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Invertebrates are the most diverse and abundant group of animals on the planet. They are cold blooded and without a backbone. Some invertebrates live on land, such as butterflies, walking sticks, bees, spiders and worms; others, like crabs, squid, fairy shrimp, clams and coral, live in water. Crayfish are the largest free-moving invertebrate in Ontario.

Of the approximate 500 species of crayfish worldwide, 9 native species reside in Ontario. Each has its own way of life, habitat and behaviours. Our most widespread lake- and stream-dwelling native crayfish is the **Virile Crayfish**, sometimes mistaken for the invasive Rusty Crayfish. The Virile Crayfish is typically reddish-brown and grows to approximately 10-12 cm / 3.9-4.7 inches long – this length does not include its long antennae or pair of claw-bearing legs. The claws often have a bluish tinge, especially in the male crayfish whose claws are larger than the female. A protective, shell-like plate called a ‘carapace’ covers its head, thorax, and feathery gills. The jointed abdomen narrows to a flipper-shaped tail. It walks about on 4 pairs of jointed legs; but when frightened, the tail is pumped rapidly beneath the body to propel the crayfish backwards through the water. Five additional pairs of smaller limbs, called swimmerets, are kept in motion to keep a steady current passing over the gills. As the crayfish grows, it sheds its exoskeleton and re-grows a bigger one. During this moulting period, it is very vulnerable.

The Virile Crayfish can be found in lakes, ponds, rivers, streams and marshes. It requires permanent bodies of water that won’t freeze solid or undergo winter die-off from significant oxygen depletion. Another habitat necessity is the presence of rocks, logs and thick vegetation which provide shelter and protection from predators during the day. At night, it exits its hiding place to forage for food, aided by long, sensitive antennae. The crayfish is an opportunistic omnivore, feeding on aquatic plant matter, insects, tadpoles, small fish and other invertebrates. It also scavenges on dead things. Fish are its main predators, with bass seeming to find it especially tasty -- hence the countless lures designed to mimic the crayfish or its use as live bait. (Note: Ontario fishing regulations prohibit the transport of crayfish between bodies of water.) Otters, mink, raccoons, loons, herons and turtles are just a handful of creatures that eat the crayfish, making this crustacean a vital part of the aquatic ecosystem and its food web. A rich crayfish population is a positive sign of habitat quality, so its disappearance in some Canadian Shield lakes is troubling.

Mating occurs in fall or spring, but the eggs are not fertilized and laid until springtime. A female Virile Crayfish can store sperm from a fall mating until spring. She lays her eggs between late May and early June and carries them tucked under her tail in a raspberry-shaped cluster. The eggs hatch in July, and tiny replicas of the adults emerge. This crayfish is short-lived. Both the male and female usually die at around 2 years of age: the male usually after mating and the female after laying her eggs.

The Virile Crayfish can tolerate low oxygen levels and may wander onto land for brief forays – where, if threatened, it adopts a defensive “come at me, bro” posture with legs and claws extended, ready to rumble. You can safely pick up a crayfish by gently grasping it behind the carapace. If you should get pinched, place your hand in the water, and the crayfish usually lets go right away.

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Photo credit: Justin Hoffman