

Green-faced Clubtail



Photo credits: Kurt Mead

Scientific Name *Gomphus viridifrons*
Hines, 1901

Family Name Gomphidae
Clubtails

Did you know?

Female Green-faced Clubtails lay their eggs in fast-moving water while tapping their abdomens onto the water's surface (Mead 2003).

Summary

Protection Unprotected in New York State, not listed federally.

This level of state protection means: the species may be taken at any time without limit; however a license to take may be required.

Rarity G3G4, S1

A global rarity rank of G3G4 means: Vulnerable globally, or Apparently Secure -- At moderate risk of extinction, with relatively few populations or locations in the world, few individuals, and/or restricted range; or uncommon but not rare globally; may be rare in some parts of its range; possibly some cause for long-term concern due to declines or other factors. More information is needed to assign a single conservation status.

A state rarity rank of S1 means: Typically 5 or fewer occurrences, very few remaining individuals, acres, or miles of stream, or some factor of its biology makes it especially vulnerable in New York State.

State Ranking Justification

The Green-faced Clubtail is known to occur in two locations in New York State, one of which is based on a recent observation from 1994. Population estimates have not been determined. Further survey efforts may result in the identification of additional populations or range expansions, and may enable population size estimations.

Conservation Issues

Threats

Any activity which might lead to water contamination or the alteration of natural hydrology could affect Green-faced Clubtail populations. Such threats might include agricultural run-off, increases in sedimentation, and changes in dissolved oxygen content of streams and rivers (Holst 2005).

Management Considerations

Any measures to reduce water contamination or hydrological alteration such as chemical contamination from agricultural run-off and increases in sediment load in streams and rivers should be considered when managing for this species (Holst 2005).

Research Needs

Further research is required to understand the habitat requirements of and threats to this species, and to create appropriate management guidelines for its persistence in known locations (Holst 2005).

Short Term Trends

No estimate of population size for the Green-faced Clubtail has been made based on the Orange County, New York observation from the mid-1990s (New York Natural Heritage Program 2007). Information prior to this time frame is limited. Therefore, any new location information on the Green-faced Clubtail in New York may reflect heightened interest in surveying for this species rather than a population increase or a range expansion (Holst 2005).

Long Term Trends

One recent observation of Green-faced Clubtails has been made in 1994 in Orange County and one observation was made in 1940 in Sullivan County, New York (Donnelly 2004, New York Natural Heritage Program 2007). Since there is limited historical information, one recent record, and the full extent and size of the populations have not been determined, long-term trends are unclear.

Habitat

Green-faced Clubtails inhabit medium-sized streams and small rivers with substrate consisting of gravel and silt (Dunkle 2000, Mead 2003). Larvae are aquatic, whereas adults are terrestrial and are found in habitats surrounding streams and rivers.

Associated Ecological Communities

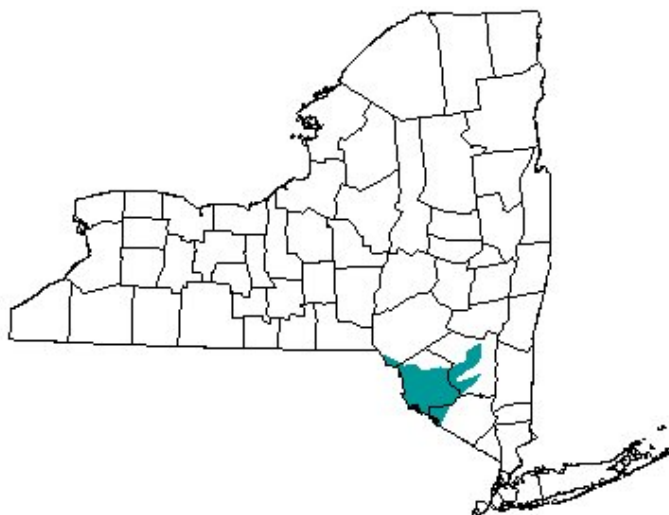
Other Probable Associated Communities

Confined river

Associated Species

Spine-Crowned Clubtail (*Gomphus abbreviatus*)
Rapids Clubtail (*Gomphus quadricolor*)

Range



The map shows the known locations for green-faced clubtail (black dots) based on the New York Natural Heritage Program database . A general approximation of the potential range (blue shading) throughout the state is based on the U.S. Forest Service Ecological Units (Keys et al. 1995).

Data Sources

- New York Natural Heritage Program (Natural Heritage Element Occurrences)
- NYS GIS Data Sharing Cooperative, simplified by NYS Department of Environmental Conservation, Habitat Inventory Unit (County Boundary for New York State)
- U.S. Department of Agriculture, Forest Service (Subregions of the conterminous United States)

Best Places to See

Delaware River (Orange County)

New York State Distribution

The Green-faced Clubtail is known from two counties in the southeastern portion of New York State (Donnelly 2004, New York Natural Heritage Program 2007).

Global Distribution

The Green-faced Clubtail is distributed in Ontario, Canada and across the northeastern United States from western New York west to Minnesota and south to northern Alabama (Dunkle 2000). It has a total known range from Ontario, Alabama, Indiana, Kentucky, Maryland, Michigan, Minnesota, New Jersey, New York, North Carolina, Ohio, Pennsylvania, Tennessee, Virginia, West Virginia, and Wisconsin.

Identification Comments

Identifying Characteristics

As their name suggests, Clubtails have an enlarged tip on the end of their abdomens, giving them a club-like appearance. Adult Green-faced Clubtails are robust, 1.8 inches long, and have dark green eyes. Their face and thoracic sides are a clear, grayish-green color. Females may have paler, greenish-yellow markings. Both sexes have a black abdomen with segment 9 appearing shorter than segment 8. Males have pale lateral (side) spots on abdominal segments 5-7, while females have yellow on the sides of their clubs. Male terminal appendages and female subgenital plates are distinctive from other Clubtails when examined under magnification.

Behavior

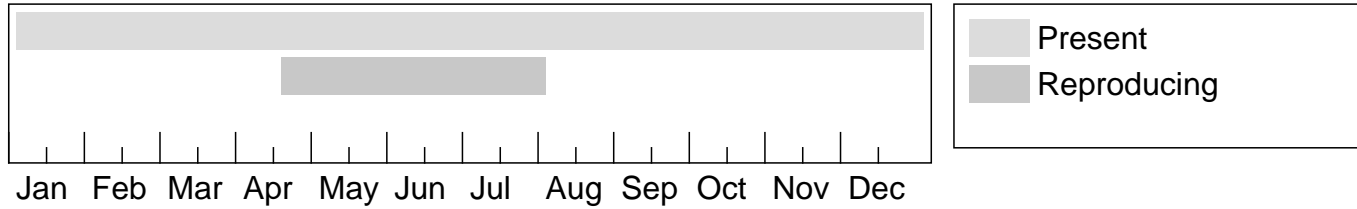
Female Green-faced Clubtails oviposit (lay eggs) by tapping the tips of their abdomens onto the surface of swift-flowing water while simultaneously releasing eggs (Mead 2003, Nikula et al. 2003). Males hover over the water with a raised abdomen and extended hindlegs and sometimes perch on nearby rocks or on shoreline leaves of weeds or trees (Dunkle 2000).

Diet

Green-faced Clubtail larvae feed on smaller aquatic invertebrates and adults feed on insects which they capture in flight.

The Best Time to See

Adult Green-faced Clubtails have been found in New York from May through July (New York Natural Heritage Program 2007). They are known to be most active in the late afternoon under cloud cover (Mead 2003).



The time of year you would expect to find Green-faced Clubtail in New York.

Similar Species

Rapids Clubtail(*Gomphus quadricolor*): The Rapids Clubtail has a middle thoracic stripe, where the Green-faced Clubtail lacks this feature. Abdominal segment 9 is not shorter than segment 8 on the Rapids Clubtail, as it is with Green-faced Clubtails (Mead 2003).

Mustached Clubtail(*Gomphus adelphus*): The Mustached Clubtail has black facial markings not present on the Green-faced Clubtail. Male Mustached Clubtails lack the pale lateral spots on abdominal segments 5-7 that are present on our subject (Dunkle 2000).

Spine-Crowned Clubtail(*Gomphus abbreviatus*): Female Spine-crowned Clubtails have a dorsal (top) yellow spot on abdominal segment 10, while this segment is all-black on the Green-faced Clubtail females.

Taxonomy

Kingdom Animalia

└ **Phylum** Mandibulates (Mandibulata)

└ **Class** Insects (Insecta)

└ **Order** Dragonflies and Damselflies (Odonata)

└ **Family** Gomphidae (Clubtails)

Additional Resources

Links

Google Images

<http://images.google.com/images?q=GOMPHUS+VIRIDIFRONS>

NatureServe Explorer

<http://natureserve.org/explorer/servlet/NatureServe?searchName=GOMPHUS+VIRIDIFRONS>

References

- Abbott, J.C. 2007. OdonataCentral: An online resource for the odonata of North America. Austin, Texas. Available at <http://odonatacentral.com> (accessed February 28, 2007).
- Carle, F.L. 1979. Two new Gomphus (Odonata:Gomphidae) from eastern North America with adult keys to the subgenus Hylogomphus. *Annals Entomol. Soc. of America* 72(3). pp. 418-426.
- Donnelly, T. W. 1992. The odonata of New York State. *Bulletin of American Odonatology*. 1(1):1-27.
- Donnelly, T.W. 1999. The dragonflies and damselflies of New York. Prepared for the 1999 International Congress of Odonatology and First Symposium of the Worldwide Dragonfly Association. July 11-16, 1999. Colgate University, Hamilton, New York. 39 pp.
- Donnelly, T.W. 2004. The Odonata of New York State. Unpublished data. Binghamton, NY.
- Dunkle, Sidney W. 2000. *Dragonflies through Binoculars; a field guide to dragonflies of North America*. Oxford University Press: 266 pp.
- Gebauer, Shane, Houle, Charlene, Timothy G. Howard, and Troy Weldy. 2005. New York dragonfly and damselfly survey database. New York Natural Heritage Program, New York State Department of Environmental Conservation. Albany NY.
- Holst, L., ed. 2005. *Comprehensive Wildlife Conservation Strategy Planning Database*. New York State Department of Environmental Conservation. Albany, NY.
- Keys, Jr.,J.; Carpenter, C.; Hooks, S.; Koenig, F.; McNab, W.H.; Russell, W.;Smith, M.L. 1995. *Ecological units of the eastern United States - first approximation (cd-rom)*, Atlanta, GA: U.S. Department of Agriculture, Forest Service. GIS coverage in ARC/INFO format, selected imagery, and map unit tables.
- Mead, K. 2003. *Dragonflies of the North Woods*. Kollath-Stensaas Publishing, Duluth, MN. 2003 pp.
- NatureServe. 2005. *NatureServe Central Databases*. Arlington, Virginia. USA
- Needham, James G., and Minter J. Westfall, Jr. 1954. *A Manual of the Dragonflies of North America (Anisoptera)*. University of California Press, Berkeley, California. 615 p.
- New York Natural Heritage Program. 2007. *Biotics Database*. Albany, NY.
- Nikula, B., J.L. Loose, and M.R. Burne. 2003. *A field guide to the dragonflies and damselflies of Massachusetts*. Division of Fisheries and Wildlife, Natural Heritage and Endangered Species Program, Westborough, MA. 197 pp.
- Soltész, Ken. 1992. Proposed Heritage ranks for New York State odonata. Unpublished report for New York Natural Heritage Program. 37 pp.

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