

**Doon Watch Nature Series for Dehradun Live Hindustan Times
by Sanjay Sondhi**

Published on 17 July 2009

The Water Skater Beetle

As a child, I had always been amazed at the ease with which other children got onto roller skates. I displayed none of their expertise and was always a clumsy skater. In later years, I continued to be captivated by all forms of skating-roller skating, ice skating or even water skating. Needless to say, my admiration was only from a distance, as getting onto any one of these skates



was sure to lead to a inelegant fall and an aching backside! With this background, I watched in amazement, as a pair of beetles, skated on the water's surface with unimaginable grace.

Standing at a slow flowing stream, I was watching the Water Skater Beetle belonging to the Gerridae family of beetles. Also known as pond skaters or water striders, these beetles effortlessly skate over the water's surface. I watched them closely for a while to determine how they are able to skate on the water's surface (more so, because I cannot skate for nuts; perhaps I could learn from them!).

The brown beetle has three pairs of long legs but the six feet of the insect are all that touch the water. The point where the feet make contact with the

water, has a depression, caused by the surface tension on the water's surface. These touch points, create six “water cups” which enables the beetle to skate. The insect has minute hair on its legs, which gives it hydrophobic or “non-wetting” legs, which causes the surface tension. Watching the insects closely, I realised that the insect used its middle legs to propel itself, using it like an oar, while the legs at the front and back provided it balance and act as a steering rudder. At each point where the feet touch the water, the “water cups” cast a shadow, hence before seeing the insects, you actually see the shadows first-six dark points on the surface of the water, zig-zagging about.

The Water Skater Beetles swim energetically and randomly, and often bang into each other. Their behaviour reminded me of a bunch of kids go-carting with gay abandon. When stationary, the beetles vibrate back and forth, as though revving up, and getting ready to shoot off on the surface of the water. Pretty much like all the youngsters I see nowadays on these big motorbikes, gunning their engines, in readiness to skate the motorways! I reached down to touch one of the beetles, and they jumped up on the water's surface-really jumpy characters.

The Water Skater Beetles can be found on most slow flowing fresh water habitats in Dehradun. Most of them lack wings and cannot fly. They lead aquatic lives, and predate on small aquatic insects. They even mate in the water (see picture) and lay their eggs in aquatic habitat.

Whether Water Skater Beetles survive this millennium, is linked to how well we protect and conserve our sources of fresh water. So make a difference and do your bit to conserve water in your daily lives.

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Making a difference: Conserve water. Did you know that you can save water by inserting plastic bottles filled with stones into the water storage of your toilet flush! This reduces the water you use with each flush, without any impact on its functionality. Try this today.

Photograph caption: Mating Water Skater Beetle