

5

JUN 0 8 REC'D

New York State Department of Environmental Conservation

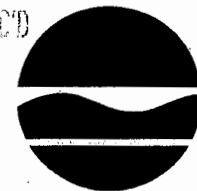
Division of Fish, Wildlife & Marine Resources

New York Natural Heritage Program

625 Broadway, Albany, New York 12233-4757

Phone: (518) 402-8935 • FAX: (518) 402-8925

www.dec.state.ny.us



Alexander B. Grannis
Commissioner

June 1, 2009

Sara R. Stebbins
Environmental Design and Research
217 Montgomery Street, Suite 1000
Syracuse, NY 13202

Dear Ms. Stebbins:

In response to your recent request, we have reviewed the New York Natural Heritage Program database with respect to an Environmental Assessment for the proposed Wind Energy Facility - Update Request, Project 06059, area, as indicated on the map you provided, located in Allegany, Cattaraugus County.

Enclosed is a report of rare or state-listed animals and plants, significant natural communities, and other significant habitats, which our databases indicate occur, or may occur, on your site or in the immediate vicinity of your site. The information contained in this report is considered sensitive and should not be released to the public without permission from the New York Natural Heritage Program.

PLEASE NOTE: For Windpower Projects, we report all records found within the project boundary, and any avian records that may be located within a 10-mile buffer of project boundary. We also report Indiana Bat Hibernacula that may be located within a 40-mile buffer of the project boundary.

PLEASE NOTE: We refer you to <http://www.dec.ny.gov/energy/40899.html> on the DEC Website for guidelines for proposed project.

The presence of the plants and animals identified in the enclosed report may result in this project requiring additional review or permit conditions. For further guidance, and for information regarding other permits that may be required under state law for regulated areas or activities (e.g., regulated wetlands), please contact the appropriate NYS DEC Regional Office, Division of Environmental Permits, at the enclosed address.

For most sites, comprehensive field surveys have not been conducted; the enclosed report only includes records from our databases. We cannot provide a definitive statement on the presence or absence of all rare or state-listed species or significant natural communities. This information should not be substituted for on-site surveys that may be required for environment impact assessment.

Our databases are continually growing as records are added and updated. If this proposed project is still under development one year from now, we recommend that you contact us again so that we may update this response with the most current information.

Sincerely,

Tara Salerno
Tara Salerno, Information Services
New York Natural Heritage Program

cc: Reg. 9, Wildlife Mgr.
Mark Woythal, Bureau of Wildlife, Albany,
R. Edick, Env. Permits, Albany

Natural Heritage Report on Rare Species and Ecological Communities

NY Natural Heritage Program, NYS DEC, 625 Broadway, 5th Floor,
Albany, NY 12233-4757
(518) 402-8935



These rare bird species and bird concentration areas have been documented within 10 miles of the project site.

~Refer to the User's Guide for explanations of codes, ranks and fields.

Natural Heritage Report on Rare Species and Ecological Communities



	NY Protection Status	Federal Listing	NY Conservation Rank	Global Conservation Rank
BIRDS				
Bald Eagle <i>Haliaeetus leucocephalus</i> Breeding	Threatened		S2S3B,S2N - Imperiled	G5 - Demonstrably secure
Clay-colored Sparrow <i>Spizella pallida</i> Breeding	Protected		S2 - Imperiled	G5 - Demonstrably secure
Kentucky Warbler <i>Oporornis formosus</i> Breeding	Protected		S2 - Imperiled	G5 - Demonstrably secure

3 Records Processed

More detailed information about many of the rare and listed animals in New York, including biology, identification, habitat, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.acris.nynhp.org, from NatureServe Explorer at <http://www.natureserve.org/explorer>, from NYSDEC at <http://www.dec.ny.gov/animals/7494.html>.

These occurrences are within the project site or in close proximity.

Natural Heritage Report on Rare Species and Ecological Communities



NY Natural Heritage Program, NYS DEC, 625 Broadway, 5th Floor, Albany, NY
12233-4757
(518) 402-8935

- This report contains **SENSITIVE** information that should not be released to the public without permission from the NY Natural Heritage Program.
- Refer to the User's Guide for explanations of codes, ranks and fields.
- Location maps for certain species and communities may not be provided 1) if the species is vulnerable to disturbance, 2) if the location and/or extent is not precisely known, 3) if the location and/or extent is too large to display, and/or 4) if the animal is listed as Endangered or Threatened by New York State.

Natural Heritage Report on Rare Species and Ecological Communities



AMPHIBIANS

Cryptobranchus alleganiensis

Hellbender

NY Legal Status: Special Concern

NYS Rank: S2 - Imperiled

Office Use
11048

Federal Listing:

Global Rank: G3G4 - Vulnerable

Last Report: 1981-07-17

EO Rank: Poor

County: Cattaraugus

Town: Allegany

Location: At, or in the vicinity of, the project site.

Directions: **

General Quality and Habitat: **For information on the population at this location and management considerations, please contact the NYS DEC Regional Wildlife Manager for the Region where the project is located.

COMMUNITIES

Allegheny oak forest

This occurrence of Allegheny Oak Forest is considered significant from a statewide perspective by the NY Natural Heritage Program. It is either an occurrence of a community type that is rare in the state or a high quality example of a more common community type. By meeting specific, documented significance criteria, the NY Natural Heritage Program considers this occurrence to have high ecological and conservation value.

Office Use

NY Legal Status: Unlisted

NYS Rank: S2

6734

Federal Listing:

Global Rank: G3G4

Last Report: 1986-07-02

EO Rank:

County: Cattaraugus

SL

Town: Allegany

Location: East Vandalia Hill

Directions: The plants are on a southeast-facing slope of a hill bordering the north side of Route 17, between Townsend Hollow and North Ninemile Road.

General Quality and Habitat: Good species diversity, size and condition, second growth forest. Mixed oak forest on a steep, southeast-to south-facing slope, in which gullies are more mesic with greater proportion of red maple, slopes are drier with oak canopy and heath shrub understory.

FRESHWATER MUSSELS

Natural Heritage Report on Rare Species and Ecological Communities



These occurrences are within the project site or in close proximity.

Actinonaias ligamentina

Mucket

NY Legal Status: Unlisted

NYS Rank: S1S2 - Critically imperiled

Office Use
5620

Federal Listing:

Global Rank: G5 - Demonstrably secure

Last Report: 2006-06-17

EO Rank: Excellent

County: Cattaraugus

Town: Portville, Olean, City Of Olean, Allegany

Location: Allegheny River and Tributaries

Directions: The mussels were found in the Allegheny River and two of its tributaries, Olean Creek and Oswayo Creek. From Mill Grove (located south of Portville), follow the Allegheny River west toward Allegany. The mussels were found in the river in more than 17 locations between Mill Grove and Townsend Hollow (located west of Allegany); see the Heritage GMF for additional location information. From Olean, follow Route 16 to Olean Creek.

General Quality and Habitat: There are multiple mussel beds in one river and two creeks spanning approximately 18 miles. Some of the beds have a small number of individuals while others are estimated to have greater than 1000 individuals. In 2005, a total of 3001 living or freshly dead mussels were observed in the Allegheny River and Olean Creek combined, in 122.0 person hours of snorkel surveys. The mussels were found at all 17 sites in the river that were surveyed and the one site in Olean Creek that was surveyed. Evidence of rec The mussels were found in the Allegheny River and two of its tributary creeks, Olean Creek and Oswayo Creek. The Allegheny River was historically the richest river in New York and Pennsylvania for freshwater mussels. It is generally a swift flowing, clear river that is greater than 50 meters wide and generally less than 1 meter deep. Some small islands are present. The river bottom is a mix of cobbles, sand, and gravel. Residential, agricultural, and wooded areas border the river. There is a flood-control levee as well. Associated species: *Alasmidonta marginata*, *Elliptio dilitata*, *Lampsilis cardium*, *Lampsilis fasciola*, *Lampsilis ovata*, *Lampsilis siliquoidea*, *Lasmigona costata*, *Ligumia recta*, *Pleurobema sintoxia*, *Pyganodon grandis*.

Lampsilis fasciola

**Wavyrayed
Lampmussel**

NY Legal Status: Threatened

NYS Rank: S1 - Critically imperiled

Office Use
1873

Federal Listing:

Global Rank: G5 - Demonstrably secure

ESU

Last Report: **

EO Rank: **

County: Cattaraugus

Town: City Of Olean, Olean, Portville, Allegany

Location: At, or in the vicinity of, the project site.

Directions: **

General Quality and Habitat: **For information on the population at this location and management considerations, please contact the NYS DEC Regional Wildlife Manager for the Region where the project is located.



These occurrences are within the project site or in close proximity.

Lampsilis ovata

Pocketbook

NY Legal Status: Unlisted

NYS Rank: S2S3 - Imperiled

Office Use
8892

Federal Listing:

Global Rank: G5 - Demonstrably secure

Last Report: 2006-06-17

EO Rank: Good

County: Cattaraugus

Town: City Of Olean, Olean, Portville, Hinsdale, Allegany

Location: Allegheny River and Tributaries

Directions: The mussels were found in the Allegheny River, Olean Creek, and Oswayo Creek. Allegheny River: From Mill Grove, follow the Allegheny River toward Allegany. The mussels were found in many locations in the river between Mill Grove and Townsend Hollow, which is to the west of Allegany.

General Quality and Habitat: There are no global rank specifications for this species. In 2005, 211 living mussels were found in 117.0 person hours of snorkel surveys in the Allegheny River. Evidence of recruitment was observed. No mussels were found in 5.0 person hours of snorkel surveys in Olean Cr ek near the Route 16 bridge. The mussels were found in the Allegheny River, Olean Creek, and Oswayo Creek. Allegheny River: The Allegheny River is generally a swift flowing, clear river that is greater than 50 meters wide and generally less than 1 meter deep. Some small islands are present. The river bottom is a mix of cobbles, sand, and gravel. Residential, agricultural, and wooded areas border the river. There is a flood-control levee as well. Associated species: *Lampsilis cardium*, *Elliptio dilatata*, *Lasmigona costata*, *Lampsilis fasciola*, *Lampsilis siliquoidea*, *Alasmidonta marginata*, *Pleurobema sintoxia*, *Pyganodon grandis*, *Ligumia recta*, *Actinonaias ligamentina*, *Strophitus undulatus* *Villosa fabalis*.

Ligumia recta

Black Sandshell

NY Legal Status: Unlisted

NYS Rank: S2S3 - Imperiled

Office Use
3227

Federal Listing:

Global Rank: G5 - Demonstrably secure

Last Report: 2005-su-fa

EO Rank: Fair

County: Cattaraugus

Town: City Of Olean, Olean, Portville, Allegany

Location: Allegheny River and Olean Creek

Directions: The mussels were found in the Allegheny River in several locations between Mill Grove (located south of Portville) and Townsend Hollow (located west of Allegany), and in Olean Creek in the vicinity of the Route 16 bridge in Olean.

General Quality and Habitat: There are no global rank specifications for this species. In 2005, 43 living and 1 recently dead mussel were found in 117.0 person hours of snorkel surveys in the Allegheny River. One mussel was found in 5.0 person hours of snorkel surveys in a section of Olean Creek. No evidence of recruitment was found in the Allegheny River or Olean Creek. The mussels were found in the Allegheny River and Olean Creek. Allegheny River: The Allegheny River is generally a swift flowing, clear river that is greater than 50 meters wide and generally less than 1 meter deep. Some small islands are present. The river bottom is a mix of cobbles, sand, and gravel. Residential, agricultural, and wooded areas border the river. There is a flood-control levee as well. Associated species: *Actinonaias ligamentina*, *Lampsilis ovata*, *Elliptio dilatata*, *Lasmigona costata*, *Lampsilis cardium*, *Lampsilis siliquoidea*, *Alasmidonta marginata*, *Pleurobema sintoxia*, *Pyganodon grandis*, *Lampsilis fasciola*, *Strophitus undulatus* *Villosa fabalis*. Olean Creek: Associated species: *Actinonaias ligamentina*, *Alasmidonta marginata*.

Villosa fabalis

Rayed Bean

NY Legal Status: Endangered

NYS Rank: S1 - Critically imperiled

Office Use
862

Federal Listing: Candidate

Global Rank: G2 - Imperiled

ESU

Last Report: **

EO Rank: **

USFWS

County: Cattaraugus

Town: City Of Olean, Hinsdale, Olean, Portville, Allegany

Location: At, or in the vicinity of, the project site.

Directions: **

General Quality and Habitat: **For information on the population at this location and management considerations, please contact the NYS DEC Regional Wildlife Manager for the Region where the project is located.

VASCULAR PLANTS



These occurrences are within the project site or in close proximity.

Trichomanes intricatum

Appalachian Bristle Fern

NY Legal Status: Endangered

NYS Rank: S1 - Critically imperiled

Office Use
12821

Federal Listing:

Global Rank: G4G5 - Apparently secure

Last Report: 1983-08-03

EO Rank: Extant

County: Cattaraugus

Town: Allegany

Location: Olean Rock City

Directions: The plant was reported from: Rock City Park, Route 646. Scattered in large northwest-facing rock houses of Pottsville sandstone conglomerate, in woods.

General Quality and Habitat: The habitat was reported as: Scattered in large northwest-facing rock houses of Pottsville sandstone conglomerate, in woods.

Vittaria appalachiana

Appalachian Shoestring Fern

NY Legal Status: Endangered

NYS Rank: S1 - Critically imperiled

Office Use
3589

Federal Listing:

Global Rank: G4 - Apparently secure

Last Report: 1983-08-03

EO Rank: Extant

County: Cattaraugus

Town: Allegany

Location: Nichols Run Road

Directions: Specimen label: Three miles west of Route 646 on Nichols Run Road. Very rare in shaded crevice of Southwest-facing outcrop of Pottsville sandstone conglomerate, in woods.

General Quality and Habitat: Shaded crevice of southwest-facing outcrop of Pottsville sandstone conglomerate in woods.

Vittaria appalachiana

Appalachian Shoestring Fern

NY Legal Status: Endangered

NYS Rank: S1 - Critically imperiled

Office Use
426

Federal Listing:

Global Rank: G4 - Apparently secure

Last Report: 1983-08-03

EO Rank: Historical, no recent information

County: Cattaraugus

Town: Allegany

Location: Olean Rock City

Directions: Specimen label: Rock City Park, Route 646. Scattered in large NW-facing rock houses of Pottsville sandstone conglomerate, in woods.

General Quality and Habitat: Failed to find in a survey of a pipeline route east and west of the North Branch Indian Creek, just north of the Pennsylvania line. Specimen label: Large northwest-facing rock houses of Pottsville sandstone conglomerate in woods.

10 Records Processed

More detailed information about many of the rare and listed animals and plants in New York, including biology, identification, habitat, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.acris.nynhp.org, from NatureServe Explorer at <http://www.natureserve.org/explorer>, from NYSDEC at <http://www.dec.ny.gov/animals/7494.html> (for animals), and from USDA's Plants Database at <http://plants.usda.gov/index.html> (for plants).

More detailed information about many of the natural community types in New York, including identification, dominant and characteristic vegetation, distribution, conservation, and management, is available online in Natural Heritage's Conservation Guides at www.acris.nynhp.org. For descriptions of all community types, go to <http://www.dec.ny.gov/animals/29384.html> and click on Draft Ecological Communities of New York State.

Natural Heritage Report on Rare Species and Ecological Communities



NY Natural Heritage Program, NYS DEC, 625 Broadway, 5th Floor,
Albany, NY 12233-4757
(518) 402-8935

HISTORICAL RECORDS

The following plants and animals were documented in the vicinity of the project site at one time, but have not been documented there since 1979 or earlier.

There is no recent information on these plants and animals in the vicinity of the project site and their current status there is unknown. In most cases the precise location of the plant or animal in this vicinity at the time it was last documented is also unknown and therefore location maps are generally not provided.

If appropriate habitat for these plants or animals is present in the vicinity of the project site, it is possible that they may still occur there.

Natural Heritage Report on Rare Species and Ecological Communities



BUTTERFLIES and SKIPPERS

Phyciodes batesii batesii

Tawny Crescent

NY Legal Status: Special Concern

Federal Listing:

Last Report: 1915-06-11

County: Cattaraugus

Town: Allegany

Location: Olean Rock City

Directions: Follow Route 16 south from Olean for approximately 5.5 miles. Rock City "Park" is clearly marked with a sign near the entry road on the north side.

General Quality and Habitat: A park with a lot of cool glacial erratics and other rock formations. The woods appear to have been cut in the past. There is evidence of old oil wells throughout the site.

NYS Rank: SH - Historical

Global Rank: G4T1 - Critically imperiled

EO Rank: Failed to find but search more

Office Use
1390

VASCULAR PLANTS

Chamaelirium luteum

Fairy Wand

NY Legal Status: Threatened

Federal Listing:

Last Report: 1963-08-16

County: Cattaraugus

Town: Allegany

Location: Vandalia

Directions: 0.8 km east of Vandalia.

General Quality and Habitat: Oak woods.

NYS Rank: S1S2 - Critically imperiled

Global Rank: G5 - Demonstrably secure

EO Rank: Historical, no recent information

Office Use
5313

M



Cynoglossum virginianum var. boreale

**Northern Wild
Comfrey**

NY Legal Status: Endangered

NYS Rank: S1S2 - Critically imperiled

Office Use
2346

Federal Listing:

Global Rank: G5T4T5 - Apparently secure

Last Report: 1921-06-26

EO Rank: Historical, no recent
information

County: Cattaraugus

Town: Allegany

Location: Olean Rock City

Directions: Specimen labels: 1921: Rock City nr. Olean; Rock City.

**General Quality
and Habitat:** A survey of a pipeline route east and west of the North Branch Indian Creek, just north of the
Pennsylvania line failed to find any plants.

3 Records Processed

More detailed information about many of the rare and listed animals and plants in New York, including biology, identification, habitat, conservation, and management, are available online in Natural Heritage's Conservation Guides at www.acris.nynhp.org, from NatureServe Explorer at <http://www.natureserve.org/explorer>, from NYSDEC at <http://www.dec.ny.gov/animals/7494.html> (for animals), and from USDA's Plants Database at <http://plants.usda.gov/index.html> (for plants).



New York State Department of Environmental Conservation

Regional Permit Administrators

Region	Counties	Regional Permit Administrator
1	Nassau & Suffolk FAX: 631-444-0360	Roger Evans NYSDEC 50 Circle Rd SUNY @ Stony BrookStony Brook, NY 11790-3409 631-444-0365 631-444-0355 (Duty Analyst-M,W&F only)
2	New York City, (Boroughs of Manhattan, Brooklyn, Bronx, Queens & Staten Island) FAX: 718-482-4975	John Cryan NYSDEC One Hunters Point Plaza 47-40 21st St. Long Island City, NY 11101-5407 718-482-4997
3	Dutchess, Orange, Putnam, Rockland, Sullivan, Ulster & Westchester FAX: 845-255-3042	Margaret Duke NYSDEC 21 South Putt Corners Rd. New Paltz, NY 12561-1620 845-256-3054
4	Albany, Columbia, Greene, Montgomery, Rensselaer & Schenectady FAX: 518-357-2460	William Clarke NYSDEC 1130 North Westcott Rd. Schenectady, NY 12306-2014 518-357-2069
4(sub-office)	Delaware, Otsego & Schoharie FAX: 607-652-2342	Kent Sanders* NYSDEC 65561 State Highway - Route 10 HCR #1, Box 3A Stamford, NY 12167-9503 607-652-7741
5	Clinton, Essex, Franklin & Hamilton FAX: 518-897-1394	Thomas Hall NYSDEC Route 86, P.O. Box 296 Ray Brook, NY 12977-0296 518-897-1234
5(sub-office)	Fulton, Saratoga, Warren & Washington FAX: 518-623-3603	Thomas Hall NYSDEC P.O. Box 220 232 Golf Course Rd. Warrensburg, NY 12885-0220 518-623-1281

6	Jefferson, Lewis & St. Lawrence FAX: 315-785-2242	Larry Ambeau NYSDEC State Office Bldg. 317 Washington St. Watertown, NY 13601-3787 315-785-2245 or 2246
6(sub-office)	Herkimer & Oneida FAX: 315-793-2748	Patrick Clearey* NYSDEC State Office Building 207 Genesee St. Utica, NY 13501-3787 315-793-2555
7	Cayuga, Madison, Onondaga & Oswego FAX: 315-426-7425	John Feltman NYSDEC 615 Erie Blvd. West (Env. Permits Room 206) Syracuse, NY 13204-2400 315-426-7438
7(sub-office)	Broome, Chenango, Cortland, Tioga & Tompkins FAX: 607-753-8532	Michael Barylski* NYSDEC 1285 Fisher Ave. Cortland, NY 13045-1090 607-753-3095
8	Chemung, Genesee, Livingston, Monroe, Ontario, Orleans, Schuyler, Seneca, Steuben, Wayne & Yates FAX: 585-226-2830	Peter Lent NYSDEC 6274 East Avon Lima Rd. Avon, NY 14414-9519 585-226-2466
9	Erie, Niagara & Wyoming FAX: 716-851-7168	Steve Doleski NYSDEC 270 Michigan Ave. Buffalo, NY 14203-2999 716-851-7165
9(sub-office)	Allegany, Cattaraugus, & Chautauqua FAX: 716-372-2113	Charles Cranston* NYSDEC Suite 3, 182 East Union Allegany, NY 14706-1328 716-372-0645

*Deputy Regional Permit Administrator

USERS GUIDE TO NY NATURAL HERITAGE DATA

New York Natural Heritage Program, 625 Broadway, 5th Floor, Albany, NY 12233-4757 phone: (518) 402-8935



NATURAL HERITAGE PROGRAM: The NY Natural Heritage Program is a partnership between the NYS Department of Environmental Conservation (NYS DEC) and The Nature Conservancy. Our Mission is to facilitate the conservation of New York's biodiversity by providing comprehensive information and scientific expertise on rare species and natural ecosystems to resource managers and other conservation partners. We accomplish this mission by combining thorough field inventories, scientific analyses, expert interpretation, and the most comprehensive database on New York's distinctive biodiversity to deliver the highest quality information for natural resource planning, protection, and management.

DATA SENSITIVITY: The data provided in the report are ecologically sensitive and should be treated in a sensitive manner. The report is for your in-house use and should not be released, distributed or incorporated in a public document without prior permission from the Natural Heritage Program.

EO RANK: A letter code for the quality of the occurrence of the rare species or significant natural community, based on population size or area, condition, and landscape context.

A-E = Extant: A=Excellent, B=Good, C=Fair, D=Poor, E=Extant but with insufficient data to assign a rank of A-D.
F = Failed to find. Did not locate species during a limited search, but habitat is still there and further field work is justified.
H = Historical. Historical occurrence without any recent field information.
X = Extirpated. Field/other data indicates element/habitat is destroyed and the element no longer exists at this location.
U = Extant/Historical status uncertain.
Blank = Not assigned.

LAST REPORT: The date that the rare species or significant natural community was last observed at this location, as documented in the Natural Heritage databases. The format is most often YYYY-MM-DD.

NY LEGAL STATUS – Animals:

Categories of Endangered and Threatened species are defined in New York State Environmental Conservation Law section 11-0535. Animals listed as Endangered, Threatened, or Special Concern are protected against taking, importation, transportation, possession, or sale without a permit. Endangered, Threatened, and Special Concern species are listed in regulation 6NYCRR 182.5.

E - Endangered Species: any species which meet one of the following criteria:

- Any native species in imminent danger of extirpation or extinction in New York.
- Any species listed as endangered by the United States Department of the Interior, as enumerated in the Code of Federal Regulations 50 CFR 17.11.

T - Threatened Species: any species which meet one of the following criteria:

- Any native species likely to become an endangered species within the foreseeable future in NY.
- Any species listed as threatened by the U.S. Department of the Interior, as enumerated in the Code of the Federal Regulations 50 CFR 17.11.

SC - Special Concern Species: those species which are not yet recognized as endangered or threatened, but for which documented concern exists for their continued welfare in New York.

P - Protected Wildlife (defined in Environmental Conservation Law section 11-0103): wild game, protected wild birds, and endangered species of wildlife.

U - Unprotected (defined in Environmental Conservation Law section 11-0103): the species may be taken at any time without limit; however a license to take may be required.

G - Game (defined in Environmental Conservation Law section 11-0103): any of a variety of big game or small game species as stated in the Environmental Conservation Law; many normally have an open season for at least part of the year, and are protected at other times.

NY LEGAL STATUS – Plants:

The following categories are defined in regulation 6NYCRR part 193.3 and apply to NYS Environmental Conservation Law section 9-1503.

E - Endangered Species: listed species are those with:

- 5 or fewer extant sites, or
- fewer than 1,000 individuals, or
- restricted to fewer than 4 U.S.G.S. 7 ½ minute topographical maps, or
- species listed as endangered by U.S. Dept. of Interior, as enumerated in Code of Federal Regulations 50 CFR 17.11.

T - Threatened: listed species are those with:

- 6 to fewer than 20 extant sites, or
- 1,000 to fewer than 3,000 individuals, or
- restricted to not less than 4 or more than 7 U.S.G.S. 7 and ½ minute topographical maps, or
- listed as threatened by U.S. Department of Interior, as enumerated in Code of Federal Regulations 50 CFR 17.11.

R - Rare: listed species have:

- 20 to 35 extant sites, or
- 3,000 to 5,000 individuals statewide.

V - Exploitably vulnerable: listed species are likely to become threatened in the near future throughout all or a significant portion of their range within the state if causal factors continue unchecked.

U - Unprotected; no state status.

FEDERAL STATUS (PLANTS and ANIMALS): The categories of federal status are defined by the United States Department of the Interior as part of the 1974 Endangered Species Act (see Code of Federal Regulations 50 CFR 17). The species listed under this law are enumerated in the Federal Register vol. 50, no. 188, pp. 39526 - 39527. The codes below without parentheses are those used in the Federal Register. The codes below in parentheses are created by Heritage to deal with species which have different listings in different parts of their range, and/or different listings for different subspecies or varieties.

(blank) = No Federal Endangered Species Act status.

LE = Formally listed as endangered.

LT = Formally listed as threatened.

C = Candidate for listing.

LE,LT = Formally listed as endangered in part of its range, and as threatened in the other part; or, one or more subspecies or varieties is listed as endangered, and the others are listed as threatened.

LT,PDL = Populations of the species in New York are formally listed as threatened, and proposed for delisting.

GLOBAL AND STATE RANKS (animals, plants, ecological communities and others): Each element has a global and state rank as determined by the NY Natural Heritage Program. These ranks carry no legal weight. The global rank reflects the rarity of the element throughout the world and the state rank reflects the rarity within New York State. Intraspecific taxa are also assigned a taxon rank to reflect the infraspecific taxon's rank throughout the world. ? = Indicates that the state or global rank is uncertain and more information is needed. Range ranks, e.g. S1S2, indicate not enough information is available to distinguish between two ranks.

GLOBAL RANK:

G1 - Critically imperiled globally because of extreme rarity (5 or fewer occurrences), or very few remaining acres, or miles of stream) or especially vulnerable to extinction because of some factor of its biology.

G2 - Imperiled globally because of rarity (6 - 20 occurrences, or few remaining acres, or miles of stream) or very vulnerable to extinction throughout its range because of other factors.

G3 - Vulnerable: Either rare and local throughout its range (21 to 100 occurrences), or found locally (even abundantly at some of its locations) in a restricted range (e.g. a physiographic region), or vulnerable to extinction throughout its range because of other factors.

G4 - Apparently secure globally, though it may be quite rare in parts of its range, especially at the periphery.

G5 - Demonstrably secure globally, though it may be quite rare in parts of its range, especially at the periphery.

GH - Historically known, with the expectation that it might be rediscovered.

GX - Species believed to be extinct.

GU - Lack of information or substantial conflicting information about status or trends makes ranking infeasible at this time.

NYS RANK:

S1 - Critically imperiled: Typically 5 or fewer occurrences, very few remaining individuals, acres, or miles of stream, or some factor of its biology making it especially vulnerable in New York State.

S2 - Imperiled: Typically 6 to 20 occurrences, few remaining individuals, acres, or miles of stream, or factors demonstrably making it very vulnerable in New York State.

S3 - Vulnerable: Typically 21 to 100 occurrences, limited acreage, or miles of stream in New York State.

S4 - Apparently secure in New York State.

S5 - Demonstrably secure in New York State.

SH - Historically known from New York State, but not seen in the past 20 years.

SX - Apparently extirpated from New York State.

SU - Lack of information or substantial conflicting information about status or trends makes ranking infeasible at this time.

SxB and SxN, where Sx is one of the codes above, are used for migratory animals, and refer to the rarity within New York State of the breeding (B)populations and the non-breeding populations (N), respectively, of the species.

TAXON (T) RANK: The T-ranks (T1 - T5) are defined the same way as the Global ranks (G1 - G5), but the T-rank refers only to the rarity of the subspecific taxon.

T1 through T5 - See Global Rank definitions above.

Q - Indicates a question exists whether or not the taxon is a good taxonomic entity.