

## *Lethocerus maximus* (Giant Water Bug)

Order: Hemiptera (True Bugs)

Class: Insecta (Insects)

Phylum: Arthropoda (Arthropods)



**Fig. 1.** Giant water bug, *Lethocerus maximus*.

[<http://carnivoraforum.com/topic/9673418/1/>, downloaded 30 January 2017]

**TRAITS.** *Lethocerus maximus* has an elongated body with six legs; the pair at the front are used for grasping their prey (Fig. 1) and the middle and hind legs are used for swimming (Carnivora, 2017). The giant water bug has brown forewings, laid flat and covering almost the entire abdomen. Only two tube-like appendages at the posterior end are left uncovered as they function in breathing air. This species reaches a maximum length of over 12 cm (Wikipedia, 2017). Males and females are similar in both size and appearance. The larvae look similar to the adults but lack fully developed wings (Animal Diversity Web, 2017).

**DISTRIBUTION.** Widespread over North and South America, giant water bugs are found mostly in very hot and humid regions and regions of mild temperatures. *Lethocerus maximus* occurs in the Nariva Swamp and in mountain streams with a rapid flow of water (Cullen, 1969).

**HABITAT AND ACTIVITY.** Found in ponds, freshwater streams and also along shallow edges of lakes with vegetation both on the surface and under the water (Fig. 2). They use the plants near the surface to support themselves while they extend their short breathing tube out of the water to breathe as they await their prey. These bugs are often referred to as ambush hunters as they lay quietly and await their prey. They appear similar to dead leaves when they are motionless; this technique provides them with protection from predators as they are able to remain hidden. However, their main defence mechanism is to flee and hide when targeted. The adults use a breathing tube that resembles a snorkel that is located at the tip of the abdomen to breathe air. They tend to float at the surface or sometimes they hide in shallow areas near the surface. This insect is diurnal in activity, and has a painful bite (Featured Creatures, 2003).

**FOOD AND FEEDING.** These insects are carnivores, and spend most of the time along the sides of ponds and lakes awaiting prey. The larvae consume aquatic invertebrates that are small in size, while adults feed on any small animals they can manipulate such as insects and also water invertebrates. They also prey on vertebrates such as salamanders, tadpoles and even small fish (Fig. 3). This bug is able to grasp prey using the strong forelegs, and shove the sucking mouthparts into the target. Adult bugs are able to capture larger prey through the use of their clawed front feet and also the chemicals that are transferred into the body of the target organism. The enzymes present cause the inside of the organism to turn into liquid, hence making it easy for the bug to suck up (Woodland Park Zoo, 2017).

**REPRODUCTION.** The female approaches the male during mating and this marks the beginning of the courtship ritual which involves making motions of boxing without executing heavy blows. The male will mate with the female after which she is allowed to lay the eggs on his back. However, she is only permitted to lay a few eggs after each mating. This ritual proceeds until the entire surface of the male's back is covered with a total of about 150 eggs (Fig. 4). The male then becomes the caretaker of the eggs. He often exposes the eggs to air to prevent growth of fungi. It takes on average about three weeks for eggs to open and produce a young one. The glue attaching the eggs to the male's back degenerates when all the eggs are hatched, which is usually late at night, then the egg cases fall off. The larvae are a pale yellow colour a few hours subsequent to hatching, and then they take on their normal appearance which involves a darker colour (Woodland Park Zoo, 2017).

**APPLIED ECOLOGY.** Currently, *Lethocerus maximus* is not in danger and has not been listed by the IUCN. This insect produces saliva that is very toxic and can cause intense pain and even paralysis in vertebrates. There is no specific treatment and as such, prevention is best (Schwartz, 2017).

## REFERENCES

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**Fig. 2.** Giant water bug in its natural habitat.

[[https://sites.google.com/a/apps.edina.k12.mn.us/tommy-giant-water-bug-2012/\\_/rsrc/1338487539615/habitat/A01\\_Giant\\_Water\\_Bug\\_Lethocerus\\_deyrollei.jpg?height=320&width=320](https://sites.google.com/a/apps.edina.k12.mn.us/tommy-giant-water-bug-2012/_/rsrc/1338487539615/habitat/A01_Giant_Water_Bug_Lethocerus_deyrollei.jpg?height=320&width=320), downloaded 13 February 2017]



**Fig. 3.** Giant water bug larva feeding on a fish.

[<https://3c1703fe8d.site.interapcdn.net/newman/gfx/news/hires/2013/1-hideambushki.jpg>, downloaded 13 February 2017]



**Fig. 4.** Male giant water bug carrying eggs on its back.

[<http://cdn.inquisitr.com/wp-content/uploads/2016/01/waterbug1-670x481.jpg>, downloaded 13 February 2017]

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