

Species: Red-banded Hairstreak (*Calycopis cecrops*)
Global Rank: G5
State Rank: S4 (State rank changed in 2002 from S2S3 to S4)
State Wildlife Action Plan:
Climate Change Vulnerability: Not Vulnerable / Increase Likely
Confidence: Very High

Habitat (adapted from Allen 1997 and NatureServe 2008):

The Red-banded Hairstreak is found in a variety of semi-open brushy habitats and forest edges. It will utilize abandoned farms and old fields, hedgerows, right-of-ways, and occasionally yards with food plants. The caterpillars feed on a wide variety of detritus (rotting leaves) especially preferring detritus from sumacs (*Rhus* spp.) but also reported to feed on detritus from the plant genera *Croton* and *Myrica*. Adults are seen mostly in the open and on edges in spring, but will move into the deep shade of forest during hot summer weather (observations by D. Schweitzer in New Jersey). Adults commonly visit gardens to nectar.

Threats:

Natural succession of habitats and conversion of old fields and other fallow habitats to other land uses such as active agriculture and development.

Main factors Contributing to Vulnerability Rank:

This species was formerly limited in Pennsylvania by an intolerance of overwintering larvae to minimum winter temperatures. This species appears to be having greater success over the past decade at surviving Pennsylvania winters, particularly in the south-east corner of the state. Throughout its range the species is widespread and adapted to disturbed habitats. While it requires successional habitats, it is not closely tied to fire-maintained natural communities. Development of infrastructure for alternate energy sources (e.g. wind and natural gas) is expected to create additional successional habitat for Red-banded hairstreaks and their favored hostplant (sumacs). The species is a strong colonizer/disperser and is capable of migrating short distances in response to environmental variables. These characteristics will help the Red-banded Hairstreak colonize new habitats to the north as temperatures become suitable for overwintering larvae.

Migration and Movements: Pennsylvania has resident populations (pers. comm. David Wright) which are augmented as summer progresses by additional individuals moving in a south-north direction. Reported to migrate at least short distances (Brock and Kaufman 2003, Pyle 1981), with heavier movement some years (CBA 2007, Kessler 2000) likely in response to environmental conditions.

Conspicuous butterfly species that occupy general habitats including residential gardens can be useful for volunteer based monitoring programs. The Red-banded Hairstreak is an

indicator of local environmental conditions, expected to move north as minimum winter temperatures allow. The following paragraph is summarized from an email correspondence from David Wright of August 22, 2000, and provides more insight into the expansion of the Red-banded Hairstreak into Pennsylvania:

Alan Gregory's collection of the Red-banded Hairstreak (*Calycopis cecrops*) at Conyngham, PA (near Hazleton in Luzerne County, Ridge and Valley Province) is the northernmost extent this migratory species has been found in Pennsylvania. Before 1999, the Red-banded Hairstreak was rare in southeastern Pennsylvania above the Fall Line (e.g. outside of the coastal plain). Philadelphia and southward usually would get a straggler or two in late summer/fall. In May of 1999 David Wright starting seeing Red-banded Hairstreaks in Lansdale (a northern suburb of Philadelphia in Montgomery County, Piedmont Province). Wright saw them throughout the summer until the last specimen was found on September 15. The winter of 1999 was relatively mild and the year 2000 spring populations were well stocked with progeny from the previous year's recruitment. The push northward is apparently underway. Interestingly, the famous old collector, Max Rothke of Scranton (Luzerne Co.), never caught a Red-banded Hairstreak in 30 years of collecting. Identifications by experienced butterfly watchers and collectors are reliable, there are no 'look-alike' species in the north-east and it is not part of a cryptic species complex.

Literature Cited:

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Connecticut Butterfly Association (CBA). 2007. Field Notes reporting observations from August 1 2007 through December 31 2007. Accessed online at [<http://ctbutterfly.org/field%20notes/FLDNTE23.html>].

Kessler, C. T. 2000. Monarch Butterfly and Other Butterfly Migrations: Monitoring Insect Migration in the Blue Ridge Mountains of Virginia. Accessed online at Journey North, a global study of wildlife migration and seasonal change [<http://www.learner.org/jnorth/tm/monarch/OtherMigrants.html>].

Pyle, R. M. 1981. The Audubon Society Field Guide to North American Butterflies. Alfred A. Knopf, Inc., New York. 915 pp.

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