



## Overwintering insects

I often get the question about where insects go when it gets cold or what happens to insects during the winter. Insects have adaptations that help them survive winter temperatures.

Many insects may go into a type of hibernation called diapause to battle cold winter temperatures while other insects will migrate to warmer areas. Insects may hide in leaf litter, under rocks, logs, bark of trees, or in burrows. They can attempt to move indoors and share structures with us as well.

Other than those modifications, insects can be broken into freeze tolerant and freeze susceptible groups. Freeze tolerant insects tend not to totally freeze. The freezing process forces water out of living cells, dropping the freezing point even lower, and then the fluids around the living cells freeze. Smaller insects find this easier to do than larger insects due to the fact that they have less fluid in their body due to size. Insects will also empty their digestive tract because food attracts water that can freeze and cause crystals to grow.

Freeze susceptible insects avoid freezing by utilizing cryoprotectants, which are antifreeze compounds. These compounds allow body fluids and tissues to supercool above their freezing point. The most common cryoprotectant for insects is ethylene glycol which is the same compound found in antifreeze for vehicles.

For more information or help with identification, contact Wizzie Brown, Texas A&M AgriLife Extension Service Program Specialist at 512.854.9600. Check out my blog at [www.urban-ipm.blogspot.com](http://www.urban-ipm.blogspot.com)

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