

Northern Bluet Damselfly

(*Enallagma annexum*)

BY LEE LAMB



DAN TAYLOR

Few things gross me out. The biologist in me triggers a curiosity in rotting carcasses, gut piles, and scat of all shapes and sizes. I'm comfortable in the presence of mice, snakes, bats, and other things that typically creep people out. But I don't like bugs. Though I understand and appreciate insects' role as predators, prey, and pollinators, they give me the willies.

The exception are dragonflies and their close cousins, damselflies. I've always been attracted to watery habitats and the critters that go with them. My favorite of these insects is the northern bluet. You've likely seen this friendly blue damselfly fluttering around shorelines or resting on grasses or even on your boat or fishing rod.

Identification The male's slender, 1.5-inch-long body is turquoise blue with black bands. The top of the head, mostly black, has two blue, teardrop-shaped spots perched behind the gigantic eyes. Females, generally blue, green, or tan, have black abdomens, and the spots on the head are smaller. Two pairs of membranous wings sprout from the rear of the thorax of both sexes.

Damselflies are easily mistaken for dragonflies. Dragonflies are typically stouter and are generally stronger fliers. When at rest, the dragonfly holds its fore- and hind-wings

straight out from the body like airplane wings; a damselfly holds its wings tucked tight against its body. Also, dragonfly eyes touch at the top of the head, while those of the damselfly are well separated.

Range The northern bluet ranges across North America from Alaska and Canada south to northern Mexico and Baja. The species is absent from the southeastern United States. In Montana, northern bluets have been recorded in 35 counties scattered across the state.

Habitat The presence of damselflies at freshwater sites usually indicates clean water, abundant native vegetation, and other aspects of a healthy ecosystem. Northern bluets live in a variety of Montana landscapes, from the dry sagebrush and prairie regions to the forested mountains. Within these habitats they require quiet waterways such as lakes, ponds, marshes, and slow-flowing streams.

Breeding and life cycle The male northern bluet establishes a mating territory near water and waits for a receptive female. When she arrives, the pair perform a ritual unlike any in the animal kingdom. First, he produces sperm in the back end of his abdomen. He then deposits the sperm into an accessory organ closer to his trunk. As he clutches the female behind her head with

appendages at the tip of his abdomen, she loops her abdomen forward and picks up sperm from his accessory organ. The bodies of a conjoined pair form a circle as they mate, either in flight or while perched on shoreline vegetation.

After copulation, the female cuts a slit into submerged vegetation with her mouth and lays her eggs. When the eggs hatch, the young nymphs are small but fully formed, meaning they don't go through larval or pupal stages. Damselfly nymphs are varying shades of green or tan and have a large, bulbous head perched on a long, tubular body. Three finlike gills emerge from the end of the abdomen.

Nymphs spend the winter underwater, where they molt (shed their skin) roughly one dozen times while growing. When about 1 inch long, the nymphs crawl out of the water onto rocks, sticks, grasses, or cattails and break out of their skin one last time, "hatching," or emerging, as adults. Adults typically live less than two weeks, spending their final days feeding and breeding.

Habits Northern bluets don't sting or bite humans, but they are formidable predators of other insects. The nymphs hide in underwater vegetation and ambush the larvae of smaller insects such as mosquitoes and mayflies. Large eyes and the ability to fly in any direction make adult damselflies excellent aerial hunters. They typically prey on mosquitoes, small moths, flies, and mayflies.

Status Dragonflies and damselflies have been around for 300 million years—predating dinosaurs by about 100 million years. Of the 450 species found in North America, scientists have identified more than 80 in Montana.

Northern bluets are one of the most common damselflies along Montana's streams, rivers, and other waters. Both nymphs and adults are consumed by birds, fish, frogs, and dragonflies. The damselfly hatch typically begins in late May and continues until early September. During various times of the year, when great numbers of nymphs move underwater toward shore, trout key in on these insects and feed with abandon. Fly-fishing patterns that imitate the nymphs are especially effective then. 🐾

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