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Reading Article G2

Article #11: SNOW BUGGIES

by Linda Crotta Brennan

Take a walk in the woods in winter. It may be cold and snowy, but at least there won't be any insects ... or will there?

Insects are cold-blooded, which means their bodies stay the same temperature as the air around them. When it gets cold, an insect's organs and muscles get cold, too, and they don't work very well. In winter many insects enter a kind of hibernation called diapause. Some, like monarch butterflies, migrate south. Others stay under the earth or in water, where temperatures don't get below freezing. But there are some insects that are active

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"springtail." These beneficial insects eat decaying matter like old leaves and plants and turn it into dirt. Because springtails are so tiny, most people don't even know they exist, but they are the most common insect on land. There are millions of them in each acre of earth, busily enriching the soil.

Springtails get their name from two tiny prongs at the end of their bodies. These prongs are held down by hooks, and when the hooks let go, the insects spring three or four inches through the air.

There are many species of springtails. Some of them are aquatic, or live in water, while others can survive in the Antarctic and arctic. In spring the golden snow flea forms a golden carpet on the snow in British Columbia. Other species are white, brown, green, blue, or red. Many, but not all, are active in the winter.

Sometimes groups of almost a million springtails make long migrations, trips of over 25 meters that can take two days to complete. The insects stay together in a round mass with the springtails on the surface hopping and the ones below crawling. At night, they all stop to rest under the leaf litter.

Springtails are considered primitive insects because they have neither wings nor compound eyes. And even though they molt, or shed their outer shell as they grow bigger, they don't go through a body change or metamorphosis as other insects do. They don't even have organs for breathing! Instead they get oxygen directly through their skin. Because the skin needs to be moist for oxygen exchange to occur, the springtails stay in wet places, such as a sunny spot where the snow is beginning to melt.

That warm sunny spot on the snow is called a microclimate, a small area with a different climate than the surrounding region. Because springtails are so tiny, they can live in a very small microclimate.

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