FRIENDS OF THE EMM BROOK

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Winter Insects- Where do they go?

In winter a lot of our wildlife starts to disappear. Many mammals hibernate, some birds migrate, and the butterflies and dragonflies we saw all summer are gone. But where?

The insects we've seen all summer are still around, they're just less conspicuous – both in appearance and behaviour**.**

Do insects hibernate?

Yes, some. Insect hibernation is known as diapause. A few adult insects are able to survive winter in a dormant state. They enter a state of suspended animation, finding shelter in homes, holes in trees, in leaf litter, under logs and under rocks.

Like mammals, these insects enter a state of torpor. Their metabolism slows and their temperature drops while their heart rate slows. Some insects produce anti-freeze chemicals that enable them to become "super-cooled". These chemicals work to prevent build-up of ice, which can rupture and destroy the insect's delicate cells and tissues. In very low temperatures however, these chemicals can fail and the insect is killed by ice.

Who hibernates where:

Bees – many species are different. **Honey bees** last out winter in the hive, huddling together and remaining semi-active, while **Bumblebees** hibernate. For many species of wasp and bee, only the queen hibernates. In the summer the queen mates and new queens are born. These new queens leave the hive and spend the winter buried in soil, while the rest of the colony perishes. **Solitary bees**, meanwhile, often seal themselves in hollow stems, or in bug hotels, to survive the winter.

Wasps – similarly to bees, all species are different. Some queens will hibernate while the others die off, and some solitary species will hide themselves away in plant stems and underground.

Ladybirds – You can find groups of ladybird beetles huddled together for warmth under tree bark or on plants.

Aquatic insects – many of the inhabitants of the common garden pond simply sink to the bottom, waiting out the winter insulated by the water above. The nymphs of a few species of **Dragonfly**, however, will be active beneath surface.

Butterflies – You may find butterflies hibernating, hanging upside down inside your garden shed. Peacock butterflies hibernate, as do Brimstones and Red Admirals.

For other species, their life cycle allows them to avoid the worst of winter. Many adult insects will die after breeding in the summer. The next generation then lives on and lasts out the winter as eggs or larvae. They are concealed in the leaf litter, soil or under bark, just waiting for the warmth of spring.

Do insects remain active in winter?

Yes, a great many do remain active. Rummage around in the leaf litter, delve into some grassy tussocks or dip a few ponds and you'll find plenty of small animals. In some of these microhabitats the insulation provided by the overlying vegetation or water takes the teeth from winter's bite, and the temperatures may remain high enough for activity to continue.

A few species of **Spider** remain active throughout the winter, and there are even a few unusual insects that are busy with courtship and mating during the winter, such as **Winter moths (*Operophtera brumata*)** and **Winter gnats (*Trichocera annulata*).**

Male Winter moths are commonly seen in the glare of car headlights when driving near woods and hedgerows from late autumn through to February. The peculiar female with tiny, useless wings is more difficult to find, but look on various broad-leaved trees and shrubs such as oak, birch, hawthorn and heather. The eggs they lay on these plants hatch in early spring. Winter gnats can often be seen lekking in the depths of winter and are able to take to the air in temperatures just above freezing thanks, again, to anti-freeze chemicals.

Do insects migrate?

Yes, a few do. **Monarch butterflies** are most famous migrant, travelling from the US to Mexico every year, and a few do turn up in the UK. **Painted lady** butterflies arrive in the UK every year from Africa, while **Clouded yellows** can come across the channel is great clouds.

How can I help?

Even the smallest of gardens can offer up a huge variety of different habitats for wildlife. There are lots of ways we can introduce, or let nature create, a diverse range of homes for nature in our outdoor spaces.

It's good to create as many habitats as possible without cramming too much in. Think about the space you have available and focus on making these microhabitats as good as they can be.

You may not even realise that some of the most common unassuming garden features can house thriving worlds of wildlife.

- Lawns for example, especially areas of un-cut long grass, are an important habitat for all sorts of insects and minibeasts, not to mention a feasting ground for the hungry birds which feed on them.

- Borders, filled with flowering plants and shrubs, give nectar rich food to butterflies and bees, as well as seeds, berries and cover for birds and small mammals.
- Trees, and hedges offer roosting and nesting sites for birds and mammals, as well as valuable shelter and cover from the elements and possible predators.
- Ponds and water features can be a habitat for a huge variety of animal life, from amphibians and invertebrates to bathing garden birds.
- Even woodpiles, compost and trimmings, the decomposing and discarded off-cuts from your garden, can be incredible places for animals to live, feed and hibernate.

Our gardens can be busy worlds of wildlife heaving with nature.

To breed and shelter

A basic need for all wildlife is somewhere safe to breed and shelter. A garden can give this in many ways to many things.

- Growing climbers against walls can provide brilliant shelter, as well as roosting and breeding sites for birds.
- Trees, bushes and hedgerows can also be great havens for the bird world, as well as small mammals like hedgehogs. As a place for cover from predators and a safe spot to build a nest, these can be invaluable.
- Providing bird boxes, bat boxes and hedgehog homes can be a great way of introducing good artificial shelters into nature. Natural roosting and nesting sites can be increasingly hard for animals to find and our gardens give us the chance to give them an ongoing safe alternative.
- Butterflies need breeding sites too, and growing the right plants can give them a place to breed and lay their eggs. Honesty and hedge garlic can be good for orange tip butterflies and buckthorn bushes are favourites for breeding brimstones.
- Dead wood, trimmings and old foliage can be a valuable hiding place for beetles and other insects and minibeasts, as well as fungi and moss.
- Leaving areas of grass to grow wild can give all sorts of wildlife a place to hide and breed. If you are looking to cut back overgrown areas, or untidy borders, wait until late winter or early spring, to give any minibeasts sheltering from the cold winter month the chance to move on.
- Why not build a Bug Hotel to provide a Winter shelter for hibernating Insects. Click here for details.