



Conservation Education

AUTUMN TERM 2004

ISSUE TEN

Published by the
Young People's Trust for the Environment
3 Walnut Tree Park, Walnut Tree Close,
Guildford, Surrey, GU1 4TR
Tel: 01483 539600
email: info@yptenc.org.uk
Web site: www.yptenc.org.uk
ISSN 0262-2203

Director: Peter Littlewood

A Habitat for Wildlife - The Garden

Contents

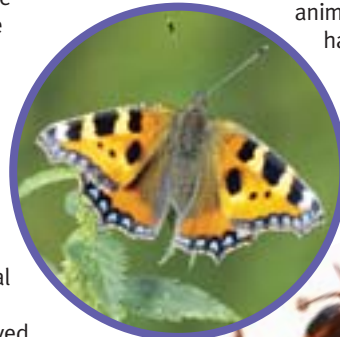
- 2 What makes a wildlife friendly garden?
Trees, Shrubs & Hedges
- 3 How to make Leaf Mould
Grassland
Flower Beds
- 4 Log Pile
Grow your own Birdseed
Untidy Corner
Compost Heap
- 5 Ponds
The Garden's Web of Life
- 6 Growing the Organic way
More help for Garden Wildlife
- 7 Nature News

There are over a million acres of private gardens in Britain, not to mention the acres of grounds belonging to schools, city parks, factories, airports and other official places. We have created green spaces around our buildings so that we can enjoy being outside, relaxing, playing, having a barbecue, growing flowers and perhaps vegetables.

Yes, green spaces are definitely important for the well-being of humans but over the years they have become important for wildlife too! The reason for this is that our wild plants and animals have been losing their natural homes - their habitats - as woodlands, hedgerows, meadows, marshes and ponds have been destroyed to make way for roads, houses and other buildings. Wildlife has also been affected by modern methods of farming, such as the use of artificial fertilisers, weedkillers and pesticides. As the natural habitats have grown smaller, wildlife has moved

happily live in our busiest towns and cities!

Many people now realise that gardens, both large and small, are as important for wildlife as they are for us and there are lots of ways in which we can actively encourage wild 'guests' to share our private green spaces. A garden bustling with wildlife is much more interesting for us too. With a wealth of animals turning up to live in the habitats you have created for them, what a great opportunity for studying nature right on your own doorstep!



What makes a wild life friendly garden?

There are people who imagine that a garden for wildlife has to be like a scruffy wilderness, full of 'weeds'! This is certainly not the case and neither is it true that a wildlife garden has to be large and in the countryside. Obviously the bigger the garden the more animals it will attract, but a tiny town garden or even a window box filled with the right plants can be useful!

The best way to encourage wild animals into your particular garden is to provide them with the important things that they need to survive - the sort of things that they find in their natural habitats. All animals need places where they can shelter, rest, find food and water and produce their young. It is a good idea to think about these basic requirements when planning to make a garden wildlife-friendly.

A formal garden that is too neat and tidy, with barely a fallen leaf in sight, will not provide all an animal's basic needs and it will not be able to find a proper home there. An informal garden with a variety of trees, shrubs, flowers, and a corner with a log pile, dead leaves and a few nettles is much more inviting for animals. With careful planning, a garden for wildlife can be as beautiful as any formal one and a lot more exciting for us too!

The variety and size of habitats you can create will, of course, depend on how large your garden is, but each one will be a valuable habitat in its own right. The animals and plants in your garden may not always be found in just one particular habitat. They often pass between several habitats. For example, a newt begins its life in a pond and then leaves the water, crawling through sheltering plants and tall grass, finally finding a cool, damp spot beneath a rotting log to spend the winter. Therefore, it is best to provide a variety of habitats for your garden residents.

Trees, Shrubs & Hedges

Britain was once almost covered with an enormous forest, made up mainly of deciduous trees (trees that lose their leaves in the autumn). Today only about 5% of Britain is covered with woodland and therefore many animals have lost their homes and a number of them have become endangered or even extinct. Did you know that bears and wolves used to roam our forests?

Even a single tree in a garden will be important for wildlife but an even better habitat will be created if trees are grouped. The idea is to try and copy natural woodland with its different tree heights forming layers. Many plants and animals are most at home in the dappled shade of the woodland edge. Garden birds such as the blackbird love to scratch around for food amongst the

dead leaves under trees and shrubs (bushy, woody plants, shorter than trees). A hedge is a row of trees and shrubs, usually found around the edge of a field or a garden. Even a short hedge is a good wildlife habitat, supplying animals with food, shelter and a place to nest. Animals like to use hedgerows as 'highways' for travelling, unseen, from one habitat to another.

What are the best wildlife trees and shrubs?

It is important to choose native species - those that have been growing in Britain for thousands of years. Our insects and other wildlife prefer these as food to those trees and shrubs that have been introduced from other countries. The best tree of all for wildlife is the oak as it attracts over 300 species of insect alone! Of course, not everyone will be able to plant an oak, as you do need plenty of room for such a large tree. There are many other smaller native trees you could choose, such as silver birch, ash, alder, willow and rowan.

Underneath trees, native shrubs like blackthorn, hawthorn, dog rose, hazel and holly can be planted. These provide food in the form of nectar and berries for many animals and also make excellent hedges. You can add even more food for your garden wildlife by growing a few non-native shrubs (often known as alien species), which are rich in nectar and/or berries. Good examples are buddleia (butterfly bush), lilac, pyracantha (firethorn) and cotoneaster.

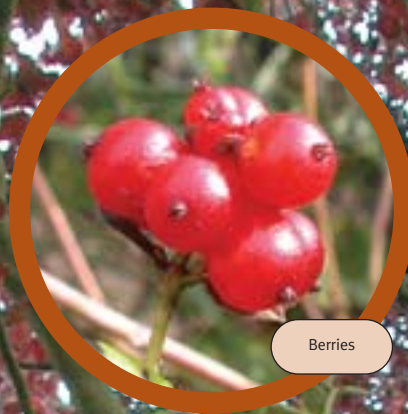


Holly

Autumn leaves - are they any use? The answer to this question is definitely yes! There are gardeners who think that fallen leaves are an untidy nuisance, to be swept up and burned! In natural woodland the dead autumn leaves form a layer on the ground, which is an excellent micro-habitat for minibeasts (correctly known as invertebrates, as they are animals that do not have a backbone). In nature, nothing is wasted and organic matter (anything that comes from a plant or animal) is decomposed (recycled so that it can be used again). Dead leaves are full of nutrients (minerals and other chemicals that plants and animals need to help them grow and be healthy), which are recycled by nature's decomposers.

Earthworms and other minibeasts start off the decomposition by feeding on the leaves, using some of the energy trapped in them for themselves. The remaining bits of leaves help to make a rich humus (the mixed-up remains of dead plants and animals). The job is finished off by fungi and bacteria, which break down the humus, obtaining energy and releasing nutrients into the soil, ready for the use of living plants, including the trees.

If you have a lot of autumn leaves to deal with, sweep some of them into a corner or under a hedge, where they will provide shelter for insects and spiders. A hedgehog may find the pile useful for hibernation. Another thing you can do with the leaves is make them into leaf mould, which, when it has decomposed, can be dug into the soil to improve its condition.



Berries



Tree layer
e.g. silver birch, oak

Shrub layer
e.g. hawthorn, hazel

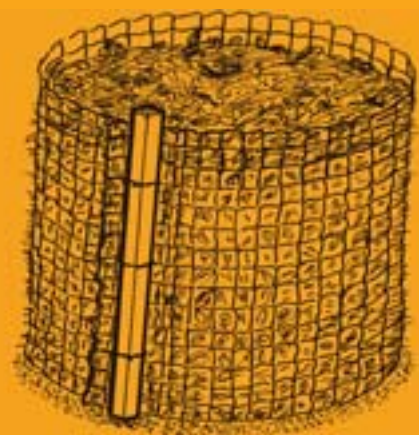
Herb layer
e.g. fern, bluebell

Ground layer
e.g. short grass, mosses

How to make Leaf Mould

- 1 **Make a cage by banging a 90cm post into the ground and fixing wire netting around it in a cylindrical shape (a square cage with four posts would be just as good).**
- 2 **Collect fallen leaves and pile them into the cage. Oak and beech leaves make the best leaf mould, but any deciduous leaves will do. Firm the leaves as you fill.**

- 3 **If the leaves are dry, pour water over them, using a watering can. Mixing some grass mowings in with the leaves will speed up the decomposition process.**
- 4 **Leave undisturbed for at least a year. By then the leaves will have turned into crumbly, black leaf mould.**

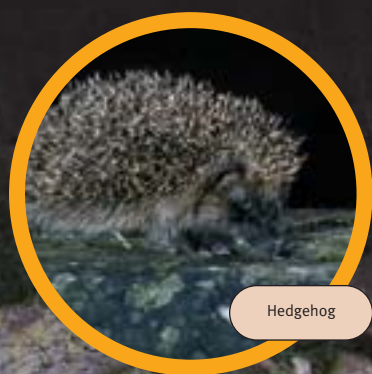


Log Pile

In natural woodland, fallen branches and dead tree trunks are used as micro-habitats by minibeasts and other small animals. As time goes by, the wood will be decomposed by the action of minibeasts, fungi and bacteria.

You can provide a good natural habitat in your garden by piling up a few logs. A mixture of native trees, such as oak, elm, silver birch and ash will attract a wide variety of minibeast species. A good pile can be made from logs with a diameter of 15-23cm and put it in a shady place to prevent the wood from drying out in the sun.

Try to leave the pile undisturbed as much as possible to encourage the visiting animals to stay. As the logs begin to decompose, you will see fungi and mosses growing on them. As well as the invertebrates, birds, wood mice, voles, shrews and hedgehogs all find food and shelter in a log pile. Toads, newts, slow-worms and hedgehogs may hibernate there in the winter.



Hedgehog

Grassland

There are thousands of regularly mown lawns in our gardens and parks. If these lawns are not treated with chemicals such as weedkillers, a few minibeasts and wild plants could find a home in them; but if they were looked after more thoughtfully, they would attract much more wildlife. Even wildlife gardeners like to have some of the grassy areas of their garden kept short, usually the grass closest to the house. After all, most of us want a place to sit out and enjoy a sunny day! However, minibeasts and other animals prefer a patch of rough, tall grass in a corner somewhere, where they can hide and find food.

Perhaps an area beyond the short grass, or at the edge of a woodland area, could be turned into a wildflower meadow, where spring or summer flowering plants can grow. Meadow flowers grow well in sunny areas with poor soils. Never use any type of fertiliser on meadows because this encourages tough grasses to flourish and swamp the more delicate wild flowers.

Wildflower seeds may be sown straight into grassland or bare soil, but it is often easier and more successful to sow them in pots and then transfer the resulting plants into your meadow.

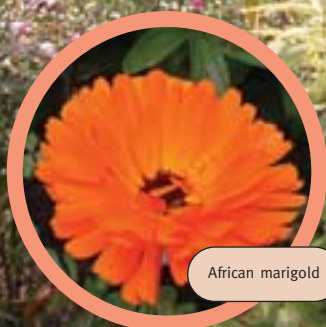
Flower Beds

Gardeners have always loved growing flowers and they provide colour all year round for us and food all year round for wildlife! Flowers are important in any wild habitat as they provide nectar and pollen for insects, and some offer seeds for birds. Butterflies and bees are attracted by the colour and scent of flowers as these signal that nectar is present. The best flowers of all for insects are the wild ones that they would find in their natural habitat and it's a good idea to grow at least a few of these in your garden – perhaps in a wildflower meadow as already described.

To many people, a wild plant found growing in their garden is a 'weed' – but a 'weed' is just a plant growing in a place where we don't want it! Some weeds (sorry, wild plants!) have really beautiful flowers – the foxglove, for example, which is excellent for bumble bees and enhances any garden.

To add to the natural food supply in the garden, colourful flowerbeds and borders can be created, choosing nectar-rich flowers. There are many cultivated plant species that are rich in nectar and make a very colourful display. Choose single flowered varieties (a 'daisy' type of flower is a good one) rather than those with double flowers. It is easier for the insects to reach the nectar and pollen in a single flower and double ones normally don't have very much nectar.


Choose plants that will have flowers at different times of year to provide a continuous supply of food. For example, spring-flowering bulbs e.g. snowdrops, daffodils, bluebells: hardy annuals (those that live for only one year) e.g. marigolds, snapdragons, poached egg plants: herbaceous perennials (plants that may live for several years) e.g. michaelmas daisy, ice plant (sedum): woody perennials (shrubs that may live for several years and have woody stems) e.g. buddleia, honeysuckle, hydrangea.



African marigold

Grow your own Birdseed

There are many varieties of sunflowers that are easy to grow and produce enormous bright yellow flowers. Bees and hoverflies find the flowers a rich source of nectar. Leave the flower heads on the plants to go to seed. Finches, such as chaffinches, house sparrows and greenfinches, will feast on the seeds, using their short, nutcracker-like bills to break open the tough outer cases.



Untidy Corner

There are many animals that will only stay in a garden if there is a place where they can hide away, completely undisturbed.

The log pile is one such habitat but it is also useful to provide an 'untidy corner', preferably well away from the house, perhaps behind a shed or garage. Here you could provide a few inviting homes such as a pile of autumn leaves, a sheet of corrugated iron, a piece of paving stone over a hollow in the ground, an upturned flower pot and a patch of nettles. This corner may not be the most attractive part of the garden for us, but a surprising variety of animals will use it, especially as a place to spend the winter.



Compost Heap



The slow-worm is a legless lizard which hides in the heap and hunts for earthworms and slugs.



Ground beetles of many kinds search the rotting vegetation for slugs, their favourite prey.



Fungi help to break down the rotting plant material.



Blackbirds peck amongst the leaves searching for earthworms and also eat any rotten apples they find there.

The centipede is a carnivore and several types hunt through the heap, catching almost any minibeast they find.



The great black slug, which is often orange, prefers dead plants to living ones.

The woodlouse feeds on rotting wood and other decaying plant material.



The black cylindrical snake millipede is one of the many kinds of millipede which scavenge on the rotting vegetation.

The hedgehog eats minibeasts and sometimes the slow-worms found in the compost heap - and may nest there.



Toads may spend most of the year in the compost heap, feeding on the many minibeasts.



No garden should be without a compost heap! Every natural habitat recycles its own waste and wildlife gardeners work with nature and recycle all they can. A sheltered corner of the garden is a good place to make a pile of plant waste from the garden, such as grass clippings, soft and twiggy stems, dead flowers, weeds, pondweed and a few dead leaves.

Uncooked vegetable scraps from the kitchen, straw, teabags, paper towels and torn-up egg boxes also make good compost ingredients. All these materials should be chopped up small, mixed well and either left in a heap with a piece of old carpet on the top, or put into a special bin or box. You could even make your own compost bin from old planks of wood.

See the end of this booklet for sources of information to help you look after a compost heap and encourage it to decompose into an excellent natural fertiliser for the flower and vegetable beds in your garden.

The best compost heaps are those that allow animals to get into them. Decomposer minibeasts such as worms, slugs, snails, woodlice and millipedes will enjoy eating the plant material and help to break it down. Fungi will grow in the heap and help the decomposition. Other animals – birds, slow-worms, toads and hedgehogs will feed on the minibeasts. Grass snakes often lay their eggs in compost heaps, the heat generated by the rotting material helps to speed up the incubation of the eggs.



Ponds

Water is essential for life so it is important to provide a supply for garden wildlife. A simple dish of water for birds and hedgehogs is useful, but if you can make a pond, then the amount and variety of wildlife will increase enormously. Frogs, toads, newts and minibeasts may live and breed in your pond. Foxes, hedgehogs, bats and birds may visit a pond for a drink.

Britain's once common wetlands have been decreasing over the years – ponds and ditches have been filled in, marshes have been drained and they have all

suffered from pollution. Over 80 per cent of all ponds are now in private gardens or school grounds. Many species of animals rely on ponds for their survival. Creating a pond in your garden, even a tiny one, is a sure way of helping wildlife and it is one of the most enjoyable habitats to study.



House sparrow



Fox

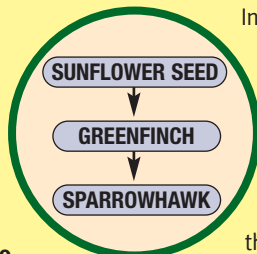


The Garden's Web of Life

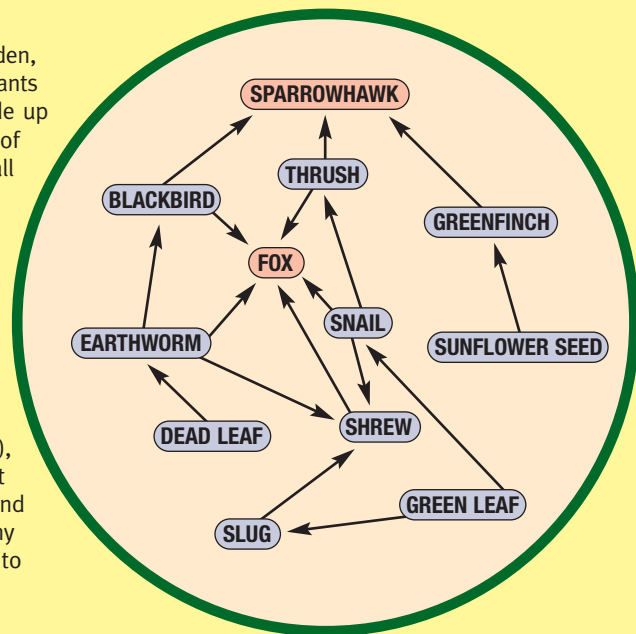
The most important part of any garden is the soil. Without it, plants would simply fall over, as they need something to anchor their roots! Soil offers a home for many animals, fungi and bacteria. A healthy soil contains plenty of humus – perhaps provided by the garden compost you have made, leaf mould and rotted animal manure. This organic matter helps to bind the soil particles together and makes sure the soil has food, water and air for the soil life and plant roots.

Healthy soil means that the plants will grow strongly and provide food for animals. The leaves of the plants absorb sunlight and this gives them the energy to turn carbon dioxide (the gas which animals breathe out) and water into sugar. This process is called photosynthesis. The sugar travels to every part of the plant and gives it the energy to grow. Some of the sugar is stored as starch. Seeds are made of starch. A herbivore (plant-eating animal) may eat this starch and, in turn, the herbivore may be eaten by a carnivore (meat eating animal). Carnivorous animals are often called predators and the animals they eat are prey. The sequence of feeding is known as a food chain.

▼ Here is an example.



In a well-balanced garden, the community of plants and animals is made up of a large number of species and they all depend on each other for their survival. In reality, the feeding relationships within the community are much more complicated than a simple food chain. For example, the sparrowhawk, a top predator (the animal at the top of the food chain), will eat several species of birds, not just greenfinches. Any living plant and animal material may be part of many food chains and the chains join up to form a food web. Here is a simple garden food web. ►



Notice that the sparrowhawk and the fox, being top predators, are not preyed upon. When they die, their bodies will be eaten by scavengers, including minibeasts such as fly larvae (maggots) and beetles. The bits that remain will be further broken down by tiny decomposers in the soil and the resulting nutrients will be used by living plants.

Try this!

HOW MANY FOOD CHAINS CAN YOU FIND IN THE ABOVE FOOD WEB? Using the picture of the compost heap and its visitors on the previous page, draw another garden food web.

Growing the Organic way

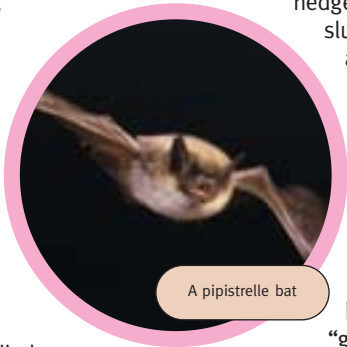


Try these!

Pesticides are chemicals designed to kill invertebrates, usually insects, which have become plant pests. Herbicides (weedkillers) are chemicals designed to kill unwanted wild plants. Farmers and gardeners have been spraying pesticides and herbicides on their food crops and flowers for many years.

This has resulted in a fall in the number of insects and their food plants in the countryside and gardens. Animals such as birds and bats, which eat insects, have also suffered.

Chemicals, whether they are artificial fertilisers, pesticides or herbicides, upset the balance of life in a habitat, and a gardener who cares for wildlife does not use them. Gardening without chemicals is called organic gardening and organic gardeners try to work with nature rather than against it. If you grow vegetables, the pests that attack these can be kept



A pipistrelle bat

fairly well under control by the many predators you have managed to encourage into the garden. For example, hedgehogs and song thrushes eat slugs and snails. If slimy pests are munching their way through your lettuces and flowers, it is very tempting to buy a packet of 'slug pellets' – but if a hedgehog or thrush eats a lot of poisoned slugs and snails, the poison builds up inside their bodies and may kill them! There are many "green" ways to deal with pests, which do not affect the food chains. Organically grown fruit and vegetables are probably safer for humans too!

If you are interested in finding out more about gardening for wildlife, you may like to read...

How to Make a Wildlife Garden by Chris Baines, Elm Tree Books

Starting a School Garden by David Gale, School Garden Company, PO Box 49, Spalding, Lincs. PE11 1NZ

Muck and Magic Published by the Henry Doubleday Research Association (HDRA), National Centre for Organic Gardening, Ryton-on-Dunsmore, Coventry, CV8 3LG

Wildlife Ponds (& other titles) by Jenny Steel (visit www.wildlife-gardening.co.uk)

and visit the websites of...

Space for Nature: www.spacefornature.co.uk

Wild About Gardens: www.wildaboutgardens.org

Composting Association: www.compost.org.uk

Duchy Originals HDRA Organic Gardens for Schools (free membership & advice): www.schoolsorganic.net

Learning Through Landscapes (National School Grounds Charity): www.ltl.org.uk

Wildlife Explorers (junior branch of the RSPB): www.rspb.org.uk/youth

Wildlife Watch (junior branch of the County Wildlife Trusts): www.wildlifewatch.org.uk

More help for Garden Wildlife

We have seen that the most important thing we can do for our garden wildlife is to make sure we provide them with the best possible habitats. When we have done that, we can think of ways to boost these habitats to make our garden even more attractive!

The importance of water has already been mentioned, so a bird bath of some sort is a helpful extra. Putting out food for birds throughout the year is another way to help them – and gives you hours of entertainment too! You could put up a bird table, hang up lumps of fat and containers of nuts and seeds.

Few gardens have old trees suitable for hole-nesting birds, so putting up nest boxes around the garden is helpful. In fact, there are all sorts of artificial homes you can make, or buy, for a variety of wildlife – for hedgehogs, bats, toads, bumble bees, ladybirds and butterflies.

Looking after the wildlife in your garden, whether at home or at school, is not only an exciting project, but also a real contribution to nature conservation!



Bird table



News

Nature

Why not try one of our great Environmental Discovery Courses in 2004-5?

The Environmental Discovery Courses run by the Young People's Trust can give young children an insight into the living world. They may not cost as much as you think either!

The Courses last five days are available in the beautiful surroundings of the south of England, or in the spectacular scenery of the Lake District.

We've been hosting these courses for over 20 years and we know how to make them safe, secure and exciting too. Whichever location you choose, you'll be guaranteed a learning experience that will last a lifetime.

Prices are very reasonable, especially out of high season, and they can

provide a focus for some excellent preparation and follow up work in the classroom, as well as giving everyone going on the trip something to look forward to during the dark days of winter.

For more details of pricing and availability contact us on 01483 539600, or check our web site: www.yptenc.org.uk

Free School Talks

Would your pupils benefit from a talk given by one of our expert speakers?

Are the children in your school interested in the environment? Do they know about global warming or British wild animals? Are they curious about endangered animals or wildlife in the garden?

Call us

Maybe it's time to invite an expert from the Young People's Trust along to your school to give one of their informative, interesting and fun school talks. They are free of charge to any school in the catchment area - which is within a 100 mile radius of our two offices; one in Guildford, Surrey, and the other in Penrith in Cumbria. But even if you are outside that area, why not get in touch

with us anyway; there's often something we can do to help.

Designed for you

We're happy to take on topics like the ones we've mentioned above, but we can tackle many others or a particular issue your school is interested in, or one with a link to required teaching subjects. We will tailor our talks to your requirements. All you have to do is ask!

Our goal at the Young People's Trust is to bring the environment and its importance to life, and our popular school talks are really effective in helping to encourage understanding and interest.

Young People's Trust for the Environment
3 Walnut Tree Park, Walnut Tree Close,
Guildford, Surrey, GU1 4TR
Tel: 01483 539600 Fax: 01483 301992
ISSN 0262-2203
email: info@yptenc.org.uk
Web site: www.yptenc.org.uk
Director: Peter Littlewood

Photography by

Young People's Trust for the Environment
Manester Design & Marketing Ltd

Printed on paper sourced from sustainably managed forests.