-5 eggs is usually laid and incubated for 12-14 days.

Current Status

The bullfinch is protected under the EC Birds Directive and the Wildlife and Countryside Act 1981 (as amended). It is also on the RSPB 'Red List' of Species of Conservation Concern; and listed as a Species of Principal Importance for Biological Diversity by the UK Government. It is also a Priority Species on the UK BAP.

There are thought to be 180,000 breeding pairs in the UK (4% of the European population)..

Distribution

Bullfinches occur throughout most of the UK and mainland Europe. They were recorded in 25% of the BTO survey squares in the 2005 UK Breeding Bird Survey..





Why is there an Action Plan?

Numbers of bullfinch have declined dramatically in the last 40 years. The losses have been greatest on farmland where a 75% decline occurred between 1968 and 1991. Improving habitats for bullfinch will benefit many other species.

Current factors causing decline

The exact cause for the bullfinch's decline has not been identified – an increase in predation due to a rise in sparrowhawk or magpie numbers has been disproved. However, the following factors may have contributed:-

- Loss of farmland trees and hedgerows
- Inappropriate management of hedges (early cutting and over-frequent trimming)
- Loss of urban fringe and open country habitat to development
- Herbicide use
- Loss of winter stubble fields
- Predation of nests, often by wood mice

Current Local Action

- Suitable habitat, including scrub and woodland are SNCI selection criteria
- South Gloucestershire Council regularly requests the planting of new native hedges and trees in landscape proposals for new developments, which may help create suitable bullfinch habitat
- Breeding bird surveys are routinely required for planning applications
- The Bristol Big Bird Watch is run each year by Avon Wildlife Trust includes South Gloucestershire
- The BTO annual Breeding Bird Survey (BBS) includes survey squares in South Gloucestershire and results are available online. www.bto.org
- S Gloucestershire provides grants for the planting of trees and for biodiversity projects
- Many organisations are involved in the monitoring of bird species: BTO, Big Bristol Bird Watch, BRERC, RSPB and the Biodiversity Partnership will support monitoring groups wherever possible
- Sympathetic hedgerow management (e.g. hedge laying, coppicing, gapping up, replanting and less regular trimming) is encouraged by agri-environment schemes such as Environmental Stewardship

Associated Action Plans

*South Glos:
Broadleaf Woodlands,
Hedges and Field
Margins, Song Thrush*

*Avon Biodiversity
Partnership:
Woodland, Hedgerows*

*UK:
Bullfinch, Ancient and
Species-rich Hedges*

Species uk priority



TARGETS: (See table of actions Table 1)

- 1 Where possible enhance habitat for known bullfinch populations**
- 2 Ensure habitat is managed with bullfinch in mind, including areas of scrub**
- 3 Encourage public participation in Bird Surveys to increase bullfinch records**

TABLE 1: Bullfinch Actions 2006 – 2015

Actions	Target	Date	Lead	Other partners	Measurable outcome
1. New developments to include bullfinch friendly landscape features, (e.g. hedge planting) through the planning control and landscape design process.	1	Ongoing	SGC(NBE)		Raise awareness amongst Council planners
2. Ensure bullfinch-friendly management is understood within Council departments, including Highways, Parks and Local Nature Reserve managers	2	By 2007	SGC(NBE)		Leaflet produced
3. Promote sensitive management of bullfinch habitat through targeted Environmental Stewardship schemes	2	Ongoing	NE, FWAG		Number of farms/ hectares within schemes
4. Ensure all existing bullfinch records are submitted to BRERC, including national survey results	3	By 2007	BRERC		Number of records held by BRERC
5. Encourage recording and involvement of local people, including the promotion of the Bristol Big Bird Watch and the BTO survey throughout South Gloucestershire.	3	2006	BP	AWT, BTO	Number of events

Abbreviations: AWT – Avon Wildlife Trust, BP – Biodiversity Partnership, BRERC – Bristol Regional Environmental Records Centre, NE – Natural England, FWAG – Farming and Wildlife Advisory Group, SGC – South Gloucestershire Council, DC – Development Control Team, NBE – Natural and Built Environment Team.

What Can I Do?

- Take part in Avon Wildlife Trust's Big Bird Watch www.avonwildlifetrust.org.uk
- Report sightings of bullfinch to the Bristol Regional Environmental Records Centre www.brerc.org.uk
- Help the British Trust for Ornithology with their breeding birds' survey by visiting the same 1km square 3 times a year and recording bird species www.bto.org
- Plant new hedges
- Put up bird tables with bird food





Dormouse

(MUSCARDINUS AVELLANARIUS)

Introduction

Dormice are rarely recorded in South Gloucestershire. To date, no specific, comprehensive survey of the area has been carried out, so it is not known whether dormice are very localised or just under-recorded.

Ecology

With its golden-brown fur, prominent black eyes and long furred tail, the common (or hazel) dormouse is one of our most attractive native mammals. It is strictly nocturnal mammal.

Except for when hibernating, it rarely descends from trees/shrubs to the ground and consequently dormice are unobtrusive and highly elusive. It occupies a range of habitats, but is primarily associated with deciduous woodland (containing oak, hazel, honeysuckle and bramble) and (species-rich) hedgerows.

Dormice have a varied diet, including flowers, pollen, fruits, berries, nuts and insects; and thus require habitat with a diversity of flowering/fruited shrubs that are infrequently cut, as this provides the most abundant food. Hedges are also important means of dispersal, linking dormouse populations living in isolated woodlands and coppice.

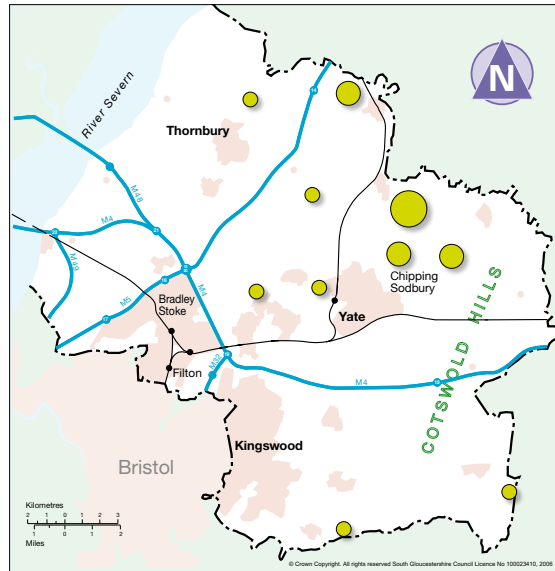
Research has shown that dormice tend to prefer hedges over 3.5 metres in height.

Distribution

Once widespread across England and Wales, dormice are now restricted to southern and western England and Wales, having been lost from over half of its former range in the last 100 years.

Avon is roughly in the centre of dormouse distribution nationally. Populations are found at Lower Woods, Horton, Tortworth, Hawkesbury, Yate, Frampton Cotterell and Marshfield. Suitable dormouse habitat is found elsewhere, which suggest that there may be more populations currently unknown to us.

Species uk priority



● Distribution of Dormouse 2006

Current Status

Research has shown that there has been a 70% decline of dormice in hedgerows over the last 25 years (English Nature, 2002) and the national dormouse population is now estimated to be 40,000.

In 2005, there were only 20 dormouse sites recorded by BRERC for South Gloucestershire.

The dormouse is a European Protected Species under Annex IV of the Habitats Directive and under the Bern Convention 2 III and is on the IUCN Red List. It is also protected under the Wildlife and Countryside Act 1981 (as amended) and CROW Act 2000. It is a Priority Species of the UK Biodiversity Action Plan and is listed by the Government as being a Species of Principal Importance for Biological Diversity.

Why is there an Action Plan?

Dormice are very rare in the district. Management of woodland and hedgerow habitat specifically for dormice benefits other species, too, and helps avoid habitat fragmentation.





Associated Action Plans

South Glos:
Broadleaf Woodland,
Hedgerows, Wild
Service Tree, Song
Thrush

Avon BAP:
Dormouse, Hedgerows,
Woodland

UKBAP:
Dormouse

Current factors causing decline

- Lack of management, or inappropriate management, of hedgerows
- Frequent flailing of hedges causes low availability of fruits and nuts and few nest sites
- Fragmentation of woodland and hedgerow leaving isolated, non-viable populations
- Changes in, or lack of, woodland management (i.e coppicing)
- Habitat loss
- Ignorance of dormice being present
- New housing, increased cat predation
- Potential competition from grey squirrels

Current Local Action

- Dormice on Your Doorstep (2005-2008) to identify, survey, conserve and celebrate the dormouse
- Field Boundaries Project provides information on the biodiversity of hedges
- Biodiversity and environment grants offered by the Council
- The Great Nut Hunt, started by English Nature in 1993
www.greatnuthunt.org.uk
- National Dormouse Monitoring Programme co-ordinated by the People's Trust for Endangered Species (PTES)
- Monitoring at Lower Woods
- Sympathetic hedgerow and woodland management is encouraged by agri-environment schemes such as Environmental Stewardship



TARGETS: *(See table of actions Table 2)*

- 1 Identify existing dormouse populations in South Gloucestershire**
- 2 Maintain existing dormouse populations through habitat management, creation and connection**
- 3 Raise awareness of likely dormouse habitat, ecology and needs**

Species uk priority

TABLE 2: Dormouse Actions 2006 – 2015

Actions	Target	Date	Lead	Other partners	Measurable outcome
1. Through 'Dormice On Your Doorstep' project, arrange and survey training for volunteers in target areas and across the District.	1,3	2006 – 8	DOYD	AWT, GWT	120 trained volunteer dormouse surveyors
2. Ensure all known dormouse areas are in good management, including identify corridors and linking habitat and carry out dormouse-friendly management.	1	2008	DOYD	BP	Key areas mapped, number of tree-planting schemes
3. Use dormouse records re development to ensure surveys, mitigation and habitat creation are included.	2	2006 onwards	SGC (all)		
4. Target advice, grants and agri-environment schemes to dormouse hot spots.	2,3	2006 onwards	FWAG	DOYD AWT	Number of farms, hectares in schemes
5. Monitor dormouse population numbers on a key site(s) with boxes to gauge population change.	2	Ongoing	GWT		Results to BRERC

Abbreviations: AWT – Avon Wildlife Trust, BRERC – Bristol Regional Environmental Records Centre, DOYD – Dormouse On Your Doorstep, NE – Natural England, FoA – Forest of Avon, FWAG – Farming and Wildlife Advisory Group, GWT – Gloucestershire Wildlife Trust, SGC – South Gloucestershire Council, DC – Development Control Team, NBE – Natural and Built Environment Team.

What Can I Do?

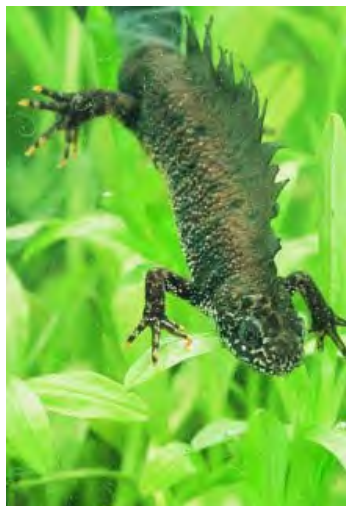
- Plant a native hedgerow or native shrub on your land or within your garden (dormice will use some gardens)
- Help with a dormouse surveys
- Take part in dormouse ecology training days

Dormice On Your Doorstep Project (2007-2009)
www.dormice.org.uk

People's Trust for Endangered Species
www.ptes.org

The Mammal Society
www.abdn.ac.uk/mammal





Great Crested Newts

(TRITURUS CRISTATUS)

Introduction

There are three native species of newt in the UK - smooth newt, palmate newt and the largest, great crested newt. The great crested newt is our rarest and most threatened species, being dark brown or black with a warty, rough skin and growing up to 15cm in length. In spring, the males develop an impressive jagged crest on their back, with a separate straight-edged crest along the tail.

Ecology

Great crested newts can live up to 14 years in the wild. Open, standing water (e.g. ponds) is needed for breeding (between March-August approx.), but as the majority of the year is spent on dry land, newts also need a sufficient area of terrestrial habitat to feed, shelter and over-winter. Their ideal habitat comprises a mixture of woodland (with dead wood), scrub, hedgerows and rough grassland; they will also use piles of rubble and crevices in dry stone walls and more unusual locations, such as neglected swimming pools or underground water tanks.

Great crested newts are nocturnal and feed on a variety of aquatic and terrestrial invertebrates, including worms, spiders and slugs.

Water beetles, fish, snails and wading or diving birds all feed on newt eggs and larvae and, consequently, garden ponds tend not to be used, being stocked with goldfish and lacking suitable habitat around them. Ponds that dry out in summer are beneficial as this kills off predators.

Great crested newt colonies often form part of a larger, wider population known as a 'metapopulation' associated with a cluster of ponds.

Distribution

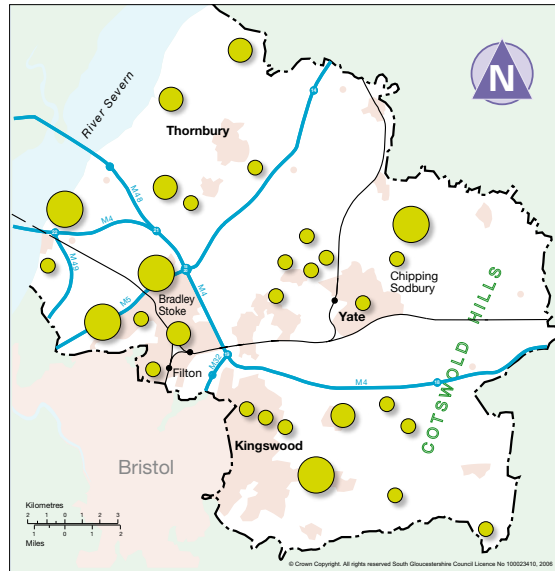
Great crested newts are likely to occur throughout the district, with the largest known population at an active limestone aggregate quarry at Tytherington.

Species uk priority



A survey of parts of South Gloucestershire in 2004 found concentrations of great crested newts at Horton, Spaniorum Hill and Northwick.

There are also many records in the north west part of Bristol around Bradley Stoke and Filton, in amongst the urban landscape.



● Distribution of Great Crested Newt 2006

Current Status

It is estimated that there are some 18,000 great crested newt ponds in Britain, although only 3,000 of these have been actually identified.

In 2005, BRERC held 56 records for the species in South Gloucestershire.

The great crested newt (all life stages) and its habitat is protected under the EC Habitats Directive 1992, implemented in Britain by the Conservation (Natural Habitats, etc.) Regulations 1994, as well as the Wildlife and Countryside Act 1981 (as amended) and CROW Act 2000. It is also a Priority Species on the UK Biodiversity Action Plan and listed by the Government as being a Species of Principal Importance for Biological Diversity, as well as included under the Bern Convention.

Development affecting great crested newts, or surveying using a technique that could disturb them, or managing ponds where great crested newts are present, requires a licence from Natural England.

Why is there an Action Plan?

The great crested newt population in Britain is one of the largest in Europe but it is declining, with an estimated 2% of colonies being lost every five years.

In Europe the loss is even greater.

Probably due to its greater pond density, South Gloucestershire has a higher newt population than the other ex-Avon unitary authorities.





Associated Action Plans

*South Glos:
Ponds, Rhines,
Rivers and Water
Bodies, Hedgerows
and Field Margins,
Broadleaf Woodland,
Old Meadows and
Pastures, Coastal
Saltmarsh/Floodplain
Grazing Marsh, Adder's
Tongue Spearwort,
Tassel Stonewort*

*Avon BAP:
Standing Open Water
(includes GCN actions)*

*SW BAP:
Great Crested Newt*

*UKBAP:
Great Crested Newt*

Current factors causing decline

- Loss of suitable breeding ponds caused by reduction of the water table, in-filling (development or agricultural changes) or neglect
- Wildfowl eating egg-laying vegetation and pollution from bird feed
- Introduction of fish to ponds, especially sticklebacks
- Degradation, loss and fragmentation of terrestrial habitat through development, roads and intensification of farming practices
- Polluting of ponds - pesticides, herbicides, silage, industrial chemicals or road run-off (salt is particularly toxic to amphibians, even in low concentrations)
- Traffic-related mortality
- Unknown populations unintentionally lost/damaged

Current Local Action

- Large great crested newt sites designated as SNCIs or even SSSIs
- Great Crested Newt Conservation Handbook - Froglife 2001
- Highways Agency BAP
- AWT 'Pondways' Project involving volunteers in monitoring publicly accessible ponds
- Avon Reptile and Amphibian Group
- Sympathetic management of habitat around ponds is encouraged by agri-environment schemes such as Environmental Stewardship

TARGETS: *(See table of actions Table 3)*

- 1 Increase knowledge of the location and population of great crested newt sites in South Gloucestershire**
- 2 Halt the loss of all great crested newt sites**
- 3 Enhance, restore and create new great crested newt habitat, in water and on land**
- 4 Involve local communities in understanding and caring for great crested newts**

Species uk priority



TABLE 3: Great Crested Newt Actions 2006 – 2015

Actions	Target	Date	Lead	Other partners	Measurable outcome
1. All existing great crested newt records submitted to by BRERC. Work with AWT 'Pondways' and NARRS (National Amphibian and Reptile Recording Group) re new surveys and training.	1	By 2007	AWT BRERC ARAG	SGC (NBE)	Number of records
2. Ensure all ponds known to hold exceptional populations* are designated as SNCIs. (*>50 seen or netted in day, or >100 counted at night)	2	2008	SGC (NBE)/EN	BRERC	Designation of SNCIs
3. Raise awareness within Planning re great crested newt surveys of development sites. Ensure appropriate mitigation with follow up monitoring - e.g. retain or create new ponds, management plans, road tunnels, fences, hibernacula.	2	Ongoing	SGC (DC)		Number of awareness events
4. Encourage ponds and adjoining land to be managed sympathetically through grants, agri-environment schemes, on nature reserves and other public land.	3	2006 onwards	SGC, FWAG	BP	Number of SG grants for pond creation/management
5. Submit articles to at least 1 publication per year to encourage recording and protection e.g. Network News, ARAG, Bristol Naturalists Society, BRERC & AWT newsletters	4	Ongoing	SGC	BRERC AWT ARAG	Number of press releases

Abbreviations: ARAG – Avon Reptile and Amphibian Group, AWT – Avon Wildlife Trust, BP – Biodiversity Partnership, BRERC – Bristol Regional Environmental Records Centre, DOYD – Dormouse On Your Doorstep, EN – English Nature, FoA – Forest of Avon, FWAG – Farming and Wildlife Advisory Group, GWT – Gloucestershire Wildlife Trust, SGC – South Gloucestershire Council, DC – Development Control Team, NBE – Natural and Built Environment Team

What Can I Do?

- Create new wildlife ponds in your garden, with log piles (for hibernation) and rough (long) grass areas
- Retain and sympathetically manage farm field ponds
- Report any sightings of great crested newts to BRERC
www.brerc.org.uk
- Get involved with the Avon Reptile & Amphibian Group via the Avon Wildlife Trust or BRERC.





Lesser Horseshoe Bat

(RHINOLOPHUS HIPPOSIDEROS)

Introduction

The lesser horseshoe bat is one of the smallest British bat species. Approximately 230 (summer) breeding (maternity) roosts are currently known of in the UK, mostly within South West England and Wales.

Ecology

There are two species of horseshoe bat in Britain – the greater and lesser. Both have a distinctive (horseshoe-shaped) fleshy structure called a ‘nose-leaf’ surrounding the nose which amplifies the ultrasonic calls (echolocation) that the bat uses to navigate and forage in the dark.

Originally a cave-dweller, summer maternity colonies of lesser horseshoes are associated with large rural buildings such as (slate tiled) barns, stable blocks and country houses. Most hibernate underground in caves, mines and cellars during the winter. The lesser horseshoe bat prefers to forage in deciduous woodland, grazed pasture, scrub, parkland and wetlands, usually within a few kilometres of their roosts.

Lesser Horseshoe bats weigh between 4-10g and are c.4cm in length (about the size of a plum), with a wing span of 20cm. The oldest known lesser horseshoe bat lived to 21 years.

Distribution

The lesser horseshoe bat is found throughout Europe and North Africa. It has undergone a severe decline in the northern part of its range, having disappeared from Northern England and the Midlands in the last 50 years, although populations now seem to be stable.

South Gloucestershire has only one known (large) breeding roost on the Cotswolds.

Current Status

Current estimates suggest a UK population of 14000, divided equally between Wales and England.

Species uk priority

Associated Action Plans:

Hedges, Dry Stone Walls and Field Margins, Old Meadows and Pastures, Broadleaf Woodland

UKBAP:
Lesser Horseshoe Bat

All bats and their roosts are protected under the EC Habitats Directive 1992, implemented in Britain by the Conservation (Natural Habitats, etc.) Regulations 1994, as well as the Wildlife and Countryside Act 1981 (as amended) and CROW Act 2000. Lesser horseshoes are also a Priority Species on the UK Biodiversity Action Plan and are listed by the Government as being a Species of Principal Importance for Biological Diversity.

This species is included in Appendix II of the Bonn Convention (and its Agreement on the Conservation of Bats in Europe) and Appendix II of the Bern Convention (and Recommendation 36 on the Conservation of Underground Habitats).

The 1996 IUCN Red list of Threatened Animals classifies this species as Vulnerable (VU A2c).

Why is there an Action Plan?

Once widespread throughout England, it has now suffered large declines.

Current factors causing decline

- Loss of summer breeding (maternity) roosts due to exclusion, deterioration of buildings or unsympathetic conversions (barns, stables)
- Loss of underground hibernation sites (entrances blocked)
- Disturbance during either winter hibernation or summer breeding periods
- Loss or fragmentation of habitat (changes in management)
- Poor seasonal weather
- Toxic (historic) timber treatment products
- Poor understanding of the species' needs
- Lack of roost records
- Pesticide use (prey insect species)

Current Local Action

- The Avon Bat Group - covers all aspects of bat conservation
- 'Batscapes' HLF-funded Project 2003-06
- Protection of lesser horseshoe bats (and all bat species) via local planning process (surveys and licensing requirements)
- Sympathetic habitat management encouraged via agri-environment schemes such as Environmental Stewardship





TARGETS: (See table of actions Table 4)

- 1 Maintain existing populations of lesser horseshoe bats in South Gloucestershire**
- 2 Ensure no further loss or fragmentation of habitat by promoting favourable management of land particularly close to roosts**
- 3 Encourage the provision of new roost sites**
- 4 Maintain a comprehensive understanding of lesser horseshoe bat needs**
- 5 Monitor status, distribution and ecological requirements**
- 6 Promote education and awareness of the status and needs of all bat species**

TABLE 4: Lesser Horseshoe Bat Actions 2006 – 2015

Actions	Target	Date	Lead	Other partners	Measurable outcome
1. Carry out surveys to identify new records or maternity roosts.	1,3	Ongoing	ABG	AWT, consultants	Bat records passed to BRERC
2. Protect known sites by designation and ensure that land managers and advisors (particularly those administering agri-environment schemes) are aware of key roost sites.	2	Ongoing	BRERC SGC (NE)	SGC(NE) NE, AWT, BRERC, other UAs	Sharing of reports and records via BRERC. SNCI review
3. Ensure that SG grants, Stewardship and Woodland Grant schemes near known lesser horseshoe bat roosts, include habitat management to protect and improve potential feeding and commuting habitat (eg hedgerows, woodlands, and stream corridors).	2	Ongoing	AWT, FWAG, FC SGC (NBE)		Nos of grant applications, metres of new hedge, Nos of farms/hectares in Stewardship
4. Ensure that planning applications require bat surveys where appropriate; and that planning consents comply with national and International legislation.	1,3	Ongoing	SGC (NBE)	SGC(DC)	Applications for barn conversions to include ecological survey

Abbreviations: ABG – Avon Bat Group, AWT – Avon Wildlife Trust, BRERC – Bristol Regional Environmental Records Centre, EA – Environment Agency, NE – Natural England, FC – Forestry Commission, FWAG – Farming and Wildlife Advisory Group, GWT – Gloucestershire Wildlife Trust, SGC – South Gloucestershire Council, DC – Development Control Team, NBE – Natural and Built Environment Team, other UAs – ex Avon Unitary Authorities.

Species uk priority



What Can I Do?

- Report sightings of bats (dead or alive) to BRERC www.brerc.org.uk.
- Take part in bat ecology training days
- Learn how to use a bat detector
- Join the Avon Bat Group and help with bat surveys
- Create areas of habitat – ponds, rough grassland, scrub, hedges etc – on land to provide insects
- If you own buildings used by bats, ensure access points are kept open and that roosts are secure, sound and undisturbed





Song Thrush

(TURDUS PHILOMELOS)

Introduction

The song thrush was once common throughout the UK. However, it has suffered a marked and rapid decline in past years throughout the UK, although recent research has shown a partial recovery.

Ecology

The song thrush is a medium-sized bird (c.22cm in height), with warm brown upper parts, a highly distinctive, darkly speckled chest (the markings resemble arrows pointing upwards) and relatively large eyes.

The birds' diet includes worms, insects, berries and snails - it has a highly characteristic habit of cracking open snails on stones ('anvils'). A thrushes' song is clear and flute-like, repeating the same phrase three or four times and it is reliant on scrub in which to build nests - consequently, it is generally found in woodland, farmland hedges and bigger, more mature rural or urban gardens.

Song thrushes are partial migrants, although the majority winter in the UK..

Distribution

Song thrushes occur throughout most of Europe and Western Asia. They were recorded in 75% of the BTO survey squares in the 2005 UK Breeding Bird Survey.

Current Status

There are thought to be 1million breeding pairs in the UK (6% of the European population).

Song thrush is protected under the Wildlife and Countryside Act 1981 (as amended) and CROW Act 2000. It is also on the RSPB 'Red List' of Species of Conservation Concern; and listed as a Species of Principal Importance for Biological Diversity by the UK Government. It is also a Priority Species on the UK BAP.

Species uk priority

Associated Action Plans:

South Gloucestershire:
Broadleaf Woodlands,
Arable, Hedges,
Hedgehog, Bullfinch

UK:
Song thrush

Why is there an Action Plan?

Nationally, the species has experienced a severe decline (a reduction of 73% on farmland since 1970). Although still a relatively common species in South Gloucestershire it is likely to be declining in line with national trends.

Current factors causing decline

BTO and RSPB have not definitively pinpointed the cause of song thrushes' decline but the following factors are likely to have affected it:-

- Changes in farming affecting food supply - particularly the switch from spring to autumn sowing of cereals
- Severe winter weather (unlikely to be a key cause in recent years)
- Predation by crows, cats and foxes
- Competition with blackbirds (although blackbird numbers are declining too)
- Hunting in Southern France
- Pesticide use
- Slug pellets in gardens

Current Local Action

- The national Hedgerow Regulations 1997 control loss of hedges
- Breeding bird surveys regularly required for planning applications
- The BTO annual Breeding Bird Survey www.bto.org, www.rspb.org.uk
- The annual Bristol Big Bird Watch (Avon Wildlife Trust) - includes South Gloucestershire
- Song thrush sites incidentally protected as SNCIs
- Sympathetic hedgerow management is encouraged by agri-environment schemes such as Environmental Stewardship

TARGETS: (See table of actions Table 5)

- 1 Create/enhance habitat for song thrush**
- 2 Ensure habitats (including gardens) are managed with song thrush in mind, including pesticide use and slug pellets**
- 3 Encourage public participation in Bird Surveys to increase song thrush records**



TABLE 5: Song Thrush Actions 2006 – 2015

Actions	Target	Date	Lead	Other partners	Measurable outcome
1. Require new developments to include song thrush-friendly landscape features, (e.g. hedge planting) through the planning process.	1	Ongoing	SGC(NBE)	SGC(DC)	Raise awareness amongst Council planners
2. Promote wildlife friendly gardening (including alternatives to slug pellets).	2	Ongoing	AWT		
3. Ensure song thrush-friendly management is understood within Council departments including Highways, Community Services, Parks, Direct Services and Local Nature Reserve managers	2	By 2007	SGC(NBE)	SGC(CS) SGC(DS) LNRs	Awareness raising event via NERC
4. Promote sensitive management of song thrush habitat through targeted Environmental Stewardship schemes	2	Ongoing	NE, FWAG, AWT		Number of farms/ hectares within schemes
5. Submit articles to at least 1 publication per year to encourage recording and action.	3	Ongoing	SGC		Number of press releases
6. Promote bird surveys (including the Bristol Big Bird Watch and the BTO survey of South Gloucestershire) and ensure all records are sent to BRERC.	3	By 2008	AWT, BTO	BRERC, RSPB	Number of events Number of records

Abbreviations: AWT – Avon Wildlife Trust, BP – Biodiversity Partnership, BRERC – Bristol Regional Environmental Records Centre, NE – Natural England, FoA – Forest of Avon, FWAG – Farming and Wildlife Group, GWT – Gloucestershire Wildlife Trust, RHS – Royal Horticultural Society, SGC – South Gloucestershire Council, DC – Development Control Team, NBE – Natural and Built Environment Team.



What Can I Do?

- Report sightings of song thrush to BRERC www.brerc.org.uk
- Keep an eye on your cat to prevent bird kills.
- Use alternatives to slug pellets for pest control in gardens – avoid poisoning song thrushes
- Put up suitable nest boxes



Tassel Stonewort

(TOLYPELLA INTRICATA)

Introduction

Tassel stonewort is an internationally threatened species of plant (algae). The largest population in the country is found at Lower Woods and Inglestone Common, near Hawkesbury.

Ecology

Tassel stonewort is a branching underwater plant that reaches c.40cm in length and resembles a tangled fishing net. It is composed of large cells which grow up to 15cm long.

It is generally found in poached temporary pools and ditches. The plants grow rapidly in early spring, and begin fruiting from the end of March, dying back again by the end of May, although in cool wet years they can survive into June.

The South Gloucestershire population occurs in a series of dew ponds and wet ruts/trenches throughout Lower Woods and Inglestone Common. Tassel Stonewort is often found with water starwort (*Callitriche* sp.) and buttercup (*Ranunculus*) species and at Inglestone, it is found in the same pool as Adders-tongue Spearwort, another South Gloucestershire BAP species.

Distribution

Records are quite widely dispersed in Britain, with three strongholds – Oxford, the Cambridgeshire Fens and Inglestone Common.

A survey of 460 UK ponds/pools between 1996 and 1998 found tassel stonewort in only some 5% of the sites.

Current Status

Tassel stonewort is now generally restricted to small populations in Southern England. It is classified as 'endangered' by the British Red Data Book and listed as a UK priority species in the UK Biodiversity Action Plan. It is not formally protected in law.

Most of the South Gloucestershire tassel stonewort population is within Lower Woods SSSI.





Why is there an Action Plan?

South Gloucestershire is a recognised national stronghold for this extremely rare plant and without the proper management it could potentially become extinct in our area.

Current factors causing decline

- Lack of ground disturbance ('poaching' or trampling) caused by a loss or reduction in grazing
- A lack of knowledge/research - it is not known to what degree water conditions such as turbidity, nutrient load etc are important factors

Current Local Action

A survey of 25 ponds at Inglestone was carried out in 2002, including all 11 known tassel stonewort sites and 14 other pools. Five populations were recorded, two of which were new sites. There were eight sites, however, where tassel stonewort had previously been recorded, but not seen in 2002. This may be just chance, or a lack of cattle.

In September 2005, the Council funded management work to one of the known tassel stonewort ponds on Inglestone Common. The wild plant conservation charity Plantlife oversaw the work and will monitor its success.

TARGETS: *(See table of actions Table 6)*

- 1 Ensure continued awareness and monitoring of the tassel stonewort population at Lower Woods/Inglestone Common**
- 2 Develop a long term management strategy for tassel stonewort sites**

Associated Action Plans:

*South Glos:
Ponds, Rivers, Rhines
and Water Bodies,
Adder's Tongue
Spearwort, Great
Crested Newt*

*Avon BAP:
Standing Open Water*

*UK BAP:
Tassel Stonewort
Species Action Plan*

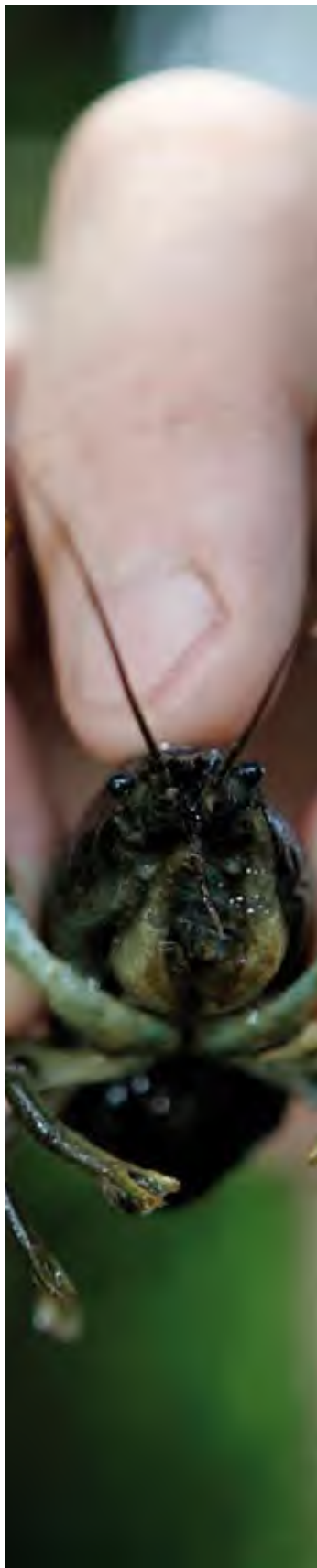
Species uk priority

TABLE 6: Tassel Stonewort Actions 2006 – 2015

Actions	Target	Date	Lead	Other partners	Measurable outcome
1. Commission report on the plants conservation status South Gloucestershire.	1	By 2010	NE / Plantlife		Report completed
2. Survey all or likely ponds in the area by 2010 including volunteer training.	1	By 2011	SGC(NBE) Plantlife	Plantlife, BSBI, GWT, BP	Survey or training completed
3. Raise awareness within planning departments so that planning process requires a survey for tassel stonewort where appropriate.	1	2006-2015	SGC (DC)		
4. Undertake management of sites containing tassel stonewort as part of a management strategy for Lower Woods/Inglestone Common.	2	2010	SGC (NBE)/ Plantlife	FWAG, NE, GWT, landowners, commoners	Land in favourable condition
5. Carry out and monitor management of known site at Horton Great Trench.	2	2007-9	GWT	Plantlife/ NE	Survey report
6. Notify stronghold sites as SSSIs/SNCIs	2	By 2015	NE SGC (NBE)	Plantlife	Designation

Abbreviations: AWT – Avon Wildlife Trust, BRERC – Bristol Regional Environmental Records Centre, BSBI – Botanical Society of the British Isles, NE – Natural England, Farming and Wildlife Advisory Group, GWT – Gloucestershire Wildlife Trust, SGC – South Gloucestershire Council, DC – Development Control Team, NBE – Natural and Built Environment Team.





White Clawed Crayfish

(AUSTROPOTAMOBIOUS PALLIPES)

Introduction

The White-clawed crayfish is the only species of crayfish native to the UK.

Ecology

Crayfish can be found in a wide range of aquatic habitats, such as rivers, streams, open water and quarry pools. They prefer alkaline water with limited sediment, free of pollution and plenty of shelter in the form of rocks, aquatic plants and tree roots.

Current Status

The white-clawed crayfish is classified as 'globally threatened' by IUCN/WCMC. It is a Priority Species on the UK BAP and listed as a Species of Principal Importance for Biological Diversity by the UK Government.

It is protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended) in respect of taking from the wild and sale.

Distribution

It is thought that the UK supports up to 24% of the world's population of the white-clawed crayfish.

They are widely distributed throughout England and Wales - the last known population in South Gloucestershire is found on the Frome and its tributaries.

Why is there an Action Plan?

The South Gloucestershire/Bristol population of white-clawed crayfish is threatened by the spread of the non-native signal crayfish *Pacifasticus lenisusculus* which appears to be becoming more common throughout the district.

Species uk priority

Associated Action Plans:

*South Glos:
Ponds, Rhines, Rivers
and Water Bodies*

*B&NES, Avon,
Cotswold:
White-clawed Crayfish*

*SW BAP:
White-clawed Crayfish*

*UK BAP:
Freshwater White-
clawed Crayfish*

Current factors causing decline

- Competition from the introduced American signal crayfish (the signal crayfish predated white clawed crayfish and damages river ecology)
- A fungus *Aphanomyces astaci* ('crayfish plague') is spread by signal crayfish and is fatal to white-clawed crayfish
- Loss and fragmentation of suitable habitat
- Inappropriate management of waterways and water bodies
- Water pollution, particularly urban/agricultural run-off, sewage and increased levels of sediment

Current Local Action

- The Environment Agency and Avon Wildlife Trust are investigating the potential of 'ark' sites – moving white clawed crayfish to a safe haven site away from signal populations (2007 and ongoing)
- A South Gloucestershire Council-funded survey of the River Boyd in 2006
- Community training events
- Survey of the Ham Brook 2005
- Survey of River Frome, Avon Wildlife Trust, 2004
- Wessex Water – ongoing environmental policies and funding
- Ongoing River Avon/Frome Project

TARGETS: *(See table of actions Table 7)*

- 1 Clarify the distribution of existing populations of both native and non-native crayfish within South Glos**
- 2 Investigate ways to maintain the present distribution of the species by limiting the spread of non-native species,**
- 3 Help maintain optimum habitat conditions**
- 4 Investigate suitable 'ark' sites**



TABLE 7: White-clawed Crayfish Actions 2006 – 2015

Actions	Target	Date	Lead	Other partners	Measurable outcome
1. Survey River Frome to check the spread of the non-native population.	1	Ongoing	EA	SGC(NBE)	Survey
2. Survey tributaries and watercourses for white-clawed crayfish.	1	By 2008	EA	SGC(NBE)	Survey
3. Investigate signal crayfish control programmes successfully used in the UK.	2	By 2007 & ongoing	SGC(NBE)	UKBAP EA	Trial if possible
4. Find an 'ark' site in South Glos (or elsewhere) to translocate native crayfish away from the non-native populations.	2	2007 onwards	EA, AWT	SGC(NBE)	Locate receptor site
5. Advise landowners on sensitive land management re white-clawed crayfish populations. Involve volunteers and local residents in practical works.	2	2007 onwards	EA	SGC(NBE)	Advice given
6. Publicity to build understanding of the need to control non-native species	2	Ongoing	EA	SGC(NBE)	Number of press releases

Abbreviations: AWT – Avon Wildlife Trust, EA – Environment Agency, SGC – South Gloucestershire Council, NBE – Natural and Built Environment Team.



What Can I Do?

- Report any sightings of white-clawed (or other non-native) crayfish species to BRERC www.brerc.org.uk
- If you are an angler, the crayfish fungus is spread on boots or wet or muddy equipment - all equipment including wellingtons and waders should be washed in disinfectant before moving between water courses
- Angling Clubs and Angling Competitions – adopt the above as a code of conduct
- See 'The Crayfish Code' www.environment-agency.gov.uk



Hedgehog

(ERINACEUS EUROPAEUS)

Introduction

The hedgehog is widely known, unique and a much-loved species of British mammal, partly derived because of its use of back gardens.

Ecology

The hedgehog is named after its pig-like habit of noisily 'rooting' through undergrowth and is the only spiny British mammal - adults have up to 5000 of these short, yellow-tipped spines.

They are nocturnal, solitary and are found in a variety of habitats - gardens, scrub, woodland and hedgerows - travelling up to 3km a night. During the summer, hedgehogs shelter in temporary nests of leaves, moss and grass; and by the autumn, they have fattened themselves up in readiness for their winter hibernation period.

Hedgehogs' diet comprises worms, slugs, caterpillars and other invertebrates, as well as frogs, young mice and voles and the eggs and chicks of ground-nesting birds.

Current Status

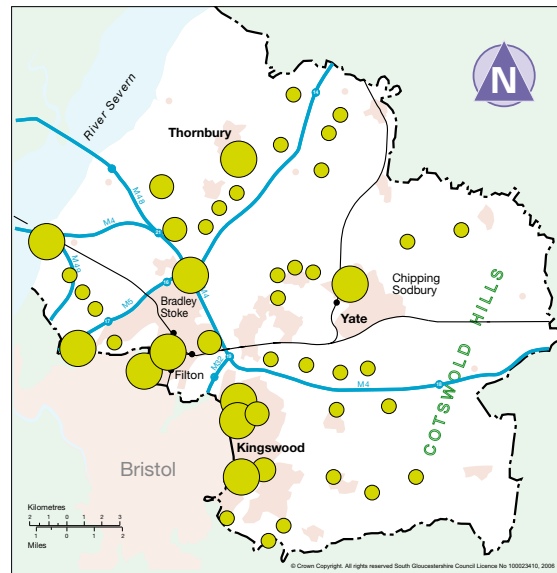
Partially protected in the UK under Schedule 6 of the Wildlife and Countryside Act 1981 (as amended) (killing or trapping by certain means).

Hedgehogs are protected under the Wild Mammals (Protection) Act 1996 and have recently been elevated to a Priority Species on the UK BAP.

Distribution

The European hedgehog is found throughout Europe and Asia.

In 2004 BRERC had 400 hedgehog records across all 10km squares for South Gloucestershire, mostly from road kill or nocturnal garden sightings. Records are greater around populated areas.



● Distribution of Doormouse 2006

Why is there an Action Plan?

The UK has 1 million hedgehogs, a quarter of the world's population. Despite this, however, it is estimated that they have declined in numbers and range by 20% since 2001 (Mammals on Roads survey) and is now of UK 'Concern'. In recognition of this, it has recently been added to the UK BAP.

The hedgehog was voted the UK's favourite garden animal in a survey by the RHS and Wildlife Trusts.

Current factors causing decline

- Loss of suitable habitat
- Accidental death (sheltering in bonfires)
- Increase of composting in artificial containers
- Lack of, or disturbance of, hibernation sites
- Drowning in garden ponds and falling into cattle grids
- Poisoning - slug pellets and pesticides
- Deaths caused by strimmers or mowing
- Road kill
- Changes in weather conditions (mild winters)
- Presence of cats and dogs (not proven)
- High badger numbers increasing predation

Species uk priority

Associated Action Plans:

South Glos:
Broadleaf Woodland,
Hedgerows & Field
Margins, Song Thrush,
Glow Worm, Slow-
worm

Avon BAP:
Hedgerows

Current Local Action

The hedgehog rescue centre based in Yate specialises rescues and homes injured hedgehogs and is involved in community education work.

TARGETS: *(See table of actions Table 13)*

- 1 Update hedgehog survey information for South Gloucestershire
- 2 Encourage people to provide a hedgehog-friendly environment in private gardens and allotments
- 3 Ensure hedgehog-friendly management on Council land - eg parks, cemeteries, LNRs, school grounds
- 4 Increase the number of people involved in hedgehog conservation



**TABLE 13: Hedgehog Actions 2006 – 2015**

Actions	Target	Date	Lead	Other partners	Measurable outcome
1. Ensure all hedgehog records are submitted to BRERC, including national survey results	1	2008	BRERC	All	Nos of records held by BRERC
2. Promote hedgehogs, their habitat and threats, including via the national 'Hedgehog on Roads' survey and Yate Hedgehog Rescue Centre.	1,2	Ongoing	YHRC		Nos of people involved
3. Encourage hedgehog-friendly gardening (including the installation of hedgehog boxes/nesting), targeting other habitats such as churchyards and allotments.	2	Ongoing	AWT	BP, RHS	
4. Ensure hedgehog-friendly management within Council departments.	3	By 2008	SGC(NBE)		Number of events or publications
5. Raise awareness of hedgehogs amongst Council planners of and how they can be conserved through the planning system.	3	Ongoing	SGC(DC))	SGC(NBE)	Events

Abbreviations: AWT – Avon Wildlife Trust, BP – Biodiversity Partnership, BRERC – Bristol Regional Environmental Records Centre, NE – Natural England, RHS – Royal Horticultural Society, SGC – South Gloucestershire Council, SGC – South Gloucestershire Council, DC – Development Control Team, NBE – Natural and Built Environment Team, YHRC – Yate Hedgehog Rescue Centre.

What Can I Do?

- Learn more about hedgehog ecology
- Report sightings of hedgehogs (dead or alive) to BRERC
www.brerc.org.uk
- Use alternatives to slug pellets - avoid poisoning
- Garden for hedgehogs – build a compost heap and log pile in your garden
- Encourage your local allotment holders to garden for hedgehogs
- Join your local voluntary wildlife group



Adder's tongue spearwort

(*RANUNCULUS OPHIOGLOSSIFOLIUS*)

Introduction

One of the rarest plants in Britain, South Gloucestershire holds one of only two known populations of Adder's-tongue spearwort. Action is required to ensure that it does not become extinct in the UK.

Ecology

Adder's tongue spearwort is a member of the buttercup family and has the characteristic yellow flowers (in Gloucestershire it is known as the "Badgeworth Buttercup" after the location of the main population). It looks like, and is found in similar places to, lesser spearwort (*Ranunculus flammula*), although it is distinguished by its' smaller, almost heart (adder's tongue) shaped lower leaves with oval upper ones. Flowers appear from June to September and have five shiny yellow petals and five sepals. The 1.5 mm long fruits have small warts on the surface, which is the most distinguishing feature.

It is an over-wintering annual and the numbers of plants vary from year to year. It likes damp, disturbed ground and germinates between autumn and spring - poaching of pond edges by cattle provides ideal conditions and traditionally the seeds were spread on the hooves of animals. It prefers bare, moist soil from August to October with an absence of frost for germination and seedling growth, sufficient winter rain to submerge the plants, and a reduction of water level in spring (Dring & Frost 1971; Holland 1977). A seed bank can persist in the mud around the pond for up to 30 years, ready to germinate when conditions are right.

Current Status

It is protected under the Wildlife and Countryside Act 1981 (as amended).

It is not included on the UK BAP but did form part of English Nature's 1997 Species Recovery Programme in 1997.

Plantlife included it on their 'Back from the Brink' campaign.

Adder's tongue spearwort is classified as endangered in the British Red Data Book





The pond at Inglestone Common has been monitored for some years. The maximum recorded number of plants was 48 in 1999. The BSBI informally monitor the population and reported that few plants were found in 2004 and none found flowering. The species is flourishing at Badgeworth, a Gloucestershire Wildlife Trust reserve, where over 1,000 plants are regularly recorded.

The pond at Inglestone Common pond lies within Lower Woods SSSI, although it is in private ownership.

Distribution

This plant is only known at the above two sites in Britain. In the past there have been records from Jersey, Dorset and Hampshire but these are now presumed extinct. It also occurs in south and west Europe.

Why is there an Action Plan?

South Gloucestershire has a special responsibility to protect the population of this extremely rare plant. The pond needs management to provide the conditions needed for the plant to survive otherwise it is likely to become extinct in South Gloucestershire.

Current factors causing decline

- Lack of 'poaching' (trampling) by cattle on the edges of pond –too little (under) or too much (over) grazing is harmful
- Climate change - winter droughts
- Habitat loss - not a major factor but a loss of nearby ponds reduces the potential to establish new populations

Current Local Action

In 2005 work took place at the Inglestone pond to regenerate the number of plants, monitored by Plantlife and funded by the Council's Environment Grant.

Associated Action Plans:

*South Glos:
Tassel Stonewort,
Ponds, Rivers, Rhines
and Water Bodies*

*Avon BAP:
Standing Open Water*

*English Nature/Plantlife
Species Action Plan
(1999)*

Species local



TARGETS: (See table of actions Table 8)

- 1 Identify and protect all Adder's tongue spearwort populations in South Gloucestershire**
- 2 Achieve a viable population of Adder's tongue spearwort at Inglestone Common**
- 3 Monitor the population size and management of Inglestone Common pond.**
- 4 Raise the profile of Adder's tongue spearwort in South Gloucestershire**

TABLE 8: Adders' tongue Spearwort 2006 – 2015

Actions	Target	Date	Lead	Other partners	Measurable outcome
1. Monitor ponds on Inglestone Common for Adder's tongue spearwort and provide identification training for volunteers.	1,3,4	Ongoing	Plantlife / BSBI	GWT, BRERC SGC(NBE), AWT (Pondways)	Survey, training event
2. Manage Inglestone Common pond(s), control grazing if necessary.	2	Ongoing	Plantlife,	GWT, NE, SGC(NBE)	Successful grazing at appropriate levels.
3. Develop long term management strategy for Inglestone Common and encourage landowners to implement.	2	2010	Unknown	SGC(NBE), NE, Plantlife FWAG, GWT, Parish Council Landowners, Commoners	Write plan, implement

Abbreviations: AWT – Avon Wildlife Trust, BRERC – Bristol Regional Environmental Records Centre, BSBI – Botanical Society of the British Isles, NE – Natural England, SGC – South Gloucestershire Council, NBE – Natural and Built Environment Team, FWAG – Farming and Wildlife Advisory Group, GWT – Gloucestershire Wildlife Trust.



What Can I Do?

- Help count existing populations
- Do not take (any) plants from the wild.



Barn owl

(TYTO ALBA)

Introduction

The barn owl is a much-loved bird of the countryside. Their white, ghost-like appearance and almost silent flight has led to them being known colloquially as the 'White Owl' and 'Old Hushwings'.

Ecology

Barn owls have a distinctive heart-shaped face, with small black eyes and a golden-buff colouring on the crown, back and upper-parts of the wings finely speckled with a grey teardrop patterning.

They are primarily associated with farmland and open countryside, hunting over rough grassland (on the edge of grazed pasture, woodland or hedgerows or along woodland rides) which in turn provides habitat for small mammals, especially short-tailed voles.

Barn owls do not build nests, but instead lay their eggs in tree cavities or barn lofts or amongst hay bails. They pair for life, laying 3-7 white bantam-sized eggs, with a second brood in good years, with owlets taking their first flights at about 9 weeks old.

The birds' silent flight is allied to an extraordinarily acute sense of hearing which is used to locate prey at night, flying close to the ground and listening for movement in the undergrowth below. While primarily nocturnal, it is not uncommon to see them hunting in daylight when food is short during periods of drought or hard winters.

Their call is a harsh shriek rather than a hoot, accounting for their other name in Britain, the 'Screech Owl'.

Current Status

Under the Wildlife and Countryside Act, 1981 (as amended), it is illegal to kill, injure or take a barn owl or to remove or damage eggs.

Barn owls are also on the RSPB 'Amber List' of Species of Conservation Concern as numbers are still thought to be in general decline.

In 2005 there was thought to be 4,000 breeding pairs in the UK (2% of the European total).

Species local

Associated Action Plans:

South Glos:
Hedgerows, Old
Meadows and Pastures

Avon BAP:
Hedgerows, Grassland

Distribution

There are over 30 subspecies of barn owl, distributed almost world-wide.

The birds occur across most of the UK but have been lost from a significant part of that range since 1973, including the South West England and South Gloucestershire (BTO Breeding Atlas 2006).

Why is there an Action Plan?

The bird has suffered declines in the past fifty years as a result of the degradation of once prey-rich habitats in the face of intensive agricultural practices. The presence of barn owls is a good indicator of the health of land in lowland areas as their ideal habitat needs to support a wide range of small mammals.

Current factors causing decline

- Increased volume/speed of road traffic – this accounts for the majority of deaths (30%) as barn owls are low flyers and more at risk of being hit
- Loss of rough grassland hunting habitat - agricultural intensification, development and a lack of rough wasteland
- Loss of nest/roost sites - felling of trees and conversion of farm buildings
- Declining small mammal populations nationally
- Poisoning from mouse/rat bait - 'second generation' poisons used to control Warfarin resistant rodents

Current Local Action

- The Hawk & Owl Trust promote and raise awareness about birds of prey, including barn owls
- The Barn Owl Group – Gloucestershire
- Hedgerow Regulations 1997 control loss of hedges
- Breeding bird surveys are regularly required for planning applications, especially for the conversion of old or derelict agricultural buildings
- The BTO annual Breeding Bird Survey (BBS) includes survey squares in South Gloucestershire and results are available online
- The Bristol Big Bird Watch (Avon Wildlife Trust) records barn owls in South Gloucestershire
- A number of barn owl sites are protected as SNCIs or TPOs
- Sympathetic hedgerow and grassland management is encouraged by agri-environment schemes such as Environmental Stewardship





TARGETS: (See table of actions Table 9)

- 1 Continue to monitor population size**
- 2 Maintain, restore and create good habitat for barn owl prey**
- 3 Advise landowners and the public about barn owls, their habitat requirements and potential risks**
- 4 Support the local interest groups**

TABLE 9: Barn Owl Actions 2006 – 2015

Actions	Target	Date	Lead	Other partners	Measurable outcome
1. Establish baseline figure for population by encouraging the reporting of sightings of barn owls.	1	Ongoing	HOT	BTO RSPB BRERC	Records
2. Promote relevant options for barn owl in agri-environment schemes	2,3	Ongoing	FWAG	AWT DEFRA NE	Number of farm schemes
3. Give advice to churches, cemeteries, parks, Council Highways and Street Care depts re need for long grass, veteran trees and provision of nest boxes.	2,3	Ongoing	SGC(NE) / HOT	SGC Church Diocese FoA	Number of areas with appropriate rough grass
4. Support the Hawk and Owl Trust in raising awareness of the conservation of barn owls.	1,4	Ongoing	HOT	everyone	Membership numbers
5. Advise Council planners on conserving barn owls and their habitat through the planning system.	3	Ongoing	SGC(DC)	SGC(NE)	Events

Abbreviations: AWT – Avon Wildlife Trust, BTO – British Trust for Ornithology, BRERC – Bristol Regional Environmental Records Centre, NE – Natural England, FoA – Forest of Avon, FWAG – Farming and Wildlife Advisory Group, HOT – Hawk and Owl Trust, SGC – South Gloucestershire Council, SGC (DC) – Development Control Team, SGC (NBE) – Natural and Built Environment Team.

What Can I Do?

- Report sightings of barn owls (alive or dead) to BRERC www.brerc.org.uk
- Retain or create rough uncut grassland on your land
- Encourage your local church/parish councils to set aside areas of rough grassland for the small mammals on which barn owls feed
- Join the Hawk and Owl Trust, RSPB, BTO or your local raptor group.

www.rspb.org.uk,
www.bto.org,
www.hawkandowl.org

(follow link to South
Glos group)



Bath Asparagus

(ORNITHOGALUM PYRENACIUM)

Introduction

Bath Asparagus (or 'Spiked Star of Bethlehem') is a nationally scarce plant found primarily in West Wiltshire and around the Bath area.

Ecology

Bath asparagus is an elegant member of the lily family, with numerous greenish-white star-shaped flowers on tall spikes reaching up to 1m in height. It is a perennial, flowering in June and July and storing nutrients in an underground bulb, similar to bluebells. It is found in shade in woods and hedgebanks on calcareous and clay soils.

One theory suggests the plant was brought to the area by the Romans as a cultivated food crop – people in Bath sold the unopened flower spikes as a delicacy in the past.

Current Status

It is found throughout Europe. Very scarce in the UK, it is now localized in southern and central England, with the South West regarded as a stronghold.

Distribution

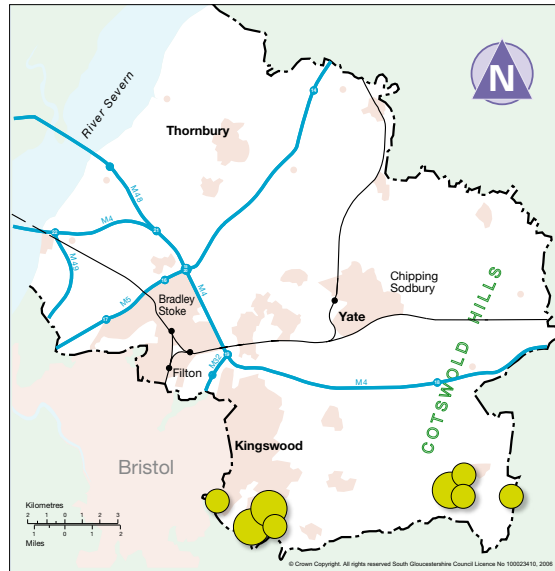
The plant has been recorded in 81 sites Avon sites, mostly around Bath and Keynsham. There are two main sites for Bath Asparagus in South Gloucestershire - Cleeve Wood, Hanham and St Catherine Valley.

Why is there an Action Plan?

It is a local specialty. The UK range of the Bath Asparagus is so small that South Gloucestershire is considered important for this plant in a national context.

The Plan augments and complements the BANES Biodiversity Action Plan 'Wild Things', which also includes Bath Asparagus.





As Bath Asparagus is present in woodland, hedgebanks and roadside verges supporting other flora, safeguarding it will protect a range of other species of flower.

Current factors causing decline

- Habitat loss and neglect
- Inappropriate management (cutting of roadside verges)
- Picking of un-opened flower stalks (low level)
- Development and recreational pressures
- Overgrazing of woodlands by deer

Current Local Action

- Council Grants – available to help positive management
- Designating roadside nature reserves to protect key verges
- Local Plan Policy L9 to protect species of importance
- Past (1990s) project run by AWT to raise awareness of species
- Biodiversity and the Planning Process contains full specification for the necessary surveys for new developments

Associated Action Plans:

South Glos:
Hedges, Dry Stone Walls and Field Margins, Broadleaf Woodlands

B&NES:
Bath Asparagus

Avon BAP:
Hedges, Woods

Cotswold AONB Priority Species List:
Bath Asparagus

SW BAP:
Hedges, Woods

UK BAP:
Hedges, Woods

Species local



TARGETS: (See table of actions Table 10)

- 1 Clarify the distribution and size of existing populations within South Glos**
- 2 Provide advice and guidance on good habitat management for Bath Asparagus**
- 3 Promote interest in and awareness of Bath Asparagus amongst the public**
- 4 Ensure known sites are protected through the Development Control framework in line with the Local Plan**

TABLE 10: Bath Asparagus 2006 – 2015

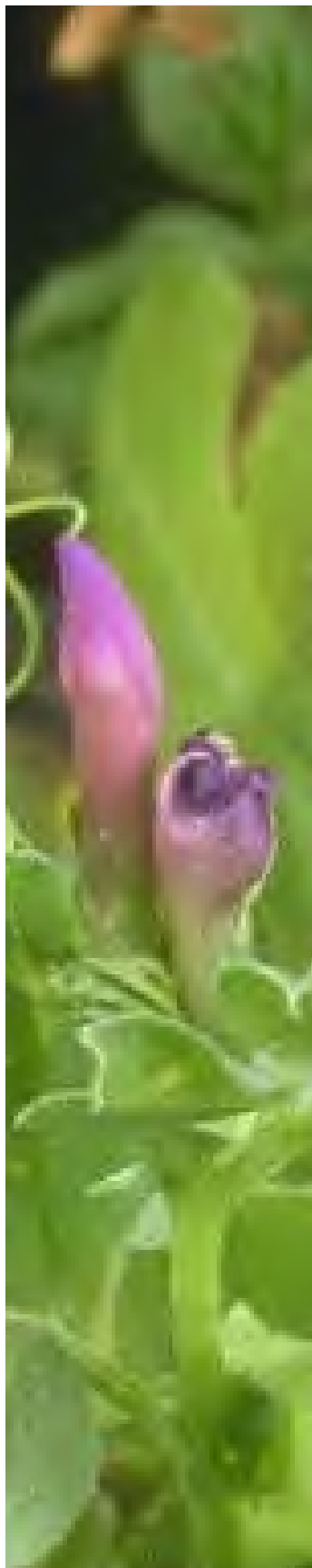
Actions	Target	Date	Lead	Other partners	Measurable outcome
1. Monitor known areas re population size. Encourage a wider survey, producing ID notes, publicity and survey events for volunteers.	1,3	By 2007	SGC (NBE)	B&NES, CAONB, FoA, BRERC	ID notes, surveys completed, nos of surveyors/ records
2. Use survey data to consider designating roadside nature reserves for Bath Asparagus.	2	2007 onwards	SGC (NBE)	SGC(CS)	Roadside verge designation
3. Share data, events and good practice with Council Development Control, Public Rights of Way, Highways, B&NES Council and Cotswold ANOB.	3,4	Ongoing	SGC (NBE)	SGC, B&NES, CAONB	Report published

Abbreviations: B&NES – Bath & North East Somerset Council, BRERC – Bristol Regional Environmental Records Centre, CAONB – Cotswold ANOB, FWAG Farming and Wildlife Advisory Group, FoA – Forest of Avon, SGC – South Gloucestershire Council, DC – Development Control Team, NBE – Natural and Built Environment Team, CS – Community Services.

What Can I Do?

- Teach yourself to identify Bath Asparagus
- Help monitor existing populations and their distribution
- Report sightings to BRERC, particularly in the Hanham Valley area www.brerc.org.uk
- Join your local voluntary wildlife group





Bithynian Vetch

(VICIA BITHYNICA)

Introduction

Bithynian vetch is an attractive, flowering legume (pea family).

Ecology

The plant has violet-purple flowers and grows to 30-50cm in height with a trailing habit. It is nationally rare and only grows in localised spots - in South Gloucestershire it has been recorded in rough grassland on roadside verges. Because it only tends to grow in low numbers it is often overlooked and may consequently be under-recorded.

Current Status

While Bithynian vetch is covered by the Threatened Plants Database (2005) in the UK, very little has been written about it. It is not legally protected or a UK priority species.

Distribution

Despite being found throughout Europe, Africa and Asia, Bithynian vetch has only been recorded in 35 10km grid squares across the UK, mostly in the South of England.

The plant was recorded in only five sites in South Gloucestershire during the 1980/90s:

- A road verge at Frogland Cross, Gaunt's Earthcott
- The junction with the Avon ring Road (A4174) at Kendleshire
- Tracy Park, Wick
- Two sites on the roadside verge along Beacon Lane, Winterbourne

Why is there an Action Plan?

The vetch is found at low numbers and South Gloucestershire could hold up to 15% of the UK population.

Our local road verges are home to a wide range of flora but have not always been well-managed.

Species local



Associated Action Plans:

South Glos:
Old Meadows and Pastures

Avon BAP:
Grassland

Current factors causing decline

- Inappropriate management of roadside verges –poor cutting regimes
- Lack of records
- Lack of knowledge and research
- Habitat loss and neglect (scrub encroachment)

Current Local Action

- Roadside Nature Reserves are planned in South Gloucestershire

TARGETS: (See table of actions Table 11)

- 1 Clarify the distribution and size of existing populations within South Gloucestershire and look for new sites**
- 2 Provide advice and encourage good habitat management for key sites**
- 3 Ensure known sites are protected through the Development Control framework**

TABLE 11: Bithynian Vetch Actions 2006-15

Actions	Target	Date	Lead	Other partners	Measurable outcome
1. Encourage volunteers to monitor known areas.	1	2008 onwards	SGC (NBE)	BRERC BSBI	Survey report
2. Designate roadside nature reserves, draw up management plans and monitor management.	2	2007 onwards	SGC (NBE)	SGC(CS)	Roadside verge designation.
3. Share data, events and good practice with SG Development Control and Highways to ensure sites are considered during development.	2, 3	Ongoing	SGC (NBE)	SGC(H) SGC(DC)	Report published

Abbreviations: BRERC – Bristol Regional Environmental Records Centre, BSBI – Botanical Society of the British Isles, SGC – South Gloucestershire Council, H – Highways, DC – Development Control Team, NBE – Natural and Built Environment Team, CS – Community Services.





What Can I Do?

- Teach yourself to identify Bithynian Vetch
- Report sightings to BRERC www.brerc.org.uk
- Help monitor existing populations where known to occur
- Survey areas of grassland within parish
- Join your local voluntary wildlife group
- Encourage your parish council to manage (species-rich) grassland verges sympathetically



Glow worm

(LAMPYRIS NOCTILUCA)

Introduction

Glow worms are one of the most easily recognised and popular invertebrates in Britain. Go along unlit country lanes between 10pm and midnight in June and July and look for the bright green glow of the female.

Ecology

Glow worms are, in fact, not worms but a species of beetle.

The larvae are dormant for their first winter and then pupate into adults during their second summer. Adult females are flightless and do not feed; they cling to the stems of long grasses emitting a luminous green glow from their abdomens. These glowing lights are seen by the winged males who fly to mate with the females.

The nocturnal larvae eat snails and slugs and thus favour moist conditions. A single glow worm can consume more than 70 snails during its two year lifespan.

Glow worms are found in a wide range of habitats including pastures, meadows, roadside and railway verges, hedgerows, churchyards, golf courses, gardens and waste ground (Tyler 2002). They prefer a mixture of rough grassland and some form of cover, such as woodland or scrub.

Current Status

The species is not legally protected or on the UK Biodiversity Action Plan. It is, however, believed to be declining (Tyler, 2002, Scagell, 2003). The increased levels of artificial lighting in the countryside means that they are also less easy to spot than they once were.

Distribution

It is difficult to be certain of the population status in South Gloucestershire.

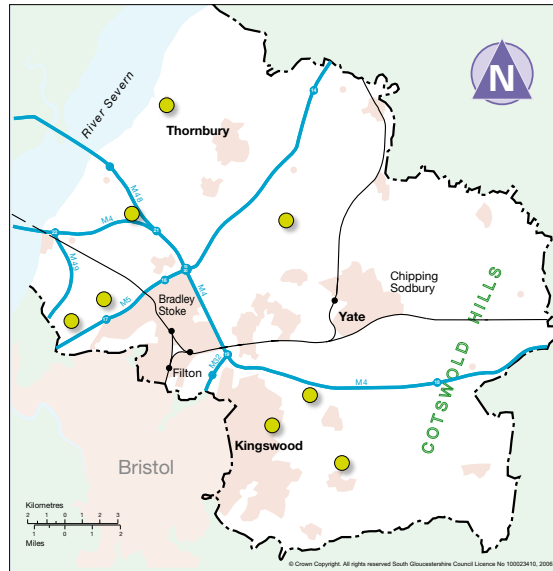
Only females are recorded and it is likely that there are still undiscovered colonies. They are effectively biennial, having a 'boom or bust' cycle from year to year.





The land around St. Arilda's Church, Cow Hill hosts the second largest known colony in Avon. Glow worms are also found at Tytherington, Almondsbury, Pucklechurch, Tockington, Olveston, Cleaves Wood, Wick Golden Valley LNR and the cycle path at Mangotsfield Station.

Many of the sites appear to be linear habitats such as former railway lines and roadside verges.



● Distribution of Bath Glow-worm 2006

Why is there an Action Plan?

It is widely held that glow worms are under-recorded and becoming increasingly scarce nationally.

Because the females and larvae are flightless, colonisation of new sites is difficult. This makes them vulnerable to local extinctions; which, in turn, increases the importance of protecting existing colonies.

Glow worms are affected by the cutting of road verges and street lighting, and so are a species directly affected by Council functions.

Current factors causing decline

- Habitat loss through development or agricultural 'improvement'
- Habitat change - poor management (cutting or grazing)
- Poisoning - use of slug pellets and other insecticides
- Street lights - artificial lighting making it difficult for male glow worms to find females

Current Local Action

- St Arilda's Church, Oldbury and the adjacent road verge are managed for glow worms.

Associated Action Plans:

South Glos:
Old Meadows and Pastures

Avon BAP:
Grassland

Species local



TARGETS: (See table of actions Table 12)

- 1 Identify all existing glow worm colonies in South Gloucestershire**
- 2 Monitor the population size and management of existing colonies**
- 3 Ensure known glow worm colonies are protected and in favourable management**
- 4 Involve people in glow worm conservation.**

TABLE 12: Glow worm Actions 2006 – 2015

Actions	Target	Date	Lead	Other partners	Measurable outcome
1. Collate existing records, encourage new surveys and provide training.	1,2	2007/8	SGC(NBE) BRERC	All inc. BP, Wildroots, LNRs	Records, Number of training events
2. Include glow worm in notable species in BRERC data searches.	1	2006	BRERC		Inclusion
3. Require glow worm surveys of development sites with good habitat and ensure appropriate mitigation when necessary.	1,2	Ongoing	SGC(DC)		Number of surveys
4. Ensure that landowners and managers have advice on appropriate land management and lighting and encourage adjoining land to be managed sympathetically.	3	2010	SGC(NBE)	BRERC NE, FWAG, SGC(DS)	Advice given and publications Number of farms/ hectares in Env schemes
5. Submit articles to at least 1 publication per year to encourage recording and protection with a focus on slug pellets.	1	Ongoing	SGC(NBE)	BRERC groups	Number of press releases

Abbreviations: BP – Biodiversity Partnership, BRERC – Bristol Regional Environmental Records Centre, FWAG – Farming and Advisory Wildlife Group, LNR – Local Nature Reserves, NE – Natural England, SGC – South Gloucestershire Council, DC – Development Control Team, CS – Community Services, DS – Direct Services, NBE – Natural and Built Environment Team.



What Can I Do?

- Report sightings to BRERC www.brerc.org.uk
- Join your local voluntary wildlife group
- Help monitor existing populations and their distribution
- Take part in glow worm surveying evenings in South Gloucestershire
- Encourage local landowners, parish council and/or PCC to manage verges and churchyards sympathetically



Slow-worm

(*ANGUIS FRAGILIS*)

Introduction

Although often mistaken for snakes, slow-worms are harmless and are actually legless lizards. The Latin *Anguis fragilis* means 'brittle snake', referring to the slow-worm's ability to drop its tail to escape from a predator.

Ecology

Slow-worms are often referred to as 'the gardener's friend' as they feed predominantly on pests such as slugs, spiders and ants, as well as earthworms. Their very small scales give them a beautiful, glassy, highly polished appearance - and while females are generally brown with dark sides and a thin line down their back, the males vary in colour, from grey to a dull brown or bronze, with blue iridescent speckles.

Slow-worms are usually found in well-vegetated habitat such as grassland, allotments, gardens, railway embankments and hedges. While they will bask in the open, slow-worms are generally inconspicuous and secretive, hiding beneath sun-warmed objects such as wood, stones or corrugated iron sheets before emerging to hunt at dusk or after rain.

Like adders, slow-worms are ovi-viviparous, the eggs being retained within the females and hatching inside, with 6-10 young being born each year in August or September. They hibernate communally for 4-5 months during the winter (mid-October to March), utilising old tree stumps, rabbit burrows and under man-made structures such as buildings or piles of rubble.

Current Status

Slow-worms are protected in Britain under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended).

They are also listed under Appendix III of the Bern Convention and classified as a Species of Conservation Concern under the UK Biodiversity Action Plan, although not a UK Priority Species.

Species local

Associated Action Plans:

Old Meadows and pastures, Glow worms, hedgehogs

Distribution

Slow worms are thought to be the most commonly distributed of all European reptiles, occurring across much of Europe and the UK.

It is widespread throughout the British Isles and is recorded in every 10km square within South Gloucestershire.

Why is there an Action Plan?

Slow worm numbers are thought to be declining. Populations are at risk from development, particularly as they are often found on so-called 'brown field' sites such as railway sidings, waste land, allotments, etc.

Entire populations can unknowingly be wiped out during development or unsympathetic habitat management.

Current factors causing decline

- Loss of habitat due to development
- Unsympathetic management (strimming, tipping, removal of rubble)
- Little new habitat created, due to smaller gardens and fewer allotments
- Predation from cats
- Poisoning - slug pellets
- Disturbance from people – especially children
- Human persecution - mistaken for snakes
- Accidental killing by grass cutting

Current Local Action

- Surveys are required for development sites
- Avon Reptile and Amphibian Group work to monitor species and raise awareness





TARGETS: (See table of actions Table 14)

- 1 Gather records to establish the number/distribution of slow worms in South Gloucestershire and prevent loss of populations**
- 2 Sympathetically manage public or private land for slow worms**
- 3 Raise the profile of slow-worms and reptiles in general**

TABLE 14: Slow-worm Actions 2006 – 2015

Actions	Target	Date	Lead	Other partners	Measurable outcome
1. Raise awareness of slow-worms, their habitat and recording with: <ul style="list-style-type: none"> • managers of churchyards and cemeteries • schools • parks • managers of allotments and allotment holders • Local Nature Reserves 	1,2,3	2010	SGC(NBE)	All	Successful project
2. Work with ARAG (Avon Reptile and Amphibian Group) to run one reptile training event per year raises profile of slow-worm conservation.	1,3	Ongoing	ARAG BRERC	SGC(NBE)	One event a year
3. Promote slow-worm-friendly gardening to public and take part in Wild About Gardens project.	2	2007	AWT	BP, RHS	Publicity material
4. Require specific slow worm surveys of development sites with suitable habitat (e.g. railway embankment, allotment, rough grass and ensure appropriate mitigation and monitoring when necessary.	1		SGC(DC) SGC(NE)		Number of surveys

Abbreviations: AWT – Avon Wildlife Trust, BP – Biodiversity Partnership, BRERC – Bristol Regional Environmental Records Centre, RHS – Royal Horticultural Society, SGC – South Gloucestershire Council, DC – Development Control Team, NBE – Natural and Built Environment Team.

Species local



What Can I Do?

- Learn more about slow-worm ecology
- Report sightings of slow-worms (dead or alive) to BRERC
www.brerc.org.uk
- Use alternatives to slug pellets to avoid poisoning slow-worms
- Garden for slow-worms by creating long grassland and stone/log piles in your garden.
- Encourage your local allotment holders to garden for slow-worms
- Join the Avon Reptile & Amphibian Group or local voluntary wildlife group
- Join the Herpetofauna Conservation Trust
www.herpconstrust.org.uk





Wild Service Tree

(SORBUS TORMINALIS)

Introduction

An uncommon tree largely confined to ancient woodland. When over-ripe its berries can be used to make an alcoholic drink called 'Chequers' – hence its alternative name, the 'Chequers Tree'.

Ecology

Wild Service trees grow to 25 metres in height and have greyish brown, flaky bark. The leaves have 6-10 pointed lobes slightly similar to field maple. The tree is easiest to spot in autumn, due to its vivid red leaves and unusual brown berries.

In the UK it is associated with Pedunculate Oak and tends to grow on poor, damp soils.

Current Status

The species is classified as 'rare', but not a UK priority.

Distribution

The tree grows throughout Europe, North Africa, the Caucasus region and the Middle East.

The tree is native to the UK and occurs at very low numbers in most counties south of Cumbria. In South Gloucestershire, specimen wild service trees can be seen in Lower Woods near Wickwar and have been recorded as part of the Field Boundaries survey in 2004 growing in hedgerows (which are thus likely to be remnants of ancient woodland).

Why is there an Action Plan?

The tree is an indicator of ancient woodland and ancient hedgerows. It grows by suckering and successive clones can be many hundreds of years old.

Species local



Current factors causing decline

- Inappropriate woodland management
- Hedgerow loss
- Inappropriate hedgerow management
- Lack of understanding or awareness

Current Local Action

- Most ancient woodland surveyed and under suitable wildlife schemes
- Wild service tree be included where appropriate into new planting schemes
- The Tree Life Centre, Kingswood and Landcare Nursery, Old Sodbury stock and distribute wild service trees for private planting
- A Wild Service Tree field guide produced by South Gloucestershire Council in 2005 to raise awareness and encourage volunteer surveys
- The Council's 'Trees' and 'Biodiversity and the Planning Process' planning guidance includes a specification for the necessary ecological surveys for development
- Tree Preservation Orders
- Lower Woods Management committee carries out wild service tree surveys in Lower Woods

TARGETS: *(See table of actions Table 15)*

- 1 Continue to survey and record wild service trees in South Gloucestershire**
- 2 Continue to promote new planting of wild service tree using native, and if possible, local stock**



**TABLE 15: Wild Service Tree Actions 2006 – 2015**

Actions	Target	Date	Lead	Other partners	Measurable outcome
1. Distribute wild service tree field guides and encourage surveys in ancient woods and hedgerows.	1	By 2008	SGC(NBE) BRERC	GWT	Continue to distribute
2. Investigate the source of native and local provenance wild service trees.	2	Ongoing	SGC(CS)	BTCV, Landcare	Number of new trees
3. Include single specimen wild service tree in planting schemes for new development.	2	Ongoing	SGC(NBE)	SGC (CS), BTCV, FoA	Presence in planting schemes

Abbreviations: BRERC – Bristol Regional Environmental Records Centre, BTCV – British Trust for Conservation Volunteers, FoA – Forest of Avon, GWT – Gloucestershire Wildlife Trust, SGC – South Gloucestershire Council, NBE – Natural and Built Environment Team, CS – Community Services

What Can I Do?

- Teach yourself to identify wild service tree
- Report sightings to BRERC www.brerc.org.uk
- Help monitor existing populations where known to occur
- Join your local voluntary wildlife group
- Encourage your parish council to plant a single specimen wild service tree in the parish



Biodiversity Action Plan 2006-2015

Conclusion



Introduction

The UK signed up to the international convention on biodiversity in 1992 and the Biodiversity Action Plan (BAP) was the delivery mechanism chosen. A document was written by South Gloucestershire Council with the full involvement of a large biodiversity group and other outside partners.

The plan contained a list of priority species and habitats which will remain as a material consideration in the planning process. In addition 186 actions were drawn up, of which many have now been completed. The plan was a useful way to prioritise conservation activities for key species and habitats and to help different groups to work together. Despite these successes biodiversity has continued to decline in South Gloucestershire and across the UK (State of Nature 2014).

Biodiversity loss is now considered by many leading scientists to be one of the biggest threats to humanity.

It is widely acknowledged that biodiversity needs to be tackled at a much bigger, landscape scale (Making Space for Nature, Lawton); with local projects contributing. The Biodiversity Action Group is currently looking at parish actions that can contribute to England’s challenging habitat targets (Biodiversity 2020 DEFRA).



Using a pole lathe at Three Brooks LNR

“

A high quality environment is critical to South Gloucestershire Council and the action plan helped highlight key actions for wildlife. The plan and its delivery would not have been possible without the dedication of local conservation volunteers and wildlife surveyors.

”

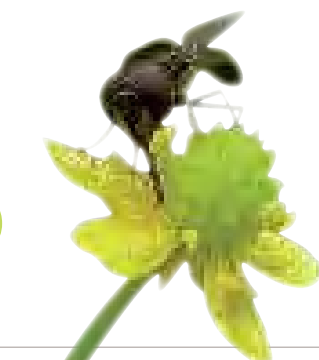
Colin Hunt, Lead member for Planning (SGC)

“

If South Gloucestershire is to remain “a great place to live and work” everyone needs to continue to recognise the great environment which contributes so much to that greatness. More and more we are realising that you can’t fence off precious sections of our countryside but must involve everyone in recognising and valuing where we live. Planning for the environment can be at a local level as long as we all have the same focus for our efforts; wildlife does not recognise parish, county or national borders. We must keep our wonderful environment at the forefront of our thinking as we move forward in planning how South Gloucestershire can maintain its vitality in years to come

”

Fen Marshal, Chair of Biodiversity Action Group (BAG)



South Gloucestershire BAP summary of progress 2006 – 2015.

South Gloucestershire BAP Priority Habitats, UK Priority Species and Local Species	No. of BAP actions completed	No. of actions with some progress	No. of actions no information reported	Total
Habitats				
Arable farmland	3	2	2	7
Broadleaf woodlands	7			7
Hedges and field margins	6	1		7
Old meadows and pastures	8	2		10
Orchards	8			8
Ponds, rhymes, rivers and water bodies	5			5
Saltmarsh and coastal floodplain	4	2	1	7
UK priority species				
Bullfinch	5			5
Dormouse	4	1		5
Great Crested Newt	3	1	1	5
Lesser Horseshoe bat	3		1	4
Song Thrush	5	1		6
Tassel Stonewort	3	3		6
White-clawed Crayfish	5	1		6
Hedgehog	3	2		5
Local species				
Adder's Tongue Spearwort	3			3
Barn Owl	4	1		5
Bath Asparagus	2	1		3
Bithynian Vetch	3			3
Glow Worm	3	1	1	5
Slow-worm	3	1		4
Wild Service Tree	3			3
2011 interim report	70	30	19	119
Total	93	20	6	119

The table above illustrates that:

78% of BAP actions are complete or significant progress has been made

17% of BAP actions have some progress

5% of BAP actions have no information reported.

Note: Where an action has been categorised as red it should not be assumed that no action has taken place. In a number of cases information against actions has not been forthcoming. It should also be noted that we are assessing whether the actions have been achieved, not how successful they have been in improving the conservation status of a particular habitat or species.

South Gloucestershire Council would like to thank all the organisations and volunteers who have helped to achieve the actions set out in this BAP.

Case studies

Bristol Avon Rivers Trust (BART) is a newly formed community led organisation which aims to deliver practical river restoration in the Bristol Avon catchment, which will contribute to many of the BAP river actions. Through promoting an ecosystem-based approach, they aim to re-connect communities to their rivers and help river users and lovers better appreciate and improve their local rivers and streams. The water framework directive listed the Bristol Frome as bad and from 2014 BART is working with the Environment Agency and others to improve conditions on the South Gloucestershire Bradley Brook and Ladden Brook tributaries. www.bristolavonriverstrust.org

Inglestone and surrounding commons are being restored to favourable condition with funding from Natural England through their Higher Level Stewardship agreement. As well as contributing to the grasslands actions; ponds and wetlands are being restored with partners including the Millennium Seedbank at Kew and Bristol Zoo benefiting Adder Tongue Spearwort and Tassel Stonewort. Volunteers have been trained to help monitor Great Crested Newts at Inglestone as well as the Three Brooks reserve in Bradley Stoke.

Orchards have been one of the most successful habitat actions with many communities, parishes and schools now with their own orchard and/or apple day. In 2012 Sarah Wells, a fabulous volunteer, went through old parish maps highlighting the 90% of orchards that have been lost.

The Forgotten Landscape is an exciting Lottery funded landscape project based along the Severn estuary 2015-2018. The project will deliver actions from the BAP for orchards and saltmarsh as well as great crested newts and additional actions for water vole.

www.aforgottenlandscape.org.uk

White clawed crayfish are now assumed to be extinct from South Gloucestershire. The population was struggling with non-native signal crayfish and disease. Bristol Zoo and partners' removed some from the Frome which went into a breeding and rehoming programme.

B-lines is a landscape scale grassland restoration project. Buglife and Avon Wildlife Trust are working together locally to link up key wildflower routes for pollinating insects contributing to the grassland BAP. www.buglife.org.uk
Since 2008 14 nominated council road verges have signs



Abbotswood Apple Day 2015

“ Reversing the decline in biodiversity is a huge challenge, given the scale and pace of loss of nature and wild spaces – even more so for our region, which has one of the fastest-growing human populations in the UK, with the consequent development pressures. Notwithstanding the scale of the problem, safeguarding our natural environment is a challenge we must meet. As well as having its own intrinsic value, nature provides us with everything we need for our own survival, wellbeing and economic prosperity ”

Taken from Avon Wildlife Trust's Vision (AWT)

“ Successful wildlife conservation needs to be based on robust science. BRERC relies on many talented and dedicated volunteers to continue to augment our baseline data on which the BAP was originally produced. ”

Bristol Regional Environmental Record Centre (BRERC)



Surveying a wild flower meadow at Wapley Bushes LNR, Dodington

and management plans to ensure the grassland and species such as glow worms are well cared for. This has been another of the very successful actions with these verges now abundant in wildflowers and new partnership working with the Greater Bristol Pollinator project www.avonwildlifetrust.org.uk/getbristolbuzzing

Avon Bat Group are carrying out extensive and ongoing research into roost sites across the area, and most especially for horseshoe bats around Tortworth and a range of bat species within the Avon Valley Woodlands Local Nature Reserve near Hanham. www.avonbatgroup.org.uk

The Dormice on Your Doorstep project delivered many of the BAP actions, educating volunteers and landowners about dormice and surveying many hedgerows and woodlands finding some new populations but highlighting an overall scarcity.

Hedgehog numbers in the UK are sadly plummeting with a national campaign to help them www.hedgehogstreet.org. The Yate based volunteer rescue centre continues to be as busy as ever helping injured and sick animals www.hedgehogrescue.co.uk.

View of the Avon Valley near Hanham



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At a personal level I think the BAP is a good tool as a reminder that we need to be proactive and keep an eye on things, not just the target species. I would like to see it continue in some form into the future, to ensure continuity. There's too much short-termism in my view where wildlife is concerned.

Ken Anstey,
South Glos Biodiversity Action Group (BAG)
and Avon Bat group

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Even with the emphasis moving away from them nationally, BAPs have a crucial role in conserving wildlife at a local level, not least because they provide a mechanism for planning authorities to develop policies to protect a variety of species of flora or fauna – such as glow-worm, for example - which do not have legal or national status and which might otherwise slip through the net.

Dave Willis,
South Gloucestershire Council Ecologist

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Many in the farming community of South Gloucestershire have been going the extra mile to protect and enhance the countryside in which they farm for decades. Natural England's new Countryside Stewardship scheme is open and we hope the transition will be smooth allowing new and existing applicants to continue delivering good environmental practices, alongside the production of food.

South West Farming
and Wildlife Advisory Group

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Chittening Warth



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More emphasis should have been put on habitats in the BAP. However because most of the habitats are in private ownership the whole process of protection, restoration and creation is dependent on forging relationships with those landowners. At the same time economic constraints have meant that the field officers workload has been spread wider so they are unable to devote as much time and resources as previously. So for the future the B.A.P. needs:

- 1. To be more focused
- 2. To develop a system whereby community or parish based volunteers talk to landowners.
- 3. Special interest groups should be brought together and develop a network/system to inform each other and work together.
- 4. The professional agencies need to work with well-informed amateurs who often have greater specific expertise

**Richard and Pauline Wilson,
South Glos BAG and Southwold AWT**

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It was a pleasure to work with so many knowledgeable and dedicated people and some wonderful things have been achieved. However the scale of public support, understanding and protection needed was always going to be massively aspirational. It is deeply sad that species are currently going extinct from South Gloucestershire.

**Sally Pattison,
South Gloucestershire Council
Biodiversity officer**

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We do not inherit the earth from our ancestors; we borrow it from our children.

Anon

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South Gloucestershire has a rich history in orchards - though many today have been lost.



**If you need this information in another format or language,
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