

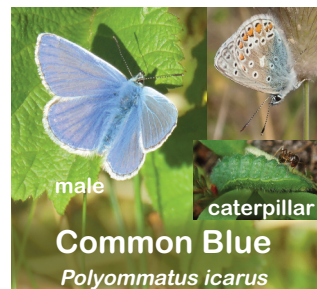
# Moor Meadows Guide Number 1

## Meadow Insects



### Butterflies, day-flying Moths and Bees

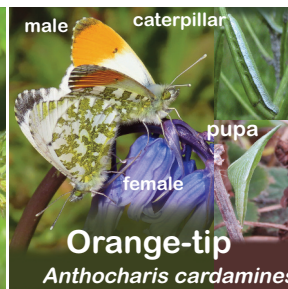
Meadows and other flower-rich verges and grasslands provide habitat for a wide variety of insects. This guide shows some of the butterflies, day-flying moths and bees found in the grasslands around Dartmoor. Details of their life histories is given, including how they spend the autumn and winter, to inform beneficial management of their habitats.



**Common Blue**  
*Polyommatus icarus*  
Flies between May and October. The caterpillar feeds on bird's-foot trefoil and is often tended by black ants *Lasius niger*. Overwinters as a caterpillar.



**Small Copper**  
*Lycaena phlaeas*  
Flies between April and October. The caterpillar feeds on sorrel and dock. Overwinters as a caterpillar and probably has an association with ants.



**Orange-tip**  
*Anthocharis cardamines*  
March to May. Eggs laid on the flowers of Garlic Mustard and Cuckoo Flower. Caterpillar feeds on seed pods. Full-grown in June. Foodplants along hedges are best as pupa needs to remain undisturbed for 8 months.



**Green-veined White**  
*Pieris napi*  
May to September. Caterpillar on cuckoo flower and garlic mustard. Overwinters as a pupa like the Orange-tip.



**Marsh Fritillary**  
*Euphydryas aurinia*  
Flies in May and June. Caterpillars overwinter in a silk tent on devil's-bit scabious. Light grazing in autumn is beneficial for this rare butterfly.



**Small Tortoiseshell**  
*Aglais urticae*  
Hibernates as an adult. Flies in two broods from March to May and July to August. Caterpillars feed on nettles growing in warm, sunny locations.



**Peacock**  
*Aglais io*  
Hibernates as an adult. Flies from March to May and July to August. Caterpillars feed on nettles growing in warm, sunny locations.



**Meadow Brown**  
*Maniola jurtina*  
Flies from June to September.



**Small Heath**  
*Coenonympha pamphilus*  
Flies May to September.



**Gatekeeper**  
*Pyronia tithonus*  
Flies in July and August.



**Ringlet**  
*Aphantopus hyperantus*  
Flies in June and July.



**Marbled White**  
*Melanargia galathea*  
Flies in June and July. This is a close relative of the other 'browns' and overwinters as a tiny caterpillar.

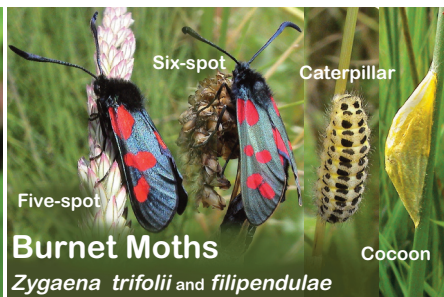
All of these 'brown' butterflies overwinter as caterpillars which feed on grasses. Ideal management for them is to lightly graze meadows in autumn. If meadows are cut, unmown strips are beneficial to them.



**Small Skipper**  
*Thymelicus sylvestris*  
Flies in June and July. Caterpillar overwinters and feeds mainly on Yorkshire fog grass.



**Large Skipper**  
*Ochlodes sylvanus*  
Late June to August. Caterpillar overwinters and feeds mainly on cock's-foot grass.



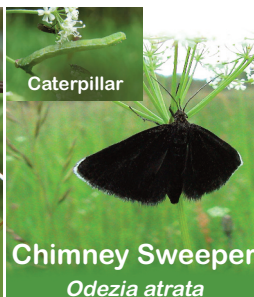
**Burnet Moths**  
*Zygaena trifolii* and *filipendulae*  
Fly from June to August. The caterpillars overwinter and feed on birds'-foot trefoils. As with the 'brown' butterflies, light autumn grazing is most beneficial to them. [www.ukmoths.org.uk](http://www.ukmoths.org.uk)



**Burnet Companion**  
*Euclidia glyphica*  
Flies in May and June. Caterpillar feeds on bird's-foot trefoil and clovers from June to September. Overwinters as a pupa.



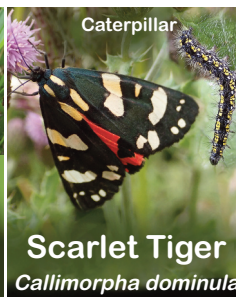
**Mother Shipton**  
*Euclidia mi*  
Flies in May and June. 'Witch face' markings on wings. Caterpillar feeds on grasses June to September. Overwinters as pupa.



**Chimney Sweeper**  
*Odezia atrata*  
Flies in June and July. Eggs are dropped to the ground and overwinter. Caterpillar feeds on pignut in spring.



**Narrow-bordered Bee Hawk moth**  
*Hemaris tityus*  
Flies in May and June. Caterpillar on devil's-bit scabious. Overwinters as pupa at ground level.



**Scarlet Tiger**  
*Callimorpha dominula*  
Flies in May and June. Caterpillar overwinters, it feeds on various plants including comfrey and alkanet.



**Honeybee**  
*Apis mellifera*

Can be seen all year. Abdomen dark or with orange markings. Eyes covered in short hairs. Usually nest in beekeepers hives but occasionally in tree holes and roof cavities.



**Buff-tailed Bumblebee**  
*Bombus terrestris*

Queens are large with buff-coloured tail. Workers have white tails and are very similar to White-tailed Bumblebee.



**White-tailed Bumblebee**  
*Bombus lucorum*

Queens and workers with a white tail.



**Early Bumblebee**  
*Bombus pratorum*

A small bumblebee with an orange tail.



**Garden Bumblebee**  
*Bombus hortorum*

Similar to White-tailed. Yellow on rear edge of thorax. Very long tongue.



**Tree Bumblebee**  
*Bombus hypnorum*

Brown thorax, black body with white tail. Sometimes nests in bird boxes.

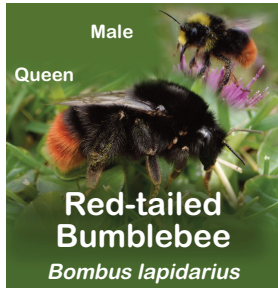


**Common Carder Bee**  
*Bombus pascuorum*

Orange-brown thorax and buff body. Quite variable in colour and orange can fade. One of the commonest bumblebee. Nest often in base of grass tussocks.

Bumblebees can be difficult to identify as the workers and males often vary in appearance from the queens. Only the queens hibernate so it is easier to identify them when they first appear in March and April. They often nest in disused rodent burrows in the ground.

Search for 'Steven Falk Flickr Collections Bees' for more information on the UKs bees.



**Red-tailed Bumblebee**  
*Bombus lapidarius*

Queens are large, black with a red tail. Males have yellow on the thorax and face.



**Bilberry Bumblebee**  
*Bombus monticola*

An upland bee. Extensive red on body separates it from the Red-tailed Bumblebee.



**Red-tailed Cuckoo Bee**  
*Bombus rupestris*

A cuckoo in Red-tailed Bumblebee nests. Dark wings and a little yellow on front of thorax.



**Vestal Cuckoo Bee**  
*Bombus vestalis*

Similar to White-tailed. Has a yellow edge to the white tail. A cuckoo in Buff-tailed nests.



**Hairy-footed Bee**  
*Anthophora plumipes*

Like a small bumblebee. Often hovers. Flies March to May. Nests in banks and cob walls.



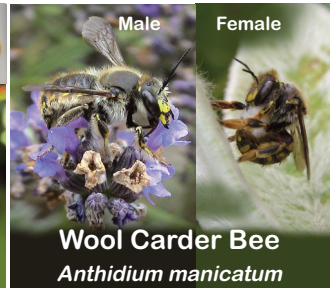
**Patchwork Leafcutter**  
*Megachile centuncularis*

Flies June to August. Nests in crevices. Collects pollen on underside of abdomen.



**Red Mason Bee**  
*Osmia bicornis*

Flies April to June. Nests in crevices. Often uses bee hotels and seals nests with mud.



**Wool Carder Bee**  
*Anthidium manicatum*

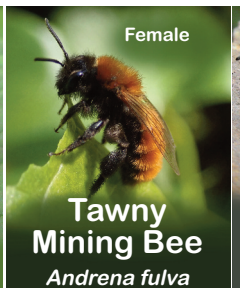
Flies June to August. Yellow spots on abdomen. Nests in crevices. Males guard patches of flowers especially woundworts for females to nectar on.



**Chocolate Mining Bee**  
*Andrena scotica*



**Orange-tailed Mining Bee**  
*Andrena haemorrhoa*



**Tawny Mining Bee**  
*Andrena fulva*



**Grey Mining Bee**  
*Andrena cineraria*



**Short-fringed Mining Bee**  
*Andrena dorsata*

Mining bees are honeybee sized or smaller. They can be difficult to identify but some females are distinctive. The males look very similar to each other. Females dig nest burrows in the ground. The 'volcano' like spoil heaps are a good sign of their presence. About 30 species occur around Dartmoor. Each has a short flight period of about a month. They fly from March to September.



**Wilke's Mining Bee**  
*Andrena wilkella*



**Large Gorse Mining Bee**  
*Andrena bimaculata*



**Ivy Bee**  
*Colletes hederæ*

Honeybee-sized mining bee. Flies in autumn and gathers pollen from ivy.



**Common Furrow Bee**  
*Lasioglossum calceatum*

Very small mining bee about 10 mm long. Males sometimes form roosts on seedheads in late summer.



**Nomad bees look like small wasps. They are cuckoos in mining bee nests.**



Mining bees like sandy warm soil to burrow in. Creating sandy banks or adding sand to the soil particularly in south-facing situations close to flower rich meadows can provide additional nesting habitat.



**Mining bee burrow and spoil heap**

