

Torrey's Mountain-mint



Pycnanthemum torrei



Photo credits: *Stephen M. Young*

Scientific Name *Pycnanthemum torreyi*
Benth.

Family Name Lamiaceae
Mint Family

Did you know?

This species is named for John Torrey, the famous New York botanist who wrote the first Flora of New York in 1843. A recently discovered population on Staten Island was almost destroyed by the construction of a shopping center.

Summary

Protection Endangered in New York State, not listed federally.

This level of state protection means: listed species are those with: 1) 5 or fewer extant sites, or 2) fewer than 1,000 individuals, or 3) restricted to fewer than 4 U.S.G.S. 7 ½ minute topographical maps, or 4) species listed as endangered by U.S. Department of Interior.

Rarity G2, S1

A global rarity rank of G2 means: This species is imperiled globally because of rarity (typically 6 - 20 known populations or few remaining individuals) or very vulnerable to extinction throughout its range because of other factors.

A state rarity rank of S1 means: This plant is endangered/critically imperiled in New York because of extreme rarity (typically 5 or fewer populations or very few remaining individuals) or is extremely vulnerable to extirpation from New York due to biological factors.

Conservation Status in New York

There are three existing populations but all of them are small or highly threatened. Most of the eight historical records occur in areas that are highly developed in the New York City area and are considered extirpated. There is a slight possibility that a few historical records could be rediscovered or new populations found in protected areas in the Lower Hudson region.

Short-term Trends

The small existing populations are threatened by succession and by development.

Long-term Trends

This plant was never common in New York. Many of the historical records have been extirpated by development while a few new populations have been discovered. If these trends continue this species may not persist.

Conservation and Management

Threats

A roadside population is threatened by nearby development and road maintenance. Other populations could be threatened by succession of the open meadow community if areas were allowed to succeed to woody plants.

Conservation Strategies and Management Practices

Open areas need to be maintained without directly damaging plants. This can be done at the appropriate time of year after seed has been disbursed. Plants should be protected from direct destruction by habitat alteration.

Research Needs

Genetic studies should be performed on the populations to determine the relationship among populations in New York and among populations range wide. Genetic studies could also help separate this species from closely related species that also occur within its range. Habitat preference studies are needed to understand why this species is so restricted in distribution locally and range-wide.

Habitat

In New York Torrey's Mountain Mint has been found in dry, open habitats, including red cedar barrens, rocky summits, trails, and roadsides (New York Natural Heritage Program 2007). Dry, often fertile, woods and thickets (Fernald 1970). Dry upland woods (Gleason & Cronquist 1991).

Associated Ecological Communities

Appalachian Oak-hickory Forest

A hardwood forest that occurs on well-drained sites, usually on ridgetops, upper slopes, or south- and west-facing slopes. The soils are usually loams or sandy loams. This is a broadly defined forest community with several regional and edaphic variants. The dominant trees include red oak, white oak, and/or black oak. Mixed with the oaks, usually at lower densities, are pignut, shagbark, and/or sweet pignut hickory.

Red Cedar Rocky Summit

A community that occurs on warm, dry, rocky ridgetops and summits where the bedrock is calcareous (such as limestone or dolomite, but also marble, amphibolite, and calcsilicate rock), and the soils are more or less calcareous. The vegetation may be sparse or patchy,

with numerous lichen covered rock outcrops.

Other Probable Associated Communities

Limestone woodland

Associated Species

Green Milkweed (*Asclepias viridiflora*)
Paper Birch (*Betula papyrifera*)
Side-oats Grama (*Bouteloua curtipendula*)
Yellow-fruited Sedge (*Carex annectens*)
Fescue Sedge (*Carex brevior*)
Pennsylvania Sedge (*Carex pensylvanica*)
Pignut Hickory (*Carya glabra*)
Pink Corydalis (*Corydalis sempervirens*)
Common Dittany (*Cunila origanoides*)
Flattened Oatgrass (*Danthonia compressa*)
Poverty Oatgrass (*Danthonia spicata*)
Wild Carrot (*Daucus carota*)
Narrow-leaf Tick-trefoil (*Desmodium paniculatum*)
American Burnweed (*Erechtites hieraciifolia*)
White Thoroughwort (*Eupatorium album*)
Fringed Black Bindweed (*Fallopia cilinodis*)
Black Huckleberry (*Gaylussacia baccata*)
Thin-leaved Sunflower (*Helianthus decapetalus*)
Rattlesnake Hawkweed (*Hieracium venosum*)
Canadian St. John's-wort (*Hypericum canadense*)
Red Cedar (*Juniperus virginiana*)
New England Blazing Star (*Liatris scariosa* var. *novae-angliae*)
Grooved Yellow Flax (*Linum sulcatum*)
Sweet Gum (*Liquidambar styraciflua*)
Virginia False-gromwell (*Onosmodium virginianum*)
Hophornbeam (*Ostrya virginiana*)
Switchgrass (*Panicum virgatum*)
Forked Nail-wort (*Paronychia canadensis*)
Virginia Creeper (*Parthenocissus quinquefolia*)
Common Reed (*Phragmites australis*)
Canada Bluegrass (*Poa compressa*)
Old-field Cinquefoil (*Potentilla simplex*)
Basil Mountain-mint (*Pycnanthemum clinopodioides*)
Hoary Mountain-mint (*Pycnanthemum incanum*)
Slender Mountain-mint (*Pycnanthemum tenuifolium*)
Chestnut Oak (*Quercus montana*)
Pin Oak (*Quercus palustris*)
Red Oak (*Quercus rubra*)
Winged Sumac (*Rhus copallinum*)
Staghorn Sumac (*Rhus typhina*)
Sassafras (*Sassafras albidum*)
Little Bluestem (*Schizachyrium scoparium*)

Roundleaf Greenbrier (*Smilax rotundifolia*)
 White Goldenrod (*Solidago bicolor*)
 Early Goldenrod (*Solidago juncea*)
 Yellow Indiangrass (*Sorghastrum nutans*)
 Late Purple Aster (*Symphotrichum patens*)
 Eastern Poison Ivy (*Toxicodendron radicans*)
 Clasping Venus' Looking-glass (*Triodanis perfoliata*)
 White Moth Mullein (*Verbascum blattaria*)
 Stagbush (*Viburnum prunifolium*)
 Downy Arrow-wood (*Viburnum rafinesquianum*)

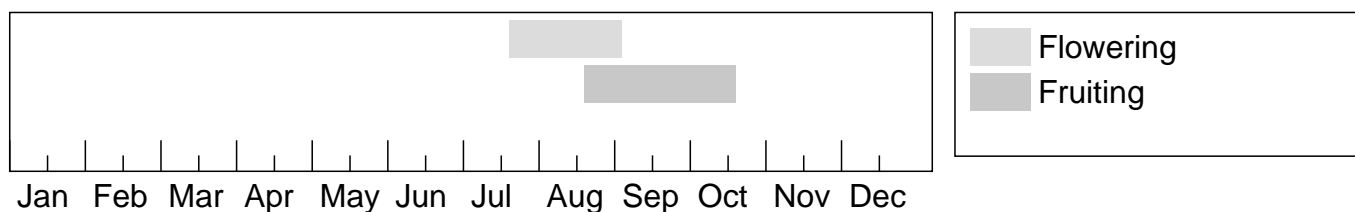
Identification Comments

Best Life Stage for Identifying This Species

Torrey's Mountain-mint is best identified when flowering or fruiting.

The Best Time to See

This species flowers from mid-July through August, and the fruits persist to early October.



The time of year you would expect to find Torrey's Mountain-mint in New York.

Similar Species

Pycnanthemum torrei most closely resembles *P. verticillatum*, from which it differs by its leaves and bracts being glabrous on the upper surface, (those of *P. verticillatum* evidently hairy above). *P. torrei* also has longer (1 to 1.5 mm) and sharper calyx teeth (those of *P. verticillatum* .5 to 1 mm long and triangular).

P. virginianum has stem pubescence confined to the stem angles, and *P. tenuifolium* has a glabrous stem, in contrast to the uniformly finely pubescent stems of *Pycnanthemum torrei*.

Conservation Comments

This may be a hybrid which does not persist for long. Taxonomic work is needed.

Taxonomy

Kingdom Plantae
 └─ Phylum Anthophyta
 └─

Class Dicots (Dicotyledoneae)
└─ **Order** Lamiales
 └─ **Family** Lamiaceae (Mint Family)

Synonyms

Koellia torrei ((Benth.) Kuntze)
Pycnanthemum torrei (Benth.)

Additional Resources

Links

New York Flora Atlas

<http://www.newyork.plantatlas.usf.edu/Plant.aspx?id=1773>

USDA Plants Database

<http://plants.usda.gov/java/nameSearch?mode=sciname&keywordquery=PYCNANTHEMUM+TORREI>

NatureServe Explorer

<http://natureserve.org/explorer/servlet/NatureServe?searchName=PYCNANTHEMUM+TORREI>

Google Images

<http://images.google.com/images?q=PYCNANTHEMUM+TORREI>

Best Identification Reference

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