

Wildlife Gardening Forum

Conference Friday 6th March

Resumé of presentations

Special Session: Conserving plants and fungi in gardens

1. Introduction to the special session Steve Head WLGF Steering Group

To date the Forum has not given much thought to using gardens to conserve plants. Instead, we have encouraged lists of plants to:

- attract insects with their nectar and pollen
- become food for caterpillars
- provide food for birds
- provide cover and nesting sites

But what about the poor old plants themselves ? There is a significant continuing debate within the Forum about the importance (or not) of persuading people to grow largely native plants to conserve native insects. The Plants for Bugs project is designed to answer some questions about this. This special session (and the subsequent workshop session), were designed to explore the role of our gardens in conserving plants and fungi in their own right.

Among the questions to be addressed are:

- Can gardens help or hinder native plant conservation?
- How important is it to conserve “heritage” cultivated plant varieties ?
- What about the neglected “lower” plants and fungi?
- What should be the Forum’s message on these issues?

2. The role of native plants in domestic wildlife gardens. Barbara Smith, Flora Locale

Flora locale seeks to restore wild plants and wild-plant communities to lands and landscapes across the UK, raising the biodiversity, environmental quality and enjoyment of town and countryside. The primary focus is on field-scale restoration work in the countryside. Flora locale produces publications and technical guidelines, technical support and training for restoration managers, and run their website www.floralocale.org (and www.wildmeadows.org.uk, which advises on restoring species-rich grasslands.)

Using British wild plants in gardens can improve gardens for wildlife, and could be used to increase public awareness and understanding about our wild plants, their relationship to our fauna, and their own role in landscape and conservation. Many are also very garden-worthy, and can be easily integrated into garden designs

- Annual wild flowers create colourful borders (e.g. cornfield annuals).
- Individual plants can be used to add structure (teasel, juniper, wild angelica, weld (*Reseda luteola*), vipers bugloss, dark mullein)

- Woodland plants provide early flowers suitable for shady areas (early dog-violet, oxlip, lords-and-ladies, wood avens, wood sorrel, butcher's broom, woodruff, wood anemone).

Some native plants are known to be good for wildlife, including: foxgloves, yellow archangel, dyer's greenweed, field scabious, greater knapweed, dwarf mallow, Jacob's ladder, oxeye daisy, wild thyme, maiden pink, honeysuckle, among many more. Urban gardens may not attract the same wildlife as country gardens, so just leaving an area to 'go wild' will often disappoint. Gardeners need good information on managing wild flowers in beds, borders and meadow areas is essential.

Flora locale specifically does NOT wish to suggest that:

- only British wild plants should be used in gardens
- British wild plants should form the majority of plants in gardens
- everyone must have British wild plants in their garden
- all British wild plants are suitable for using in gardens
- other plants, whether non-natives or garden varieties, are no good for wildlife – some are, some aren't!

Flora locale encourages the Forum and its members

- to fully acknowledge the role of wild plants in gardens,
- for wildlife and for raising public awareness about Britain's wild plants

The box below gives the text of the position statement Flora locale composed specially for the Forum meeting.

***Flora locale* is a member of the Forum for Gardening with Wildlife in Mind – a consortium of individuals and conservation groups keen to promote wildlife-friendly gardening. This document outlines *Flora locale's* views about using British wild plants in gardens.**

Flora locale's primary aim is to encourage the restoration of wild plants and plant communities at the field-scale, especially in the countryside. This is the focus of most of our work. However, we recognize that wildlife-gardening can play an important role in both raising awareness among the public about the plight of our native wildlife as well as to improve gardens for wildlife. Using British wild plants in gardens can contribute to both of these objectives.

By using some British wild plant species, gardeners may be encouraged to find out more about our native wild plants, where they grow and take an interest in their conservation in the wild. Many native plants are also very good to use in gardens. They are host plants to the larval stages of many insects, especially moths and butterflies, provide a nectar source for buglife and the seed of some species is a useful food source for birds. Common garden birds, such as Blue Tit, also benefit from the thriving buglife associated with some of our native trees and shrubs.

Gardens do not need to be filled with native plants to be good for wildlife – but native species can make a valuable contribution to improving biodiversity in gardens, whether as individual plants or established as small areas of wildlife-friendly habitat, such as a wildflower meadow.

Flora locale will continue to work as part of the Forum for Gardening with Wildlife in Mind, to promote the benefits of using British wild plants in gardens, to raise awareness about wild-plants and their conservation and to improve gardens for wildlife.

3. Messages for gardeners - Plantlife's view

Sophie Thomas, Plantlife

Plantlife's aim is the conservation of wild plants in their natural habitats, *in situ*, not *ex situ*, and views reintroduction or translocation as a last resort. Many native plants on sale are not of local origin, and so are not suitable to 'bolster local populations'

Plantlife considers that role of gardeners (rather than gardens) can be significant. The 15 million British Gardeners have great purchasing power and influence, and make millions of observations about their plants. On the other hand, 60% of our invasive plant species originated in gardens, while two thirds of UK peat use is in private gardens, creating the same carbon emissions as 277,000 return trips to Sydney.

Good gardening practice helps to safeguard wild plants. Gardeners need to be aware of non-native invasive plants, and dispose of them safely, or avoid their use completely. We can help promote positive decision making, in sustainable bulb sourcing, peat use, care with bluebells and other species, and purchasing other garden items and furniture.

Encouraging gardeners to grow native species can help send out messages about threats and declines in the wild, where 20% are under threat. This should help make more people passionate about native plants and interested in helping to conserve them. This principle underlies Plantlife's **Grow wild to know wild** campaign (www.plantlife.org.uk/uk/plantlife-discovering-plants-grow-wild.html).

The pasque-flower, *Pulsatilla vulgaris* is a good example. It is one our most beautiful native flowers, and is now very scarce in the wild, like the undisturbed chalk grassland on which it thrives. It has declined through ploughing up of grassland, the use of herbicide and fertilizer, and overgrazing. It is very easily grown in well-drained garden soil in sun and is excellent for rock-gardens and borders. Forms with white, red and pink flowers are also widely available, and it is easily grown from seed.

Gardeners can also help by making observations about native species in their gardens. For many native species we need more information about what conditions they need to thrive or germinate, and on their earlier flowering with climate change. Gardeners could also identify potentially invasive species – and how to control them.

4 Conservation of cultivated plants: the forgotten resource.

John David, RHS Wisley

Britain has a climate that favours gardening and allows gardeners to grow a wide range of plants from all around the world. As a result, a large proportion of the biodiversity of gardens is the cultivated plants. These plants are important for our native biodiversity – perhaps exemplified by the non native *Buddleja*, well-known as the butterfly bush.

New plant varieties are continually being bred and sold, while others already in cultivation fall out of favour or are forgotten. Useful attributes and genetic diversity are being lost. We need maximum biological diversity of all sorts when entering a period of environmental change. However, loss of natural (wild) biodiversity is seen as the priority, which is why this talk was subtitled "the forgotten resource".

120 cultivars of *Lachenalia* were raised in the UK between 1880 and 1930, but almost all are now extinct. Many of the cultivars were lost during the Second World War and very few persisted to the present day following the decline in interest in growing plants that need heated greenhouses.

The RHS database of plant names contains over 290,000 records, and every year over 3000 new orchid hybrids alone are registered. The RHS *Plant Finder* lists over 70,000 mostly hardy plants available from retailers. While this sounds healthy, over the 20 years the Plant Finder has been published, some 34,000 plants have ceased to be listed. That doesn't mean that they are extinct but they are endangered and many will have been lost to cultivation.

We can demonstrate a longer-term rate of loss, using the example of the daffodil. The International Daffodil Register contains details of over 29,000 cultivars which have been published back to the mid eighteenth century. The RHS *Plant Finder* lists only 1,950 cultivars as currently available in the UK, only about 6.5% of the total number listed in the Register. Some others may still be kept in specialist collections but it is clear that a huge percentage of the daffodils that have been raised and named are extinct.

As the environment changes, we will find that plants currently popular are less well adapted and we will need to go back to older genotypes or original wild species to develop new varieties that are better adapted to post climate-change conditions.

Breeding programmes tend to focus on special attributes such as form or double flowers, so valuable characteristics like a particular colour or even disease resistance can be lost. Without retaining the early cultivars these genetic attributes can be permanently lost and unavailable for future breeding.

Many plants grown in gardens are selections from the wild. Where the original population has massively reduced, garden stock may be a source of genetic diversity to improve the viability of natural populations. Work has been done to cultivate plants that are endangered in the wild, although no re-establishment programme has yet started to use them. We would have to be careful to ensure that any plants used in this way are not hybrids and represent part of the original genetic diversity of the species.

Some garden plants are derived from native plants and go back many centuries. Some are featured in folk lore or local tradition and should be preserved as cultural heritage in gardens. People restoring historic gardens will look for exactly the kinds of plants that were grown at the time they were laid out.

The RHS held a conference jointly with the National Council for Conservation of Plants and Gardens (NCCPG, now known as Plant Heritage) leading to the Growing Heritage Action Plan for conservation of plants in cultivation (www.growingheritage.org.uk)

The Plan's 5 objectives are:

Knowledge – We need to document our plants and share the information – conservation depends upon being able to identify correctly the taxa

Education – We need to make the case for cultivated plant conservation to the public and encourage them to get involved

Strategy – to get decision-makers to for cultivated plant conservation

Enhancing diversity – to define how gardeners and commercial growers might increase the diversity of plants available for cultivation within the new international agreements on biodiversity

Best practice – spread best practices for plant conservation through all branches of horticulture, and ensure that we are managing our existing genetic diversity responsibly and sustainably

Among current projects are:

- Working out ways to evaluate the threat to individual cultivated plants like the “Red Data Book” system for wild species.
- Since we can’t rely on individual gardeners to preserve all varieties, we are investigating seedbanking and cryopreservation with the NCCPG and Royal Botanic Gardens, Kew to preserve seeds of named plants from National Plant Collections.
- An inventory of nursery catalogues which although ephemeral, record much information about cultivated plants including descriptions, illustrations and related information that will allow people to trace and name varieties of plants.
- Getting Plant Conservation (including cultivated plants) on the UK school syllabus.

5 Role of gardens in lichen conservation

Dr William Purvis NHM

Lichens are much neglected plants: symbioses of algae and fungi that occur in many varieties of form and colour. When we create gardens for ourselves, we create without noticing it, many useful habitats for lichens. Crucially, they establish themselves in our gardens without our introduction, so garden lichens constitute a viable conservation resource.

Lichens are often specific in their requirements (eg to the coastal zone) and are bio-indicators of pollution and environmental quality. *Lecanora conizaeoides*, first found in Epping Forest, is extremely tolerant of acid pollution, and spread enormously through Britain and Europe as the result of rising SO₂ levels, aided by dispersion along railway lines.

Recent surveys have been made in Regent’s Park, and revealed species not seen for 200 years, including unexpected Mediterranean species.

Some lichens may be vulnerable in the wild. Some substantial colonies, tracked from 2002 to 2007 have inexplicably declined. Gardens may prove valuable for lichens, with their very varied soil and lighting conditions and diverse species of host trees.

6. Gardens and Bryophytes

Dr Agneta Burton University of Hertfordshire

Why does everyone hate moss ? A recent email said:

“.... For the past 28 years I have been fighting a running battle with moss. I have tried various products to combat the moss taking over the lawn as well as countless hours trying to rake it out, but whatever I do, it seems to be coming back stronger each year. Is there any reason why I can't just let it grow and have a mossy rather than a grassy lawn? It would save a lot of effort and I wouldn't have to mow the grass any more.”

Bryophytes including mosses, leafy and thalloid liverworts are fascinating, beautiful and diverse plants. Britain has 756 species of moss, 297 liverworts and 4 hornworts, 60% of the whole European flora. We may fight moss in our lawns, but in other countries, such as Japan, gardens can be dominated by swathes of deep green tranquil moss carpets.

A study in 32 gardens in England, Wales and Scotland recorded 216 species, averaging 27 per garden (with the most diverse recording 108). A study of Norfolk gardens, in a dry part of the UK still recorded 41 species from 26 gardens

Gardens have many microhabitats suitable for bryophytes, including lawns, trees and shrubs, cultivated beds, rockeries and other hard surfaces, ponds and rotting wood. The species found will depend on geographical factors, but in addition house style and age, the size of the garden, soil type and planting styles and management.

Globally, bryophytes are threatened by

- Habitat loss
- Climate change
- Pollution - acid deposition; nitrogen deposition (eutrophication)
- Harvesting e.g. for hanging baskets, floristry trade, packaging.
- Peat extraction.

Key issues for bryophyte conservation include:

- Accurate recording of species and their distribution –garden owners can help
- Better understanding of the biology and ecology of the many species.
- *In situ* conservation with protection
- *Ex-situ* conservation: includes potential for re-introductions

A new Field Guide to UK Bryophytes will be published this year through the British Bryophyte Society (www.britishbryologicalsociety.org.uk) . The Opal Project will be running a public survey in the East of England of epiphytic mosses, liverworts, lichens and fungi on orchard and garden trees.. www.OPALexplorenature.org

7 Gardens and conserving fungi

Prof. David Hawksworth Natural History Museum

Fungi are not plants – they are actually evolutionarily closer to animals. They are extraordinarily varied. Studies in British sites revealed the following diversity

| | |
|------------------------------------|---------------|
| Esher Common (Surrey) | 3,282 species |
| Slapton Ley NNR (Devon) | 2,500 |
| Mickelham (Surrey) | 1,300 |
| Royal Botanic Gardens Kew (Surrey) | 1,607 |
| Buckingham Palace (London) | 670 |

Two species previously unknown to science were discovered in the Buckingham Palace survey.

Fungi in gardens enjoy a variety of lifestyles The majority are probably useful saprobes – breaking down dead plant material, but others are lichen-forming, mycorrhizal (valuable symbiotic root associates of higher plants), or helpful pathogens of insects. Only a minority are plant pathogens, but these can be worrying such as *Phytophthora ramorum*, the agent of “Sudden Oak Death”.

There are a huge variety of attractive and fascinating fungi to be found in gardens. Lawns can harbour rare species, such as *Hygrocybe* which are characteristic of long-undisturbed grasslands. It is possible to buy cultures of some edible species such as Shiitake and Oyster mushrooms which can be cultured for the pot on dead wood. Fairy ring fungi are edible.

Tips for conserving fungi in gardens include:

- Do not physically disturb ancient lawns or mow when mushrooms are fruiting
- Minimize use of pesticides
- Make compost
- Retain rotten logs
- Watch out for plant/tree pathogens
- Consider cultivation of edible fungi in lawns and on logs

If you are interested, get in touch with the British Mycological Society at www.britmycolsoc.org.uk

General Session

8. **Gardeners' Worlds: a landscape ecology approach to garden biodiversity**

Mark Goddard. Leeds University

Gardens are a major component of the city landscape – the BUGS II project showed they cover about 25% of the urban area of the five UK cities they studied, and up to 50% of the green space in some cases. At the national scale UK gardens contain more than 28 million trees, 4.7 million nest boxes and 3.5 million ponds. People in 2.6 million households feed the birds. UK gardens are significant habitats.

Landscape ecology is the study of the relationship between spatial patterns and ecological processes. The basis unit is the 'patch' – an area distinct from its surroundings. We can explore how differences in patch structure, size, connectivity, shape, composition etc influence wildlife..

Larger habitat patches generally contain more species and this is true of urban ecosystems. Town landscapes are particularly patchy places, made up of a complex mosaic of small and isolated patches at fine spatial scales.

The Wildlife Gardening Forum Manifesto calls for "*research that ensures we learn more about how neighbouring gardens can work together to help wildlife*" and for "*more gardens that contain wildlife habitats complementing those in nearby gardens and green spaces*". The Gardens Biodiversity Action Plan for Stirling includes "*the integration of green urban networks linking gardens with semi-natural habitats*" and "*reduce the degree of isolation of wildlife gardens*"

This is landscape level ecology! Single gardens do not exist in isolation, but are part of a wider landscape that includes other gardens, parks, golf courses and so on.

We have examples of long term studies of single gardens, such as Jenny Owen's Leicester Garden, and of short-term studies of many gardens such as the Sheffield BUGS I & II projects. From these we know that:

- Gardens contain tremendous plant diversity, mostly exotic.
- The number of bird and invertebrate species present is linked to 3D vegetation structure.
- Larger individual gardens contain:
 - more wildlife-friendly features such as trees and ponds
 - more bird species (but *not* more invertebrate species)

Urban environments exhibit a hierarchical structure. If we want to achieve a coordinated management of city landscapes we need collaboration and communication between householders, community groups, ecologists, urban planners, developers and NGOs operating at all spatial scales.

The individual householder's garden is the smallest scale, and the scale at which most research has been done into garden biodiversity. However, an *individual* householder's decision to plant a tree or create a pond will only have a local impact on less mobile species.

At the broader neighbourhood scale, the actions of several householders have a cumulative impact that will affect larger species and their population dynamics. This is the scale of organisations such as residents' associations or horticultural societies. These organisations can act as local 'stewards' and can be targeted to engage groups of gardeners in managing their land more sympathetically for wildlife.

At the city scale, the decisions made by urban planners, local government and housing developers (e.g. the location and character of new housing estates, or a policy to build on brownfield land) can sum up to regional impacts, influencing the urban ecosystem, and the regional species pool.

Individual gardens form networks of interconnecting green space at the neighbourhood and city scale. We need to research beyond the boundary of the garden fence – the suburban ecosystem does not recognise human boundaries. Larger mobile species like birds and bees that provide pollination and seed dispersal operate at the scale of groups of gardens and surrounding habitats.

Understanding how garden patch structure influences the diversity of these mobile species could lead to specific patch-scale conservation advice tailored to the surrounding landscape, which could be more effective than generalised wildlife-friendly gardening recommendations.

Current advice encourages gardeners to fit as many habitats into a single garden as possible, but it could be more valuable to maximise habitat diversity at the city scale by managing whole groups of gardens in a way that complements the landscape context, e.g. extend woodland patches by planting trees, or creating ponds by a wetland area. Ideally we would co-ordinate management across all scales in the garden hierarchy

Little is known about the optimal size, configuration or composition of garden patches. My research involves three levels of study:

- *Quantifying patterns*: Geographic Information System (GIS) software allows the analysis and calculation of landscape metrics to describe garden spatial distribution (i.e. garden patch size, shape, connectivity)
- *Quantifying 'quality'*: Analysis of aerial photographs to assess composition of garden patches (e.g. percent tree/lawn cover)
- *Quantifying processes*: Ecological sampling of several gardens within the same landscape to determine diversity of mobile species (e.g. birds, bees).

The study area is about 130km² of the Leeds/Bradford conurbation within the Leeds district. Ordnance Survey digital MasterMap data identify buildings and garden boundaries. In the study area gardens cover about 39.7 km² or 29.9%. The GIS system can define groups of gardens as ecologically more meaningful patches, and calculate measures such as patch size, shape and connectivity. Aerial photos clearly demonstrate how very different garden patches can be in terms of vegetation pattern, mature trees etc. Automatic techniques can be used to analyse the photographs and score wildlife relevant features in the garden patches. Finally, ecological sampling within the garden patches will reveal the wildlife present, and help reveal which of the features at the neighbourhood level most influence garden wildlife.

Hopefully this and future studies in other settings will provide the understanding needed to encourage wildlife-friendly management of groups of gardens across all scales from the neighbourhood to the city.

9. OPAL (Open Air Lab Project)

John Tweddle OPAL, NHM

The Open Air Lab Project is designed to encourage people to get back in touch with nature by enabling them to explore, study, enjoy and protect their local environment. It aims to build public natural history awareness, skills and confidence, and aid people to participate actively in identifying wildlife, monitoring and research.

OPAL is funded until December 2012 by £11.7 million from the Big Lottery Fund and is a partnership of 15 bodies, mainly Universities, but including the Natural History Museum, Field Studies Council, The Met Office, the National Biodiversity Network and the Royal Parks. Opal will include 31 highly relevant biodiversity and environment projects distributed among 9 regions of England and involving local outreach activities backed up by scientific programmes and building local networks.

Five mass participation national surveys are planned, coordinated by academic centres:

| | | | |
|---|--------|------|---------------------------------|
| Soil quality and earthworm distribution | Now! | 2009 | Imperial College London and NHM |
| Air quality (lichens and other fungi) | Autumn | 2009 | Imperial College London |
| Water quality (ponds and lakes) | Spring | 2010 | University College London |
| Biodiversity – wildlife in your patch | Autumn | 2010 | Open University and NHM |
| Climate and weather | Spring | 2011 | The Met Office |

In addition, OPAL provides several overarching projects, including

- OPAL web portal and iSpot website
- Wildlife information resources, online keys and recording tools
- Support for natural history societies
- Exhibitions and events programme

Overall it is hoped that OPAL will:

- Break down some of the barriers to public engagement with science
- Make it easy for interested folk to learn more about their local wildlife and environment, and play an informed part in its protection
- Increase our understanding of UK biodiversity and environment
- Help inspire and support the next generation of naturalists.

OPAL projects will hopefully be of great interest to Forum members. Many people access nature through gardens and OPAL will offer new opportunities. In particular the Biodiversity Survey (Autumn 2010) will focus on “Wildlife in your patch” (including gardens), investigating their value to wildlife through species recording and creating a habitat matrix.

Participants will be helped by:

- Printed and online survey packs
- Ability to enter and analyse results online
- View results instantly on map
- View other people’s results
- Supporting information
- Feedback from scientists
- Verified results freely available

It is hoped that many organizations within of the Forum can encourage their members to take an active role in the project. The OPAL website is www.OPALexplorenature.org and John Tweddle can be contacted at j.tweddle@nhm.ac.uk

10. The Plants for Bugs Project

Helen Bostock, RHS

Plants for Bugs is the first scientific attempt to answer the questions:

- Are native plant species best for wildlife?
- How good are introduced plants at attracting wildlife?

Approximately 70% of plants in the average garden are not native to the British Isles. Although there are no scientific data to back up the assertion that native species are much more important than exotics to support garden wildlife this claim is often made by organizations and gardening books.

Plants for Bugs is the first research project to be initiated by the Wildlife Gardening Forum. The WGF Research Working Group identified the gaps in knowledge, and the RHS put forward Wisley Gardens in Surrey as a proposed site. The RHS is committed to fund the first year of the study, which we hope will generate enough data to enable us to raise funds to complete the project.

The experiment will create carefully selected mixed plots of garden plants. Some will be true native species, others will be wholly non-native “exotic” species. A further group will consist of non-native plants which are commonly cultivated and are closely related to true native species. When the plants are established, specialists will collect and identify the insects using the plots, and see which types (natives, near-natives or exotics) support most species, and how much they differ.

The experimental layout was intended to be as relevant to gardeners as possible:

- To be in a garden setting
- To resemble a garden border
- Garden visitor access
- As well as providing adequate experimental replication

The project design will allow careful statistical analysis. Eighteen experimental plots, each 3m x 3m have been set up in two locations (RHS Wisley and Deers Farm, Wisley village). Three different sets of plant species (A,B,C) are each in turn divided into the three origin groups of:

- True native species eg *Viburnum opulus*
- Cultivated species closely related to native species eg *Viburnum dilatatum*
- Unrelated but functionally similar non-native cultivated species eg *Ozothamnus rosmarinifolius*

Each of the nine species set / origin groups is replicated at each locality, allowing robust statistical analysis of the results. The experimental plots have been prepared, and the plants sourced, and they will be planted out in May 2009.

Funding for subsequent years has still to be raised, and additional replication sites (eg within urban community gardens) would be valuable.

The project website is www.rhs.org.uk/News/PlantsForBugsProject.asp

The box below contains the text of a hand-out specially written by Helen for the Forum meeting.

Plants for Bugs:

Investigating invertebrate diversity in native and non-native garden plant communities

It is generally accepted that some plants are better at supporting wildlife than others. However, opinions differ on the relative importance of native and nonnative plants in the garden. Are natives best? How good are introduced plants at attracting invertebrates? Approximately 70% of plants in the 'average' garden are non-native so understanding their role is hugely important.

The Plants for Bugs project, based at RHS Gardens Wisley in Surrey, will try to answer some of these questions. Data will be collected from plots of three designs. Each plot will represent a garden border and be planted up with one of three plant groups: native (e.g. eglantine rose, *Rosa rubiginosa*), near-native (e.g. red-leaved rose, *Rosa glauca*) or exotic (e.g. *Fuchsia magellanica*).

Various sampling methods will be used to assess the richness of invertebrate species between plots - from ground beetles that roam under the plant cover, to caterpillars and other herbivores that eat the leaves and finally to flying insects such as butterflies that visit the flowers for nectar and pollen. As well as being of interest in their own right, these myriads of insects are also a link in the food chain for higher animals, such as birds and hedgehogs, so will be vital in determining how well our gardens support wildlife.

It is hoped that findings from this three year study will enable gardeners who wish to support biodiversity to choose plants with more confidence, backed by sound scientific advice from the UK's leading garden charity.

Visitors to RHS Gardens Wisley will be able to view the plots themselves from Summer 2009.

11. Update on Garden for Life project

Catriona Morrison SNH

Garden for Life (G4L) is a partnership of 21 organisations working in Scotland, supported by Scottish National Heritage. It grew out of the successful SNH Plant for Wildlife project initiated in 1997, was established in April 2001, and launched at the 'Gardening Scotland' Show at Ingliston in June 2001.

Its key aims are:

- To increase enjoyment and understanding of biodiversity
- To support action by gardeners for the benefit of Scotland's biodiversity.
- To promote the benefits of gardening for health and well being

Organisations belonging to the Forum meet on a regular basis to agree plans and strategies; share information; and to work together on projects. They have produced a series of leaflets which are

distributed to the public both through garden centre plant promotions, as well as at shows, schools, community events. The Forum also has an annual site visit, and the last was to Dawyck Botanic Gardens.

The G4L Forum has produced 6 leaflets -

- Garden for Life – and you'll never be short of visitors
- Garden for birds
- Garden for Butterflies
- Garden for Food
- Garden in pots and containers
- Garden without peat

G4L is represented at the annual Gardening Scotland event where we support the Living Garden stand. The central garden has a different theme each year. In 2008 this was the Jigsaw Garden, designed to make the public aware of what would attract wildlife back and give native plants a chance to thrive. This design won a silver gilt award. The theme in 2009 will be "Pathways to Health" - growing vegetables.

Garden for Life contributes to the Scottish Biodiversity Forum by raising awareness of biodiversity to a wider audience through support from Dobbies Garden Centre who promote the work of the G4L Forum and distribute leaflets from their largest outlet. The G4L Forum continues to encourage new membership and links to strategic projects such as the Defra Peat Initiative.

Scottish National Heritage funds the Biodiversity award for Beautiful Scotland with a prize of £500 in gardening vouchers. It was first awarded in 2008 and won by Cockenzie & Port Seton, East Lothian. The award is intended to raise awareness that garden designs can be of benefit to the community and the environment and where appropriate, link to the LBAP.

"Garden for Life - and grow closer to nature!"

www.snh.org.uk/about/initiatives/g4l/

12. Teacher training for wildlife gardening.: Ideas and Examples

Anna Williams Wildlife Gardening Project - North West Wales

The Wildlife Gardening Project started in 2003 as a partnership with Snowdonia National Park Authority, Countryside Council for Wales, Plas Tan-y-Bwlch, Treborth Botanical Gardens, Antur Waunfawr, Snowdonia Society, Cyfeillion Croesor, Portmeirion Gardens, Gwynedd County Council, Conwy Civic Borough Council, RSPB and the North Wales Wildlife Trust. It is based with North Wales Wildlife Trust, Bangor and employs one part time person.

The school work is a bilingual project addressing the (2008) New Curriculum in Wales "Outdoor learning" component at Foundation and Key Stage 1- 4 levels. So far we have run 9 teacher training days involving 225 teachers, and 1 student teacher training day with 42 student teachers.

Since 2004, our general school garden work has supported 63 different schools, with 103 visits, and £150 start-up grants + toolkits to 65 schools. In addition, £1,000 start-up grants have been made to 5 schools to set them up as future training sites, and £4,000 went to Treborth Botanic Garden, Bangor to develop educational facilities.

The box below shows the activities in a typical Teacher Training Day:

Science through the environment KS2

Teacher training days 28th Jan, 1st and 4th Feb 2008

With: Anna Williams, SWGP, Bryn Griffiths, GCC Neil Griffiths, NWWT

11am-12am – 2 workshops and games

- **Minibeast hunt in the schoolyard (nets, pooters, ID charts, pots, trays)**
- **Bird activities – all teachers making birdseed feeders and birdboxes**
 - **Details about Big Garden Birdwatch for schools** –packs available
- **Games**
- **LUNCH**

1-3pm – 4 workshops, games and slideshow

- **Survey of the school yard – green school survey (20 mins)**
- **Habitat quadrats in different habitats (20 mins)**
- **Minibeast homes**
- **Sowing Seeds (10mins)**
- **Games (15mins)**
 - **Plant /Colour/Tree bingo –**
 - **Food chain game**
 - **Predator games**
 - **Camouflage game**
- **Slideshow on Wildlife Gardening in schools by Anna Williams**
- Ideas from other schools in North Wales
- **Questions & developing plans - writing postcards!**

The slideshow on Wildlife Gardening discusses the following topics:

- Planting seeds, Life cycle of plants, Living things / seasons
- Make wooden boxes – integrates with Design and technology
- Working through the seasons
- Write to local businesses for materials – developing Language skills
- Invite the local Youth Club to help with improvements- reducing the risk of vandalism
- Get help from local community and parents
- Encouraging healthy living - Where do strawberries come from?
- Creating a Herb Garden
- Make Compost (Bins available from Conwy and Gwynedd County Council)
- Plant bulbs and bedding plants with the young children
- Pretty pots outside the front door
- Rockery – use a Celtic pattern to tie in with History
- Sunflower Race competition
- Explore and discover – ties in to Science and Art
- Grow vegetables in pots or beds, Children make their own labels
- Healthy eating is fun – have lunch time in the garden
- Improve the school yard
 - Nectar-rich border
 - Sow a meadow or leave grass to grow long

- Make and install minibeast homes
- Work With living Willow
- Different design of ponds
- Put up bird and bat boxes and bird feeders
- Make a hedgehog home and tie in to animal behaviour, such as hibernation
- Run a Weather station
- Use the garden for your school work and Fun and games
- Go for Green School and Eco school awards
- Organise a watering rota during the holidays
- Make sure the garden is in the school development plan

13. “The Big Wildlife Garden” website

Jim Burt Natural England

This is currently under development, and the prototype site was demonstrated live. When complete it will be an extremely substantial and important web resource for all people with an interest in wildlife in their home space.

The site will have many component pages. Many will be factual, but the site is designed to be highly interactive. Based around Google Map overlays, it will allow gardeners to upload and share information about their gardens and wildlife, join blogs, record a journal and receive weekly gardening tips. It will also feature a “Garden Accreditation Scheme” that measures the wildlife-friendly features of your garden, and allows you to work towards various levels of award certificate through making changes to the management, planting and features in your garden.

The site will be launched in June. Until then Forum members may get access to the developing site through requesting a password by emailing bwg@monterosa.co.uk