

Kids Ask Dr. Bug

Home to more than plants, kids ask Dr. Tamra Reall about the curious things found in the garden.

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How do insects survive when it's so cold? Reggie, 9

Insects, and their relatives (such as spiders), are cold-blooded and survive the freezing temperatures by finding a warm place to live, leaving for a warmer location, or diapausing (similar to hibernating). Ladybugs, stink bugs, and spiders may come indoors. Some dragonflies and Monarch butterflies fly south for the winter. And, most arthropods find a spot to sleep it out in one life stage or another. For example, before they die, some adult grasshopper moms lay about 20 eggs together in the soil, coated in a gooey insulation. The protected eggs can withstand cold temperatures long enough to hatch in the spring.

Because insects are cold-blooded, they aren't able to move as fast when it is cold. However, there are some exceptions. Next time it snows, look carefully for jumping black specks on the white background. These could be tiny collembolan insects, sometimes called snow fleas. With fewer predators who want to eat them, they have adapted to gather at this time. They have a type of natural antifreeze in their bodies that protects them from freezing.

Where does food in the store come from when it's cold? Lizzie, 8

Local farmers used to provide most of the food for the people in their community. Today, with advanced transportation, our food can come from all over the world no matter the season. While we grow a lot of soybean, corn, and beef in Missouri, we may get our lettuce from California, bananas from Guatemala, and cashew nuts from Vietnam. Our wheat may come from Canada, olive oil from Italy, cocoa from Ivory Coast, and sugar from Mexico. Remember though, you can also find a variety of foods from local growers at your neighborhood farmers market.

Why do insect bites itch? Kaitlin, 9

Actually, it isn't the insect bite that itches. When an insect bites you, you usually don't feel it. It's your body's allergic reaction to the insect's saliva that causes the itching. For example, when a mosquito bites, it injects saliva with a particular chemical, called an anticoagulant, to prevent your blood from clotting and easy to suck. Unfortunately, most people's bodies overreact and produce another chemical, called histamine, to "protect" you from the mosquito's chemical. The area around the bite then becomes red, swollen, and itchy. Taking an antihistamine, or anti-itch cream can help keep you from scratching.

Can woolly bear caterpillars predict how severe winter will be? Laura, kid@♥

Depending on where you live, the width of the orange-brown stripe is said to predict a mild or severe winter. No worries about remembering whether the wider the stripe, the more severe, or vice versa, because the folklore isn't true. However, the size of the stripe may indicate how harsh winter was last year because, as the caterpillar ages, it has more orange-brown hairs. Wider stripe = milder winter last year.



Image: Woolly bear caterpillar by M. Reiser.

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