

Water Striders

The family **Gerridae** contains insects commonly known as **water striders**.

Kingdom:	Animalia
Phylum:	Arthropoda
Class:	Insecta
Order:	Hemiptera
Suborder:	Heteroptera
Infraorder:	Gerromorpha
Family:	Gerridae



Water striders using water surface tension when mating

Water striders can vary in length from 1.6 mm (tiny species from the genus *Rheumatobates*) to 36 mm. Similarly, their body shape ranges from slender and elongate to almost completely round. One common feature is their elongated legs (only the first pair is short and stubby) which the animals use for moving over the water surface. The body and legs are covered with tiny hairs. The head is usually elongated in front of the eyes to form a rostrum. Similar to other bug groups (such as Pyrrhocoridae), the development of wings can vary significantly within the same population. The population consists mostly of specimens with undeveloped or poorly developed wings. However, a small number of individuals have fully developed wings which they use for colonizing new habitats and forming new populations.

Ecology



A group of water striders devouring a honey bee

These are predatory insects which rely on surface tension to walk on top of water. They live on the surface of ponds, slow streams, marshes, and other quiet waters. There they hunt for insects and other small invertebrates on top of or directly below surface using their strong forelegs which end with claws. They can move very quickly, up to 1.5 m/s.

They paddle forward with the middle pair of their legs, using fore- and hind legs as a rudder.

Five species of *Halobates* sea skaters are the only insects that have successfully colonized open ocean habitats. Water striders do not taste very good so they tend to not be eaten by fish.



Water striders leg impact on water surface

Water striders can stand effortlessly on water due to their non-wetting legs. The water resistance of the legs is due to their "special hierarchical structure, which are covered by large numbers of oriented tiny hairs (microsetae) with fine nanogrooves". They go on to demonstrate that the water resistance is due more to this physical structure than the chemical properties of the wax coating of the legs.