

# Hudsonian Emerald Dragonfly



Parks & Open Space

5201 St. Vrain Rd., Longmont CO 80504 303-678-6200 BoulderCountyOpenSpace.org



**Figure 1: Adult Hudsonian dragonfly (*Somatochlora hudsonica*)**  
MONTANA: Beaverhead Co; Beaverhead-Deer Lodge National Forest, Pioneer Mts, meadow 0.7 mi E of Mono Park Campground - female - August 2014

## Background

In part, special concern for the Hudsonian emerald dragonfly is because of lack of knowledge. The Hudsonian emerald dragonfly spends most of its life as an immature larva in aquatic habitat then emerges as an adult after metamorphosis. It requires specific temperature range as well as habitat conditions around water bodies. During reproduction, females will lay up to 500 eggs. Egg hatching can take between one and five months.

In 2017, Boulder County Parks & Open Space used habitat modeling to locate Hudsonian emerald dragonfly populations. The model estimated eight sites throughout the county, and of those eight sites, five had Hudsonian emerald dragonfly populations. The results of the modeling allowed for a more comprehensive assessment of locations throughout Colorado. It is estimated that potential populations may exist in five different regions, including Steamboat Mountain and Eldorado Springs.

## Species Description

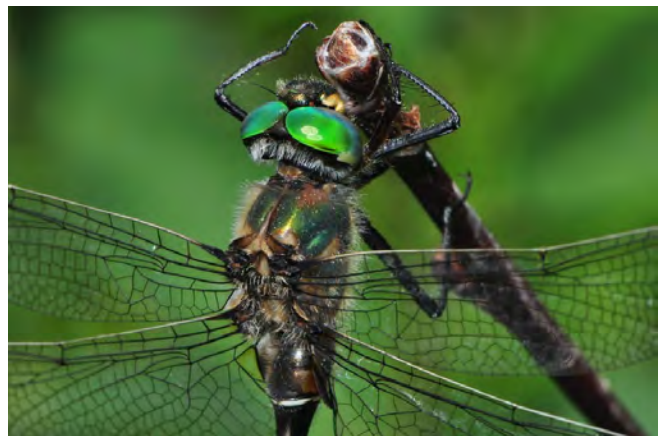
*Species:* Hudsonian emerald dragonfly (*Somatochlora hudsonica*)

*Identification:* Adults have elongated bodies with a head twice as wide as its thorax, a black face with yellow on the sides, green eyes, and a metallic green thorax. The key characteristic in the Boulder County area is a white-ringed abdomen. Males have abdominal cerci that angle sharply inward then curve outward and meet in a point.

Larva have a middorsal hook present in some species. When the middorsal is absent, the sides of the thorax are uniformly colored.

*Lookalikes:* American emerald, ocellated emerald, and mountain emerald

*Habitat:* Hudsonian emerald dragonflies are mainly found in the boggy edge of bodies of water. They are very temperature sensitive, so requiring a water temperature of 60°F-68°F, which is most often found between 8,200-9,800 feet of elevation.

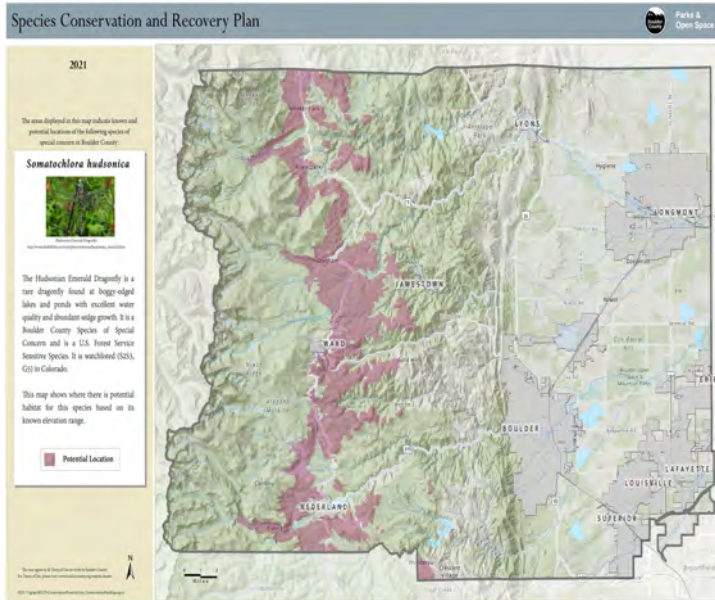


**Figure 2: Adult Hudsonian dragonfly (*Somatochlora hudsonica*)**

MONTANA: Glacier Co; Lubec Lake - males - July 2013

## Distribution & Range

## Threats



Climate change is a threat to the Hudsonian emerald dragonfly, because they have narrow thermal requirements and therefore are only found within a limited elevation range. Climate change may force them to progressively higher elevations.

**Grazing:** threatens Hudsonian emeralds as grazing and trampling along banks of water bodies reduces the area for breeding. It also negatively impacts available foraging habitat.

## Management Considerations

**Forest Practices:** Limit forest thinning and burning within ½ km radius of suitable habitat. By minimizing the disturbance caused by forestry operations, potential impacts to vegetation recruitment and temperature regimes will be mitigated.

**Manage Grazing:** Do not graze livestock within suitable habitat. This will prevent trampling, over grazing and water quality impacts from grazing practices.



**Figure 3:** Hudsonian emerald (*Somatochlora hudsonica*) adult

Photo credit: Daniel A. Soluk, taken from Voss and Loewy (2017)



**Figure 4:** Hudsonian emerald (*Somatochlora hudsonica*) adult

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<https://bugguide.net/node/view/569774>

**Disclaimer:** This summary is not a complete guide to conservation and/or recovery of the species. For more information please read the full report on our website.

2021

The areas displayed in this map indicate known and potential locations of the following species of special concern in Boulder County:

## *Somatochlora hudsonica*




Hudsonian Emerald Dragonfly

[http://www.thehibbits.net/troy/photo/odonata/hudsonian\\_emerald.htm](http://www.thehibbits.net/troy/photo/odonata/hudsonian_emerald.htm)

The Hudsonian Emerald Dragonfly is a rare dragonfly found at boggy-edged lakes and ponds with excellent water quality and abundant sedge growth. It is a Boulder County Species of Special Concern and is a U.S. Forest Service Sensitive Species. It is watchlisted (S2S3, G5) in Colorado.

This map shows where there is potential habitat for this species based on its known elevation range.

 Potential Location

