

## How (and why) to Create a Mini-Meadow for Wildlife

97% of lowland hay meadows have been lost since the 1950s and invertebrates such as butterflies which depend on them have suffered severe declines as a consequence. Caterpillars of butterflies belonging to the brown group: gatekeeper, meadow brown, ringlet, marbled white, small heath and speckled wood as well as small, Essex and large skippers all feed on grasses and overwinter at the base of grass or in soil below them. Many insects of meadows feed on specific wildflowers such as bird's-foot-trefoil, the food plant of 5 & 6 spot burnet moths and common blue butterfly caterpillars. Each species of leaf miner moth is adapted to feed on a different wildflower species. Many adult insects feed on pollen and nectar. Some are generalist feeders such as the majority of hoverflies which use most flat-topped flowers, e.g. members of the daisy or carrot family. Others are adapted to gather pollen and nectar from flowers of a particular flower shape e.g. bumblebee species with long tongues are needed to pollinate the native red clover, while bumblebee species with shorter tongues pollinate the shorter flowers of white clover.

Setting aside part of your garden or lawn as a mini-meadow for wildlife will also support animals which feed on seeds and meadow invertebrates including many bird species, frogs, toads, newts, slow worms, hedgehogs and bats.

### What should a mini wildlife meadow include?

1. A variety of grasses: Many invertebrates and their larvae eat grasses and other meadow plants. Some prefer specific grasses. A mix of grasses should include Yorkshire Fog grass (foodplant of Small Skipper and Speckled Wood butterfly caterpillars), Cocksfoot (eaten by caterpillars of Large and Essex Skipper, Speckled Wood, Gatekeeper and Ringlet butterflies), Meadow grasses (for Gatekeeper, Meadow Brown and Small Heath butterfly caterpillars), Fescues (Marbled White, Meadow Brown, Gatekeeper, Small Heath butterfly caterpillars), Rye grasses (Meadow Brown and Essex Skipper butterfly caterpillars) and Timothy Grass (Gatekeeper butterfly caterpillars). Most of these species also overwinter at the base of grasses.



Yorkshire Fog



Cocksfoot

2. Native wildflowers preferably of local provenance, because native invertebrates and fungi are adapted to live with them, on them, in them or eat them. Examples include bird's-foot-trefoil- the food plant of common blue butterfly and burnet moth caterpillars, red clover which is good for long-tongued bumblebees, ox-eye daisy and other flat topped flowers which are important for other pollinators such as hoverflies and many beetles.



Red Clover & Bumblebee

3. Small areas of bare soil, especially on south-facing slopes, because these provide nesting sites for solitary bees, many species of which are under threat. Muddy puddles also provide some insects with areas where they can find minerals such as sodium which may be missing in their diet. This is especially common in insects such as some beetles, moths and butterflies which feed mainly on nectar.

## How to Create a Mini-Meadow

- Remember wildflowers of meadows prefer sunny areas.
- Choose an area of low soil fertility where possible. 'Weed' species such as nettle, thistle, dock and coarse grasses thrive in soils with high levels of nutrients and will outcompete meadow wildflowers.
- Look at your lawn and see if you already have wildflowers growing amongst the grasses. If you have species such as bird's-foot-trefoil, selfheal, red (not white) clover etc. choose an area around this for your mini-meadow.
- Check your soil type- is it chalky, acid or neutral, sometimes waterlogged or free draining? Choose wildflowers to suit the soil.
- Make sure any wildflower seeds or plants you buy are from the UK and preferably from south-east England. Diseases can be brought in with plants from overseas. Some wildflower seed sold in shops and garden centres is imported and contains non-native wildflowers including plants used as fodder crops such as lucerne which can be very rampant and outcompete the wildflowers you are trying to encourage. Wildflower plugs and seeds from south-east England will be better adapted to local conditions and local invertebrates will be better adapted to eat them. In addition, some plants which appear superficially similar may vary according to where they come from, for example, there are 2 different species of Britain and the other has a southern distribution. Flora Locale has a list of native wildflower seed and plant suppliers, see [www.floralocale.org](http://www.floralocale.org)
- For a quick result choose native plant plugs and just plant in the desired position in spring.
- Alternatively gather seeds in late summer and autumn from areas nearby where the soil is similar to that in your garden, then you know what the flower will look like and that the soil type is probably suitable. Only take seed from common plants, do not take seed from rare plants such as orchids. Some native wildflower seeds need a cold spell before they will germinate, so put them in the fridge for a couple of weeks before sowing, or sow and overwinter them outside.
- Sow directly or in seed trays, covering them with a thin layer of fine soil. Once they have had a cold period cover seeded areas until the seeds germinate, to prevent birds eating them.
- If sowing wildflower seeds directly, prepare the soil by weeding out invasive plants such as dock, nettle, dandelion, greater plantain etc. then rake soil lightly so it is quite fine on top.
- If the soil is very rich in nutrients you can strip off the topsoil (use it in the vegetable garden) then plant wildflower seed directly onto the ground.
- Plants to choose include yellow rattle as this meadow plant is a partial parasite which gets some of the water and nutrients it requires from grasses, thereby weakening them. Other wildflowers to choose might include common (lesser) knapweed, greater knapweed, ox-eye daisy, bird's-foot-trefoil, selfheal, red clover, cowslip, cat's-ear, wild carrot, bulbous buttercup and field buttercup (NOT creeping buttercup- it is too vigorous and invasive). All of these wildflowers are reasonably unfussy regarding soil type and fertility.



Yellow Rattle



Skipper Butterfly on  
Common Knapweed



Soldier Beetles on Hogweed



Selfheal



Bird's-foot-trefoil

### **How to Maintain a Mini-meadow**

Cut once a year in autumn on a high cut after seed has set. The high cut will help the survival of invertebrates which live near the ground or at the base of grasses.

- Compost the cuttings. It is vital to remove all the cut material as if left in situ it will add to soil nutrients and smother germinating wildflowers.
- Check for hedgehogs before cutting/strimming long grass.
- Leave some of the mini-meadow uncut over winter so that invertebrates which overwinter in seed heads, hollow stems and the base of grasses, can survive the winter and some of the seeds can be eaten by birds.
- Hand weed very competitive plants such as stinging nettle, hogweed and dock.

Look out for native wildflowers which you haven't planted. As soil nutrients fall, seeds which may have been in the soil for many years may germinate and add to your meadow's diversity!

There is lots more advice available on the web see:

[http://plantlife.love-wildflowers.org.uk/wildflower\\_garden/mynomow](http://plantlife.love-wildflowers.org.uk/wildflower_garden/mynomow)

[www.gardenersworld.com/garden/wildflower-meadow/](http://www.gardenersworld.com/garden/wildflower-meadow/) which has a useful link to plug planting.