

## Creature Feature Life Below the Ice



The rivers and ponds are frozen, but life continues beneath the ice. A whole host of aquatic invertebrates are spending the winter underwater waiting for the warmth and energy of the spring.

Although terrestrial insects die or go into diapause for the winter, aquatic insects are able to remain active. The limiting factor in winter aquatic environments is not the temperature, but the availability of oxygen. The temperature at the bottom of a pond remains a constant 39 degrees Fahrenheit. While the temperature at the bottom of the river may fluctuate, it remains above freezing, allowing fish and invertebrates to continue life. The covering of ice, however, makes it impossible for additional oxygen to dissolve into the water once the ice has formed.

If you drill a hole through the ice and dip down into the water, you should be able to find several types of aquatic invertebrates. Some insects, such as the dragonfly, damselfly, caddisfly and mayfly are in their immature stages. When warmer weather arrives, they will continue their growth and eventually go through metamorphosis. Other insects, like giant water bugs and crawling water beetles spend the winter as adults in the mud at the bottom of a pond.

As you walk by the frozen rivers and ponds this winter, remember that there is a lot happening beneath the snow and ice.

*Giant Water Bug*



## Nature Notes



**Dragonfly** larva feed by shooting their lower jaw out to catch

prey. They are visual predators, so hunting in the dark world beneath the snow and ice could be a challenge. Fortunately, due to the cold temperatures, they don't need to eat very much.

### Caddisfly

larvae are active all winter long. Each larva constructs



its own case out of pebbles, leaf litter, or other 'found' items. Some species filter tiny pieces of plant material from the water while others prefer a diet of other aquatic invertebrates.

In winter, **mussels** continue to



filter food out of the water, but their growth slows due to cold temperatures.

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