



# Planting for Butterflies and Moths: Wildflowers

The UK supports over 2,500 species of moth and 60 species of butterfly. They are indicators of the health of the environment, play crucial roles in the food chain, and many are important pollinators of plants. Three-quarters are in decline and have been so for the past 40 years. But it doesn't have to be that way. By selecting the right species for sowing in wildflower meadows as part of urban development, we can all help to put back what has been lost and encourage thriving wildlife on our doorstep.

The three key elements needed to support populations of moths and butterflies are:

**Caterpillar foodplants:** many caterpillars of butterflies and moths feed on native wildflowers, including grasses, so we much prefer them to be used when establishing wildflower meadows. We have chosen the mix overleaf to benefit the widest range of meadowland butterfly and moth species. However, diversity is the key, and the more native plant species that can be established, the more butterflies and moths that can be supported.

**Shelter:** Meadowland insects require shelter at two stages in their life cycle, for the egg and the chrysalis. For example, the egg of the Small Skipper butterfly is laid in the dead leaf sheath of the grass Yorkshire-fog. The caterpillar hatches and immediately spins a tiny cocoon in which to spend the winter, and it starts feeding on fresh grass leaves in April. The chrysalis of many species are formed in soil, at ground level, or among leaves.

**Nectar plants:** The majority of adult butterflies and moths drink nectar from flowers. Many of the caterpillar foodplants can also provide nectar for adults, such as Common Bird's-foot-trefoil. It is important to establish a plant mix that provides nectar sources throughout the growing season, and species such Devil's-bit Scabious provides an important nectar sources when many other species have finished flowering.

Wildflower meadows – perennial or annual, and native or non-native?

When it comes to wildflower meadows for butterflies, our advice is to prefer seed mixes which contain mainly native perennial plants. Some native annuals are also important, such as meadow grasses for lots of caterpillars, and Hedge Garlic and Cuckooflower specifically for those of Orange-tip and Green-veined White butterflies. While bees and other insects may use non-native species for pollen and nectar, many butterflies and moths do not, and native perennials offer the greatest scope for them. Meadows of annual non-native plants certainly can look spectacular, but offer less sustaining habitat for butterflies and moths.



The plant list below provides a good range of foodplants and nectar sources suitable across many soil types. However, it can be valuable to get specific advice as the seed mix can be tailored to soil type and type of meadow desired, and where there are localised species of butterfly and moth to be targeted for enhancement.

Further advice can be sought from [scotiaseeds.co.uk](http://scotiaseeds.co.uk) and **Butterfly Conservation**.

### Wildflowers suitable for seeding

Red Clover	Garlic Mustard
Bird's-foot trefoil	Sheep's Sorrel
Greater Knapweed	Cuckoo-flower
Common Knapweed	Common Sorrel
Field Scabious	Tufted Vetch
Bush Vetch	Meadow Buttercup
Common Vetch	Primrose
Bugle	Cowslip
Self-heal	Kidney Vetch
Yarrow	Common Rock-rose
Ox-eye Daisy	Hawkbits
Devil's-bit Scabious	Meadow Vetchling
Yarrow	Tufted Vetch
Lady's Bedstraw	Yellow Rattle
Cat's Ear	Burnet Saxifrage

### Grasses

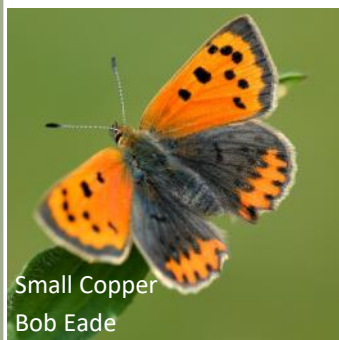
Common Bent	Meadow Foxtail
Red Fescue	Sweet Vernal Grass
Sheep's Fescue	Crested Dog's-tail
Yorkshire Fog	Meadow grasses

The most diverse wildflower meadows can be maintained through an annual cut at the end of the summer, after which the cuttings would be lifted and composted elsewhere. This ensures we keep soil nutrient levels as low as possible, which favours more delicate herbs and fine grasses, and reduces the chances of large, vigorous grasses smothering them.

Initial sowings should be made in autumn or early winter, and include the wildflower Yellow Rattle. This annual wildflower parasitises the roots of grasses, reducing their vigour and allowing other wildflowers to have space to grow.

As many species of butterfly and moth are as caterpillars or eggs on plants throughout winter, it is best to leave at least one third of a site unmown each year, and this can be done on a three-year rotation.

If low soil fertility cannot be achieved, then tall grassland cut once a year can still be useful for butterflies, particularly those whose caterpillars feed on more vigorous grasses such as Small Skipper, Ringlet and Meadow Brown (pictured).



Caterpillars of Small Copper remain on leaves and stems of Sorrels (*Rumex* species) over winter, so need some plant material to be left intact and uncut.



**Localised species** like **Small Blue** and **Northern Brown Argus** require foodplants which are often missing from seed mixes. Small Blue caterpillars feed on Kidney Vetch, and those of Northern Brown Argus feed on Common Rock-rose. It's worth checking if these butterfly species are found in the area and likely to benefit from adding the seeds of these plants in the mix for your project.

