

PRACTICAL BIODIVERSITY

Background

First an explanation. Biodiversity means variety of life. Natural habitats unaltered by people have more species than those used by humans where many plants and animals have been lost as they cannot adapt to the different conditions. Tropical rainforest is a well-known example, with thousands of species in even small areas. Scotland's natural biodiversity is not high, as only a few thousand years ago ice scraped away all forms of life. However, we do have very large and internationally important numbers of some wildlife such as seals and seabirds reflecting our island position. Even on land our most important habitats are marine influenced, such as our own temperate rain forests along the west coast.

As we have high rainfall, almost the whole country was once covered by trees and bushes. This was cleared by people to grow crops and rear animals. Many of the habitats now threatened are older forms of agriculture now superseded by newer systems which produce more food but hold less natural variety.

So, what to plant and how to do it?

Cornfield annuals such as poppies, marigolds and cornflowers need disturbed ground. They will flower from seed in a year but you need to cultivate the ground if you want a display in a future year. Some mixes even contain plants such as corn cockle which is virtually extinct in the wild as it contaminated bread. It is possible to rely on fallen seed but, for most colourful results, sow again and be prepared to kill off plants such as docks and thistles. Some annual seed mixes contain non-native plants such as cosmos, to prolong the flowering season which can benefit insects as well as looking attractive to the public for longer. Botanists do not recommend using these mixes near nature reserves. They can brighten up park and roadside verges or roundabouts, but it is unhelpful to describe them as wildflower meadows.

Meadows are perennial habitats with a base of grass traditionally used for hay or to feed grazing animals. The types of plants and the insects that use them will vary according to the soil and local climate. Many of the photos of flower rich meadows have been taken in southern England and you will never get the same range of species in Scotland. It is often unnecessary to plant to create a meadow. If you already have an area of grass, just try leaving it uncut until late summer or autumn then lift the material to reduce fertility and weaken the stronger grasses. A surprising variety of wildflowers will reappear.

Any ground left to its own devices will revert first to bushes then trees. Scrub is often thought of as untidy but is excellent songbird habitat. It will smother small flowers and this demonstrates a key point. There is no single way to manage land for all forms of wildlife. You need to be clear what sort of habitat you wish to create.

Planting saplings can speed up establishing a wood but trees will eventually recolonise most places if given time. The species may not be native as sycamore is now very common and invasive as it sets so much seed. The best woods for wildlife have clearings and rides within them to allow a greater variety of plants and shrubs, and so a greater variety of wild creatures living in the wood. Leaving old timber to decay along with piles of logs will also benefit wildlife.

Remember that expert help is readily available to advise on all these topics - from local naturalists or national organisations' websites

Feeding wildlife

Feeding is mostly used to attract birds. Food will also attract mammals. Providing food is the single most effective way to get a greater variety of birds into gardens. A variety of feeders can provide for different species and reduce fighting. You can buy or make feeders that will prevent larger birds or squirrels stealing small birds' food. Remember that you need to practise good hygiene as feeders quickly get dirty and some seed will sprout. Uneaten food can also attract rats or mice. Water should always be provided for feather maintenance as well as drinking. Look out for cats using feeders as ambush sites. If your feeders attract many songbirds, you may well also attract predators such as sparrowhawks which some people find distressing but it is entirely natural.

Making habitat for wildlife

Making things like boxes for bats, birds or beetles is a popular activity with many groups. First decide why you want to make them. Are birds short of nest sites? Often the main value of boxes is educational e.g. in the grounds of a school. It's the habitat that really matters. You should follow up any you erect to see if they are used. Remember that most British songbirds do not use boxes. The ones that do are species such as tits and sparrows that naturally nest in holes in trees. Half fronted boxes extend the range of species to include birds like robins that use cavities.

Think about where to site boxes. Not in full sun. Are they to be low enough to show children the nests or does vandalism point to the need to have them higher up? Often the most useful boxes are for bigger birds such as owls or even tree nesting ducks; goldeneyes have become

more common in Scotland thanks to nest box schemes. You need to be able to open the boxes to check what is happening and for cleaning at the end of the season. Nest box cameras allow people to see inside the nest without disturbance and are ideal for schools and visitor centres. With bat boxes you really need expert advice as only licensed bat workers can check the boxes.

Many invertebrates will use 'bug hotels'. Some of these are remarkably elaborate structures. They do not need to be. A log pile will do. Some creatures e.g. bumble bees and hibernating butterflies need dry conditions, some need it damper. You may also find amphibians in a log pile. Many schools have created piles of logs or old pallets in their grounds and use them to show the children some of the great variety of 'mini beasts'. Beware of some of the claims made about bird and invertebrate boxes. They are not homes in the human sense; wild creatures' homes are the entire habitat. Statements made in some magazines and TV programmes saying that encouraging wildlife into gardens will automatically control pests such as aphids or slugs are unrealistic. Predators do not exterminate their prey.

The wildlife value of your community

To assess the wildlife value of your community look at all the open spaces, not just the parks and gardens. What are often called brownfield sites such as railway yards, canal banks, areas scheduled for development and overgrown with 'weeds' i.e. native plants like nettle and bramble can provide habitat missing from most gardens. Although some of our most attractive butterflies will come to garden plants such as Buddleia, their caterpillars feed on nettle leaves. Old railway lines can also serve as recreational opportunities as a public path network encouraging healthy activities including walking, running, horse riding and cycling.

You can be wildlife friendly and still enjoy seasonal displays such hanging baskets even if they have double flowers that do not provide food for insects. These take up a tiny fraction of the open space so to remove them may be a gesture but will have no significant benefit to wildlife.

An effective strategy to encourage wildlife provides a variety of habitats and accepts the fact that nature sometimes will look untidy!