

Fascinating facts about winter moths

We tend to think of moths being insects typical of the balmy months of midsummer. This is partially true, but in fact moths fly all year round - each species has its own particular flight period. A few moth species fly late in the autumn and winter and they often receive names that are completely to the point such as the Autumnal Moth, November Moth, December Moth, Winter Moth and Early Moth.



One of the easiest to find is the Winter Moth. This moth can be seen flying in large numbers illuminated by car headlights near woodland and hedgerows between October and January, with the greatest numbers being seen in late November and December. The Winter Moth doesn't seem especially well adapted for winter - it doesn't have thick 'hair' like the December Moth, and seems a rather weak moth overall. While most moths need to warm their bodies to over 30 degrees Celsius to enable them to fly, the Winter Moth and its relatives have thrown out the rule-book here. Their body temperature is close to the temperature outside - sometimes almost at freezing point - even when flying. Research suggests that they may achieve this by having an unusually low body weight compared to the size of their wings, so their wings don't need to beat so fast to keep them in flight and their muscles don't need to be warmed up to work efficiently.

Yet it's only the males that have this trick as the females are completely flightless! Their wings have been reduced to tiny nubs, so they just await the arrival of the males which they attract using pheromones they release into the air. Trying to fly in the cold weather with a body weighed down by eggs must consume a great deal of energy, so they've evolved to give up flying altogether!



The December Moth takes a different strategy. Unlike the fine gossamer-like wings and thin body of the Winter Moth, December Moths have thick bodies covered in long hair-like scales that provide insulation and keep the moth warmer so its muscles work as efficiently as if it had been a summer-flying species.

With all the hardship involved in flying in winter, you might wonder why they do it. A straightforward answer may be that they do this to avoid predators such as bats which tend not to feed in the coldest months. But perhaps it is more to do with the timing of their caterpillars.

Moth species that fly in autumn and winter lay their eggs on woody parts of trees and shrubs. The caterpillars will hatch out in early spring, when the first tree buds burst into leaf, and then proceed to eat the leaves. The emergence of these caterpillars is of vital importance to the success of insect-eating birds like Blue Tits and Great Tits.

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