

Brightwood's Turtles

Photos courtesy of Chuan-Chu Chou



In the warm weather, turtles are hanging out!

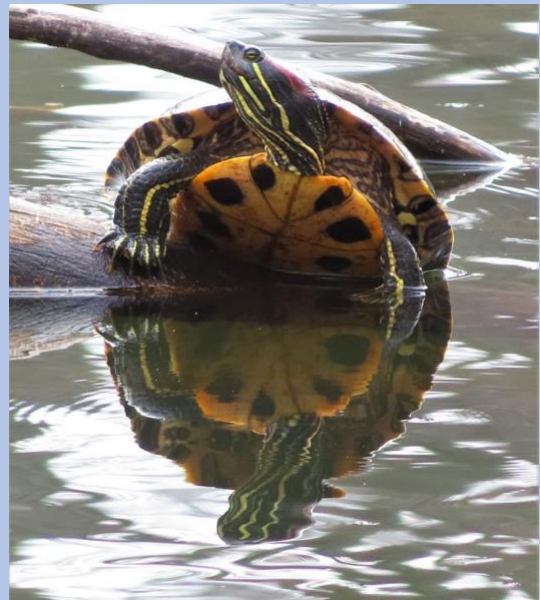
Brightwood is home to many turtles. All spring, summer and early fall you can find them sunning themselves on logs and other materials in the water.

If you keep a watch out for them in warm weather, you will see two predominant types of turtles in the pond. They seem similar but in some key respects are quite different. One of the species is a native species, the eastern painted turtle. The other, is an invasive species, a red-eared slider.



If you look closely, you will note that the eastern painted turtle has yellow stripes around its eyes. The red-eared slider has a red streak leading away from its eye. The eastern painted turtle's upper shell is smoother compared to the red-eared slider. Can you guess which is which?

These turtles' belly shells are also a contrast with the painted turtle having a brownish yellow or crimson tone and the slider having a lighter yellow color with dark markings.



The painted turtles are smaller than sliders. Female painted turtles can grow up to 10" while males range up to 6." Sliders can grow up to 12."

The painted turtles natural habitat is here in the northeastern United States. The red-eared turtles are native to the mid-western and southwestern United States from New Mexico to Illinois and to West Virginia. However, they have made their way to the eastern coast. Red-eared sliders are sold as pets and can live up to 40 to 50 years in captivity.

There is a theory that they have been introduced to this region by pet owners who release them into ponds. The red-eared turtles then compete with native species for food, habitat, and a place in the sun.



It's Cold Outside...Where Have all the Turtles Gone?

Though the turtles are around in the warmer months, they disappear when the weather turns cold. Where do they go?

Surprisingly, turtles do not hibernate in the winter. Rather, they rest, but do not sleep, on the muddy floor of the pond for the duration of the cold weather. They neither eat nor come to the pond surface to breathe. How do they survive?

Turtles are cold-blooded reptiles, that is, ectotherm, meaning that their body temperature is governed by their surrounding environment. Their bodies cannot generate heat like endotherms (such as humans). Turtles can survive cold weather, but if they freeze, they will perish. Thus, they dive down to the muddy floor of a pond where the water temperature stays above freezing.

The cold water temperature slows their metabolism. Metabolism is how a body changes nourishment into energy. With a slower metabolism in cold water, turtles can go months without eating.

But what about oxygen? They have lungs and need to breathe oxygen. Yet, turtles do not surface to breathe for months. Interestingly, they can absorb enough oxygen from the water as it passes over certain body surfaces that have a lot of blood vessels – in particular, their butts. So, you could say that they breathe through their butts to stay submerged until the weather and water warms up.

When the water warms, they surface once again, find a log and sun themselves to raise their body temperature. As their body temperature warms, their metabolism speeds up also.



For more information, check out:

<https://www.pbs.org/newshour/science/the-secret-to-turtle-hibernation-butt-breathing>