

## Appendix A: Insects

### Skillet Clubtail

*Gomphus ventricosus*

Federal Listing	N/A
State Listing	SC
Global Rank	G3
State Rank	S1
Regional Status	
Moderate	



Photo by Scott Young

#### Justification (Reason for Concern in NH)

Several species of Odonata are specialized on large or medium sized rivers, and while many are widespread in appropriate habitat in New Hampshire, a handful appear to be sufficiently rare to warrant additional considerations. In the Northeast Odonata Conservation Assessment (White et al. 2014), Skillet Clubtail was considered "moderate vulnerability" due to habitat specificity, but it is retained as a New Hampshire SGCN due to restricted range and low population density.

#### Distribution

The Skillet Clubtail occurs from Minnesota and Missouri east to Nova Scotia and North Carolina. It is sparsely distributed across this range, with concentrations in the Midwest and along the lower Connecticut River. In New Hampshire most records come from the Merrimack River between Canterbury and Manchester, with an additional record from the Contoocook River in Hopkinton (Hunt 2012). On the Connecticut, there is a single historical record (1939) from Hinsdale, and unverified records from Chesterfield and Walpole. It was not detected in any of these locations despite extensive surveys in 2006 (Hunt 2006) and in 2007-2011 (Hunt 2012), although it remains more common farther south in Massachusetts and Connecticut (Hunt et al. 2010).

#### Habitat

Large, slow-moving rivers with mud or silt bottoms. Forested shoreline habitat is probably important for emerging adults.

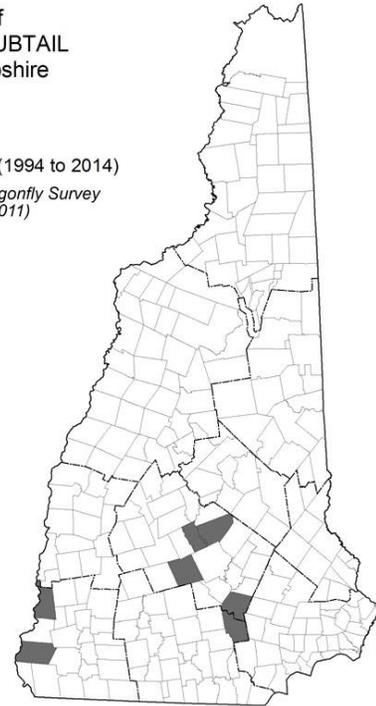
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### NH Wildlife Action Plan Habitats

- Large Warmwater Rivers
- Warmwater Rivers and Streams
- Appalachian Oak Pine Forest
- Floodplain Habitats
- Hemlock Hardwood Pine Forest

### Distribution of SKILLET CLUBTAIL in New Hampshire

Current (1994 to 2014)  
Includes NH Dragonfly Survey records (1987-2011)



Distribution Map

### Current Species and Habitat Condition in New Hampshire

Unknown

### Population Management Status

Not managed

### Regulatory Protection (for explanations, see Appendix I)

- Fill and Dredge in Wetlands - NHDES
- Comprehensive Shoreland Protection Act - NHDES

### Quality of Habitat

Unknown

### Habitat Protection Status

Unknown

### Habitat Management Status

Habitat management has not been implemented for this species

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### Threats to this Species or Habitat in NH

*Threat rankings were calculated by groups of taxonomic or habitat experts using a multistep process (details in Chapter 4). Each threat was ranked for these factors: Spatial Extent, Severity, Immediacy, Certainty, and Reversibility (ability to address the threat). These combined scores produced one overall threat score. Only threats that received a “medium” or “high” score have accompanying text in this profile. Threats that have a low spatial extent, are unlikely to occur in the next ten years, or there is uncertainty in the data will be ranked lower due to these factors.*

#### Habitat degradation due to bank stabilization that limits emergence habitat (Threat Rank: Medium)

When emerging, gomphid larvae climb onto exposed banks, where they travel a variable distance prior to eclosure (McLain et al. 2006). Distance traveled may vary by species and substrates, with some evidence that larvae travel shorter distances on artificial (e.g., stabilized) banks. Eclosing adults closer to the water are more susceptible to mortality from upstream water releases and wash-over from watercraft wakes (Wagner and Thomas 1996).

#### Habitat degradation and mortality from water releases (Threat Rank: Medium)

When emerging, gomphid larvae climb onto exposed banks, where they travel a variable distance prior to eclosure (McLain et al. 2006). Distance traveled may vary by species and substrates, with some evidence that larvae travel shorter distances on artificial (e.g., stabilized) banks. Eclosing adults closer to the water are more susceptible to mortality from upstream water releases. Extreme discharge events also have the potential to move river sediments around and disturb larval habitat.

#### List of Lower Ranking Threats:

Habitat degradation and species impacts from sedimentation (various sources including roads and agriculture)

Mortality of emerging adults from watercraft causing wakes

Habitat degradation from the loss of adjacent forested habitat

### Actions to benefit this Species or Habitat in NH

#### Skillet Clubtail surveys

**Objective:** Maintain current information on the distribution and abundance of this species in NH

#### General Strategy:

Experienced observers working in suitable habitat should be aware of this species' potential occurrence and report it if found and documented.

#### Political Location:

Cheshire County, Hillsborough County, Merrimack County

#### Watershed Location:

## References, Data Sources and Authors

### Data Sources

NH Dragonfly Survey (Hunt 2012); Hunt unpublished data  
Hunt et al. 2010; Hunt 2012; Hunt, unpublished data

### Data Quality

This species is sparsely distributed and occurs at low densities. Adults fly far over large rivers or roost in tree canopies and are thus rarely detected. Most New Hampshire records are of exuviae (the shed larval skins left behind after emergence), which can be hard to distinguish from those of similar and more common species. As a result, the species is likely underreported, although it is still considerably less common than most other clubtails in its habitat.

### 2015 Authors:

Pamela Hunt, NHA

### 2005 Authors:

## Literature

Hunt, P.D. 2006. Odonata of the Connecticut River mainstem. Report to Connecticut River Joint Commissions. New England Institute for Landscape Ecology, Canaan, NH.

Hunt, P.D. 2012. The New Hampshire Dragonfly Survey: A final report. Report to NH Fish and Game Department, Nongame and Endangered Species Program. New Hampshire Audubon, Concord, NH.

Hunt, P.D., M. Blust, and F. Morrison. 2010. Lotic Odonata of the Connecticut River in New Hampshire and Vermont. *Northeastern Naturalist* 17: 175-188.

McLain, D., F. Morrison, and L. Sanders. 2006. Bank stabilization and dragonfly emergence, population dynamics, and larval ecology in the Turners Falls pool of the Connecticut River: 2005 field season. Report to Northeast Generation Services, Massachusetts Environmental Trust Fund, and Franklin Land Trust. A Natural Focus, Westhampton, MA.

Wagner, D., and M. Thomas. 1996. Big days on the big river. *Ode News* 3: 6-8.

White, E.L., P.D. Hunt, M.D. Schessinger, J.D. Corser, and P.G. deMaynadier. 2014. A conservation status assessment of Odonata for the northeastern United States. Report to Northeastern Association of Fish and Wildlife Agencies. New York Natural Heritage Program, Albany, NY.