

What Happens to Insects In Winter?

(October 2019)

In the summer, we see and hear insects everywhere we go. They're in our yards, at the park, and at the beach. Sometimes, they even make their way inside our homes—which can be unpleasant. However, once the temperatures get colder, we see less and less of our insect friends. Then, like clockwork, they're everywhere all over again come springtime. How do they survive the long months of cold and snow? The short answer is that different insects have learned different strategies over time. The long answer is more complicated.

During the winter months, some bugs move or find places to hide, some change their body chemistry, and some simply die. For insects, these are time-tested approaches to dealing with winter. Here's how each of them works.

Let's start with moving or migration. Much like birds, some bugs migrate. Insects that live in cold places travel to warmer locations. Take monarch butterflies, for example. They travel thousands of miles in groups of a million or more. Those that live in the eastern U.S. and in Canada prefer to spend their winters in California or Mexico. Migrating insects use air currents to help get them to their destinations. In fact, during

the summer months, roughly 17 species of insects are floating or flying over your head.

The next survival method is called diapause. This is a kind of dormant or resting state. All of an insect's bodily functions and daily activities come to a halt—they basically don't do anything. Most likely, they just sit under the bark of a tree and wait patiently for warmer days.

That brings us to antifreeze. Yes, that's right—some insects produce a type of antifreeze to prevent themselves from turning into bug ice cubes. The antifreeze is a cryoprotectant which is a compound made of glycerol and sorbitol. This keeps ice crystals from forming in their little bodies. The antifreeze is especially handy during diapause.

The following method might not fall under the category of survival, *per se*. Some insects prefer to die before winter sets in, but before they do, they lay eggs that will hatch in the spring. They might be gone, but their offspring are not. Although not actually insects, spiders follow this technique. They lay their egg sacs in the fall and then die. As soon as warmer temps are upon us, the creepy-crawly spiderlings hatch.

Insects, like humans, huddle to keep warm in the winter. Honeybees are big on winter snuggling. This lets them use their collective body heat to keep warm and cozy. Actually, they physically shiver to produce heat. Ants and termites move

farther underground and hang out in large groups where there's warmth in numbers. Ladybugs get together in large groups and stay put on a rock or a branch, collectively fending off the cold.

And then some insects do what a lot of us wish we could do—hide. Cockroaches, stink bugs, and conifer seed bugs find a warm spot in homes and buildings. Once the days get longer and warmer, they make their way outside again—lucky for us.

It appears humans and insects have a lot in common when it comes to keeping warm during the cold, bleak winter months. Some of us move to warmer climates, a good deal of us huddle, and many of us wish we could hide it out. So the next time you spot a stink bug sitting by your fireplace, you both probably have the same idea: to get and stay warm.

Teacher Resources – Vocabulary

Potential Words for Further Study: These words not only help with comprehension of the passage, they also appear more frequently in a wide spectrum of reading, especially in academic text. Therefore, further study of the meaning of these words may be beneficial. The words on this list can be incorporated into subsequent lessons.

Wilson Reading System Vocabulary Level: AB

migrate (v) to move from one region to another with the change in seasons, as many birds and some fishes do

survive (v) to live or exist longer than or beyond the life or existence of; outlive

Words for Quick Discussion: Consider discussing these words as they are encountered to help students comprehend the passage. A quick discussion in student-friendly language while reading the text is best.

Wilson Reading System Vocabulary Level: B

bleak (adj) cold and cutting; harsh

dormant (adj) torpid in winter; in a state of suspended animation

strategy (n) skill in managing or planning, esp. by using stratagems

termites (n) small insects that do a lot of damage by eating wood

Definition Source: *Collins English Dictionary*. Retrieved from <https://www.collinsdictionary.com/us/dictionary/english>

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