

Colorado Insect of Interest

Giant Water Scavenger Beetle

Scientific Name: *Hydrophilus triangularis* Say

Order: Coleoptera (Beetles)

Family: Hydrophilidae (Water scavenger beetles)



Figure 1. A giant water scavenger beetle

Description and Distinctive Features: The adult giant water scavenger beetle is a glossy black, smooth bodied beetle that is 27-40 mm long. The wing covers often reflect faint greenish or purplish hues. The hind legs are feathered, an adaptation for swimming, and a stout spine runs along the underside of the body.

Larvae, which occur in water, have an elongate body and large dark head with prominent curved jaws. Elongated spiracles through which they acquire oxygen arise from the end of the abdomen

Distribution in Colorado: Statewide. The adults are strong fliers and can colonize isolated water pools, including stock tanks.



Figure 2. Larva of a giant water scavenger beetle swimming in stock tank

Life History and Habits: Giant scavenger beetles winter in the adult stage, buried in the mud at the bottom of water bodies. They emerge in spring and eggs are laid in late spring or early summer. The female produces eggs in the form of a mass that is laid in a silken case that is attached to floating debris.

The immature stage is a predator, working by ambush to lie in wait, seizing and crushing prey that comes within reach. Most of their diet is made up of small insects and other aquatic invertebrates. However, their jaws are

quite powerful allowing them to consume snails whole as well as catch large prey such as tadpoles and small fish. After completing development it leaves the water and pupates within a soil chamber produced a few inches deep in moist soil. Adults emerge in about 2-3 weeks.

Adults also are predators but will scavenge dead animal matter in the water. Water scavenger beetles are excellent swimmers, with large hind legs feathered to propel them quickly. They are also able to stay under water for extended periods (including all of winter) by carrying with them air bubbles under the wing covers and along the underside, trapped by small hairs of the body. As the oxygen is depleted within the bubbles it is replenished from the oxygen in the water. This air supply is also periodically renewed by a brief visit to the water surface. When surfacing they go head first, extending the antennae to break the surface which allows fresh air to move over the body and form a new bubble.

The beetles are strong fliers and sometimes are attracted to lights at night.

Related Species: The water scavenger beetle family is a large one, including many Colorado species in the genera *Berosus*, *Helophorus*, *Tropisternus*, and *Enochrus*.