

The Water Striders by Chris Ricardi

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Some of you may have noticed the masses of little bugs skimming across the calm lake surfaces this summer. The water striders or skaters, those little black bugs that walk on water and seemingly skate across the watery surface, were very abundant this year. I was asked if I had any ideas why there were so many, so I did a little reading and have some ideas on the water strider population explosion.

The water striders are very interesting little creatures. They have 4 spindly legs that poke at the water without breaking the surface tension to hold their thin stick-like bodies above the water. If you look closely at them you can see that their legs push little indentations into the water forming depressions in the surface. Water molecules are very polar with charges that hold the individual molecules tightly together. So it is that the weight of these tiny bugs spread out across 4 points is not enough to break the strength of the molecular bond forces that hold the surface in place. Walking on water? Not really a miracle, just simple physics. Striders also have water repelling hairs on their undersides that keep them afloat. With a boat shaped body and legs that extend to the sides over the water, they are really like little catamarans.

These little guys are predatory in nature. They eat other insects that venture out onto the lake or are blown in by the wind. They also prey on mosquito larvae and other aquatic insects as they float to the surface and hatch. Like a spider they pierce and suck juices from their victims. They actually have a total of 6 legs. The front two are smaller legs in the front of their bodies that have claws to catch and hold prey. In masses they will swarm a fat flying ant or other bug that is unfortunate enough to fall on the water. They are also known to be cannibalistic.

So, what might have caused the larger numbers of water striders on the lake this past summer? It was most likely due to the warmer winters that we have had the past two years and the warm spring and summer this year. They grow better in warmer temperatures. They can survive the winter by taking shelter along the shoreline and hibernating. Winter survival would be higher during a mild winter. They also breed throughout the warm seasons, laying eggs on the lake shore and on plants. They continue to lay eggs until cooler temperatures come, and then they stop producing eggs and store body fat in preparation for hibernation. Because the last two years were warmer than normal, they would have laid eggs for a longer period. A longer egg-laying season combined with better growth and survival means more bugs.

There are over 1000 different species of water striders. I believe the ones on our lake are called Common Water Striders. Some species even live on the open ocean spending their entire lives at sea. Just as the lake species use objects on the shore for shelter, and to lay eggs and shelter young until they are ready to take to the water, the marine striders use floating objects. I recently read an article in Scientific American magazine that said that some oceanic populations were growing in calm areas of the sea where plastics and other trash were gathering. In one location called the North Pacific Subtropical Gyre, the amount of floating plastic trash has increased by 100 times in the past 40 years. Researchers found that the striders were laying eggs on the floating trash and were taking advantage of the new habitat.

So next time you see the little water striders racing across the lake think about their little lives and how they earn their keep on our lake.