

Giant water bug

By Heather Fraley

I plunge my dip net into the foul-smelling muck of a stagnant pond and sweep it around. Looking at the wriggly contents of the net, I'm as excited as a kid on Christmas morning. Today, I've hit the invertebrate jackpot: one of Montana's largest aquatic insects, a deadly, streamlined predator known as the giant water bug.

IDENTIFICATION

The giant water bug is shaped like a cockroach. It has a flat, oval body about two inches long with a four-inch wingspan. Its mottled, brown coloring blends perfectly with the bottom of ponds. The bug's sharp beak tucks up under its head between two bulbous, oval eyes. Long, grasping forelegs with terminal hooks extend out from its head. Two rear legs are slightly flattened for efficient swimming.

At first glance, the giant water bug is often mistaken for a beetle. Closer examination reveals the soft, leathery outer wing that identifies the insect as being in the order Hemiptera, or true bugs. Montana is home to two nearly identical looking species of giant water bug: *Lethocerus americanus* and *Belostoma flumineum*.

HABITAT AND RANGE

Giant water bugs are found in still or slow-moving water in ponds, sloughs, or wetlands. They range throughout the United States and Canada and across Montana.

REPRODUCTION AND LIFE CYCLE

A single female can lay up to 150 eggs in her life. A female of the *Belostoma* genus lays her eggs on the back or folded wings of a male. Then she leaves him to incubate the glued-on glob until the eggs hatch. A female of the *Lethocerus* genus deposits her eggs in rows above water on aquatic vegetation. Neither she nor the male watches over the eggs.

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Giant water bug eggs, laid in early summer, hatch into nymphs after incubating for two weeks. Life as a giant water bug nymph is harsh because of cannibalism and predation, so very few survive the month or so it takes to reach adulthood. Adult giant water bugs, however, are strong fliers and swimmers and often can escape large fish and other predators.

BEHAVIOR

Giant water bugs are fierce “ambush predators” that wait for insects, small fish, and amphibians to cross their path. The entomology journal *Psyche* once described them

After capturing its prey, the giant water bug stabs its sharp beak into the body and injects a powerful toxin. The toxin first paralyzes the prey, then liquefies the internal parts, which the giant water bug can suck up like a protein milkshake.

There are even reports of giant water bugs killing fish. In 1923, a Montana man observed a giant water bug floating on the surface of a creek near Ovando, waving its leg. As reported in *Psyche*, a trout “grabbed the water bug by the leg...whereupon the bug raised up and sunk its beak into the top of the fish's head. The trout began to swim excitedly in circles and jumped clear of the



as having “extreme voraciousness.” The grasping raptorial forelegs ending in tarsal claws are ideal for snatching and pulling prey close to the bug's piercing beak. These legs are surprisingly strong. If held by a human, the giant water bug may try to pull a finger within range of its beak.

water several times. It finally turned over on its back.”

Nicknames include “electric light bugs,” because they are attracted to streetlights and “toe biter” because they occasionally deliver a painful chomp to the submerged digits of unsuspecting swimmers. 🐞