



## NEW HAMPSHIRE NATURAL HERITAGE BUREAU

DRED - DIVISION OF FORESTS & LANDS

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# Rare Animal List for New Hampshire

Including species listed as threatened or endangered  
under the NH Endangered Species Conservation Act of 1979

July 2008

This list is maintained in cooperation with the



## Nongame & Endangered Wildlife Program

New Hampshire Fish & Game Department

2 Hazen Drive, Concord, NH 03301

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## A Quick Overview of the NH Natural Heritage Bureau's Purpose and Policies

The Natural Heritage Bureau is mandated by the Native Plant Protection Act of 1988 (NH RSA 217-A) to determine protective measures and requirements necessary for the survival of native plant species in the state, to investigate the condition and degree of rarity of plant species, and to distribute information regarding the condition and protection of these species and their habitats.

The Natural Heritage Bureau provides information to facilitate informed land-use decision-making. We are not a regulatory agency; instead, we work with landowners and land managers to help them protect the State's natural heritage and meet their land-use needs.

The Natural Heritage Bureau has three facets:

***Inventory*** involves identifying new occurrences of sensitive species and classifying New Hampshire's biodiversity. We currently study more than 740 plant and animal species and 195 natural communities. Surveys for rarities on private lands are conducted only with landowner permission.

***Tracking*** is the management of occurrence data. Our database currently contains information about more than 5,000 plant, animal, and natural community occurrences in New Hampshire.

***Interpretation*** is the communication of Natural Heritage Bureau information. Our goal is to cooperate with public and private land managers to help them *protect* rare species populations and exemplary natural communities.



The Nongame & Endangered Wildlife Program of the NH Fish & Game Department coordinates protection efforts for the state's wildlife that are not hunted, fished, or trapped. The Nongame Program works closely with the NH Natural Heritage Bureau to maintain a database of rare and imperiled wildlife populations throughout the state. Locational information about rare animals in the Natural Heritage Bureau database compliments a habitat-based database for all of New Hampshire's wildlife that is managed by the NH Fish & Game Department.

### ***Animals Tracked by the Nongame Program and the NH Natural Heritage Bureau***

The following list is our current assessment of the status of the state's rarest and most imperiled animal species. The Nongame Program has developed the list in cooperation with researchers, conservation organizations such as the Audubon Society of New Hampshire, knowledgeable amateur biologists, and the NH Natural Heritage Bureau. We obtained wildlife locations from sources including museum specimens, personal contacts, the scientific literature, and through extensive field research. It is important for readers to remember that this list is dynamic -- as new discoveries are made or populations are lost, species may be added to or removed from the list.

For each species, we have provided the following information:

***Common Name*** Common names are provided for all species that have them. Many insect species, particularly moths, do not have common names, so either general terms such as "A Noctuid Moth" are used or no name is given ("--").

***Scientific Name*** Scientific names are standardized with the scientific names used by other Natural Heritage programs throughout the United States, Canada, the Caribbean, Latin America, and South America.

***Global & State Ranks*** When considering the rarity of a species, it is important to consider the status of a species both in New Hampshire and across its total range. The degree of rarity within New Hampshire is noted with a "State Rank" and throughout its range with a "Global Rank." Ranks are on a scale of 1 to 5, with a 1 indicating critical imperilment, a 3 indicating that the species is vulnerable, and a 5 indicating that the species is secure. Some species, such as the dwarf wedgemussel (*Alasmidonta heterodon*), are critically imperiled both globally and in New Hampshire. Other species, such as the upland sandpiper (*Bartramia longicauda*), are very rare in New Hampshire (S1) but quite common in other parts of their range (G5).

The rankings for wildlife are based more on the degree of imperilment than on the number of occurrences in the state, although abundance certainly plays a role in assessing a species' long-term viability in New Hampshire. Some species, such as the fish crow (*Corvus ossifragus*) have only a few occurrences in New Hampshire but, since they are expanding northward into the state, they are considered to be vulnerable but not imperiled. Blandings turtles (*Emydoidea blandingii*), on the other hand, appear to be distributed fairly broadly across the state, but populations are extremely small and vulnerable to habitat loss, so they are considered to be vulnerable.

In this technical list, we have noted the full global and state ranks. The codes are defined on pages iii and iv.



### ***Listing***

A portion of New Hampshire's rare animals are listed as "threatened" or "endangered" under the NH Endangered Species Conservation Act of 1979 (NH RSA 212-A). A subset of these species are also listed under the federal Endangered Species Act of 1973 (42 USCA §§ 4321-4370c). Listing represents a political recognition of rarity, so some species that are biologically rare (as indicated by the State and Global Ranks) may not be listed as "threatened" or "endangered." Under the NH Endangered Species Conservation Act, "endangered" species are those in danger of being extirpated from the state, while "threatened" species face the possibility of becoming "endangered."

### ***Known Sites***

There has not been a comprehensive search of the state for rare species, so we are frequently finding or learning about previously unknown populations. Further, many populations have not been checked since they were originally found, sometimes more than 50 years ago, so we do not know the status of these populations. We have therefore separated known sites into two sub-categories: those last seen more than 20 years ago, and those reported within the last 20 years. This distinction helps show the state of our knowledge about a given species and the need for additional research. If no locations are indicated in the list (- -), the species is known to have once occurred in the state, but specific sites are not in our database.

### ***You Can Help!***

Our biologists can only cover so much ground, so we are constantly seeking information from other sources. Knowledgeable recommendations for adding or removing species from the list of "endangered" and "threatened" species are always welcomed. Further, locational information about any of the species we track will help make our database more complete and therefore more useful for land-use planning. A form for reporting rare animal species that you find is attached to the back of this list. It is the policy of the NH Natural Heritage Bureau not to survey on private property without landowner permission, so please respect your neighbor's privacy. Thank you!

If you have any questions or need additional information, please do not hesitate to contact us.

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### ***Explanation of Global and State Rank Codes***

Ranks describe rarity both throughout a species' range (globally, or "G" rank) and within New Hampshire (statewide, or "S" rank). The rarity of sub-species and varieties is indicated with a taxon ("T") rank. For example, a G5T1 rank shows that the species is globally secure (G5) but the sub-species is critically imperiled (T1).

| <i>Code</i> | <i>Examples</i> | <i>Description</i>  |
|-------------|-----------------|---|
| <b>1</b>    | G1 S1           | Critically imperiled because extreme rarity (generally one to five occurrences) or some factor of its biology makes it particularly vulnerable to extinction.   |
| <b>2</b>    | G2 S2           | Imperiled because rarity (generally six to 20 occurrences) or other factors demonstrably make it very vulnerable to extinction.   |
| <b>3</b>    | G3 S3           | Either very rare and local throughout its range (generally 21 to 100 occurrences), or found locally (even abundantly at some of its locations) in a restricted range, or vulnerable to extinction because of other factors. |
| <b>4</b>    | G4 S4           | Widespread and apparently secure, although the species may be quite rare in parts of its range, especially at the periphery.  |
| <b>5</b>    | G5 S5           | Demonstrably widespread and secure, although the species may be quite rare in parts of its range, particularly at the periphery.  |
| <b>U</b>    | GU SU           | Status uncertain, but possibly in peril. More information needed.   |
| <b>H</b>    | GH SH           | Known only from historical records, but may be rediscovered. A G5 SH species is widespread throughout its range (G5), but considered historical in New Hampshire (SH).  |
| <b>X</b>    | GX SX           | Believed to be extinct. May be rediscovered, but evidence indicates that this is less likely than for historical species. A G5 SX species is widespread throughout its range (G5), but extirpated from New Hampshire (SX).  |

The following modifiers indicate that there is some question about a species' rank.

| <i>Code</i> | <i>Examples</i> | <i>Description</i>  |
|-------------|-----------------|---|
| <b>Q</b>    | G5Q GHQ         | Questions or problems may exist with the species' or sub-species' taxonomy, so more information is needed.  |
| <b>?</b>    | G3? S3?         | The rank is uncertain due to insufficient information at the state or global level, so more inventories are needed. When no rank has been proposed the rank may be "G5T?" or "S?" |

The following modifiers indicate when the breeding status of a migratory species is considered separately from individuals passing through or not breeding within the New Hampshire. These modifiers are only attached to state ranks.

| <i>Code</i> | <i>Example</i> | <i>Description</i>   |
|-------------|----------------|--|
| <b>B</b>    | SHB            | Indicates the breeding status in New Hampshire of a migratory species.   |
| <b>N</b>    | S1N            | Indicates the non-breeding status in New Hampshire of a migratory species. These species are typically over-wintering birds with regular aggregation areas that could be conservation targets. |



Breeding-status modifiers may be used alone or in combinations. For example:

- |         |  |
|---------|--|
| S3B     | Breeding occurrences are uncommon (S3B), and the species does not over-winter in New Hampshire.  |
| SUB,S1N | The breeding status of the species is unknown (SUB), and any wintering site is critically imperiled or extremely rare (S1N) regardless of breeding status. |

When ranks are somewhat uncertain or the species' status appears to fall between two ranks, the ranks may be combined. For example:

- |            |  |
|------------|--|
| G4G5       | The species may be globally secure (G5), but appears to be at some risk (G4).  |
| G5T2T3     | The species is globally secure (G5), but the sub-species is somewhat imperiled (T2T3).   |
| G4?Q       | The species appears to be relatively secure (G4), but more information is needed to confirm this (?). Further, there are questions or problems with the species' taxonomy (Q). |
| G3G4Q S1S2 | The species is globally uncommon (G3G4), and there are questions about its taxonomy (Q). In New Hampshire, the species is very imperiled (S1S2).                               |



| Name   | Rank   |       | Listing |       | Known sites |       |
|--|--------|-------|---------|-------|-------------|-------|
|  | Global | State | Federal | State | <1988       | 1988+ |
| <b>Invertebrates - Mollusks</b>                            |        |       |         |       |             |       |
| Brook Floater ( <i>Alasmidonta varicosa</i> )              | G3     | S1?   | --      | E     | 3           | 28    |
| Dwarf Wedge Mussel ( <i>Alasmidonta heterodon</i> )        | G1G2   | S1    | E       | E     | 7           | 7     |
| Eastern Pond Mussel ( <i>Ligumia nasuta</i> )              | G4     | S1    | --      | --    | 1           | 4     |
| <b>Invertebrates - Insects</b>                             |        |       |         |       |             |       |
| -- ( <i>Acrionicta hamamelis</i> )                         | G4?    | SX    | --      | --    | -           | -     |
| -- ( <i>Aeshna mutata</i> )                                | G4     | S1    | --      | --    | -           | -     |
| -- ( <i>Agrotiphila staudingeri</i> )                      | GH     | SH    | --      | --    | -           | -     |
| -- ( <i>Agrotis stigmata</i> )                             | G4     | SU    | --      | --    | 1           | -     |
| -- ( <i>Apantesis carlotta</i> )                           | G5     | SU    | --      | --    | -           | 1     |
| -- ( <i>Catocala pretiosa pretiosa</i> )                   | G4T2   | SX    | --      | --    | -           | -     |
| -- ( <i>Gomphus ventricosus</i> )                          | G3     | S1    | --      | --    | -           | -     |
| -- ( <i>Holomelina lamae</i> )                             | G4     | S1S2  | --      | --    | -           | -     |
| -- ( <i>Papaipema lysimachiae</i> )                        | G4     | SNR   | --      | --    | -           | 2     |
| -- ( <i>Sthenopsis auratus</i> )                           | G3G4   | SU    | --      | --    | -           | -     |
| -- ( <i>Syngrapha microgamma nearctica</i> )               | G5T4   | SU    | --      | --    | -           | -     |
| -- ( <i>Syngrapha montana</i> )                            | G4     | SU    | --      | --    | -           | -     |
| -- ( <i>Xanthorhoe algidata</i> )                          | G4G5   | S2S3  | --      | --    | 2           | -     |
| -- ( <i>Xestia (Pachnobia) perquiritata</i> )              | G5     | S2S3  | --      | --    | 3           | -     |
| A Geometrid Moth ( <i>Carsia sororiata alpinata</i> )      | G5T2Q  | S2    | --      | --    | -           | -     |
| A Geometrid Moth ( <i>Euchlaena madusaria</i> )            | G4     | S1    | --      | --    | -           | 2     |
| A Geometrid Moth ( <i>Eulithis destinata triangulata</i> ) | G5TNR  | S2    | --      | --    | -           | -     |
| A Geometrid Moth ( <i>Eumacaria latiferrugata</i> )        | G4     | S2S4  | --      | --    | 2           | 1     |
| A Geometrid Moth ( <i>Hesperumia sulphuraria</i> )         | G5     | SNR   | --      | --    | -           | -     |
| A Geometrid Moth ( <i>Itame subcessaria</i> )              | G4     | SH    | --      | --    | 1           | -     |
| A Geometrid Moth ( <i>Metarranthis apiciaria</i> )         | G1G3   | S1    | --      | --    | 2           | -     |
| A Geometrid Moth ( <i>Xanthorhoe ramaria</i> )             | G5     | S2S3  | --      | --    | 1           | -     |
| A Mayfly ( <i>Ameletus browni</i> )                        | G3G4   | SNR   | --      | --    | -           | -     |
| A Mayfly ( <i>Ameletus tertius</i> )                       | G4     | SNR   | --      | --    | -           | -     |
| A Moth ( <i>Grammia quenseli</i> )                         | G5     | S2    | --      | --    | 3           | -     |
| A Moth ( <i>Gynaephora rossii</i> )                        | G5     | S2    | --      | --    | 2           | -     |
| A Moth ( <i>Hepialus hyperboreus</i> )                     | G5     | S1S3  | --      | --    | 1           | -     |
| A Noctuid Moth ( <i>Acrionicta lanceolaria</i> )           | G4     | S3    | --      | --    | 1           | -     |
| A Noctuid Moth ( <i>Acrionicta spinigera</i> )             | G4     | SNR   | --      | --    | -           | -     |
| A Noctuid Moth ( <i>Anarta melanopa</i> )                  | G5     | SNR   | --      | --    | 9           | -     |
| A Noctuid Moth ( <i>Andropolia contacta</i> )              | G5     | SH    | --      | --    | 1           | -     |
| A Noctuid Moth ( <i>Anepia capsularis</i> )                | G5     | SH    | --      | --    | 1           | -     |
| A Noctuid Moth ( <i>Apamea burgessi</i> )                  | G4     | SU    | --      | --    | -           | -     |
| A Noctuid Moth ( <i>Apamea cristata</i> )                  | G4     | SH    | --      | --    | -           | -     |
| A Noctuid Moth ( <i>Apharetra dentata</i> )                | G4     | S2    | --      | --    | 1           | 2     |
| A Noctuid Moth ( <i>Chaetagnaea cerata</i> )               | G3G4   | S1S2  | --      | --    | 5           | -     |
| A Noctuid Moth ( <i>Chytonix sensilis</i> )                | G4     | S1S2  | --      | --    | 2           | 1     |
| A Noctuid Moth ( <i>Cucullia speyeri</i> )                 | G4     | S3    | --      | --    | 1           | -     |
| A Noctuid Moth ( <i>Eucoptocnemis fimbriaris</i> )         | G4     | SH    | --      | --    | 2           | -     |
| A Noctuid Moth ( <i>Euxoa dissona</i> )                    | G5     | S2    | --      | --    | 1           | -     |
| A Noctuid Moth ( <i>Euxoa pleuritica</i> )                 | G4     | S1    | --      | --    | 2           | 1     |
| A Noctuid Moth ( <i>Hydraecia immanis</i> )                | G4     | SU    | --      | --    | -           | -     |
| A Noctuid Moth ( <i>Idia diminuendis</i> )                 | G4G5   | S2S4  | --      | --    | 3           | 1     |



| Name  | Rank   |       | Listing |       | Known sites |       |
|---|--------|-------|---------|-------|-------------|-------|
|   | Global | State | Federal | State | <1988       | 1988+ |
| A Noctuid Moth ( <i>Lasionycta leucocycla hampa</i> )           | G5T1T3 | S2    | --      | --    | 1           | -     |
| A Noctuid Moth ( <i>Lasionycta subdita</i> )                    | G4     | S1S2  | --      | --    | 2           | -     |
| A Noctuid Moth ( <i>Lemmeria digitalis</i> )                    | G4     | SH    | --      | --    | 1           | -     |
| A Noctuid Moth ( <i>Lithophane thaxteri</i> )                   | G4     | SU    | --      | --    | 2           | 1     |
| A Noctuid Moth ( <i>Platyperigea meralis</i> )                  | G4     | S1    | --      | --    | -           | 2     |
| A Noctuid Moth ( <i>Sphinx canadensis</i> )                     | G4     | SH    | --      | --    | 1           | -     |
| A Noctuid Moth ( <i>Sphinx eremitus</i> )                       | G4     | SH    | --      | --    | 1           | -     |
| A Noctuid Moth ( <i>Sympistis funesta</i> )                     | G5     | S2    | --      | --    | 2           | -     |
| A Noctuid Moth ( <i>Sympistis melaleuca</i> )                   | G5     | S1    | --      | --    | 1           | -     |
| A Noctuid Moth ( <i>Trichosilia manifesta</i> )                 | G4     | SH    | --      | --    | 2           | -     |
| A Noctuid Moth ( <i>Xestia (Megasema) scropulana</i> )          | G4     | SH    | --      | --    | 1           | -     |
| A Noctuid Moth ( <i>Xestia (Pachnobia) atrata</i> )             | G5     | SH    | --      | --    | -           | -     |
| A Noctuid Moth ( <i>Xestia (Pachnobia) fabulosa</i> )           | G4     | S2    | --      | --    | 2           | -     |
| A Noctuid Moth ( <i>Xestia (Pachnobia) homogena</i> )           | G4     | S1S2  | --      | --    | 2           | -     |
| A Noctuid Moth ( <i>Xestia (Pachnobia) imperita</i> )           | G5     | S2S3  | --      | --    | 1           | -     |
| A Noctuid Moth ( <i>Xestia (Pachnobia) okakensis</i> )          | G4     | SH    | --      | --    | 1           | -     |
| A Noctuid Moth ( <i>Xestia (Pachnobia) speciosa</i> )           | G5     | S2S3  | --      | --    | 1           | -     |
| A Noctuid Moth ( <i>Zale curema</i> )                           | G3G4   | S2    | --      | --    | 1           | -     |
| A Noctuid Moth ( <i>Zale obliqua</i> )                          | G5     | S2    | --      | --    | -           | 1     |
| A Noctuid Moth ( <i>Zale sp. 1 nr. lunifera</i> )               | G3G4   | S1    | --      | --    | -           | 1     |
| A Tiger Beetle ( <i>Cicindela ancocisconensis</i> )             | G3     | S1S3  | --      | --    | -           | -     |
| A Tiger Beetle ( <i>Cicindela longilabris</i> )                 | G5     | S2S4  | --      | --    | -           | -     |
| A Tiger Beetle ( <i>Cicindela patruela</i> )                    | G3     | SH    | --      | --    | -           | -     |
| Appalachian Brown ( <i>Satyrodes appalachia</i> )               | G4     | S1?   | --      | --    | 1           | 2     |
| Atlantis Fritillary ( <i>Speyeria atlantis</i> )                | G5     | SNR   | --      | --    | -           | -     |
| Aureolaria Seed Borer ( <i>Rhodoecia aurantiago</i> )           | G4     | SU    | --      | --    | 1           | -     |
| Barrens Chaetoglaea ( <i>Chaetoglaea tremula</i> )              | G5     | SNR   | --      | --    | -           | 1     |
| Barrens Daggermoth ( <i>Acronicta albarufa</i> )                | G3G4   | SNR   | --      | --    | -           | -     |
| Barrens Xylotype ( <i>Xylotype capax</i> )                      | G4     | S2    | --      | --    | 3           | 2     |
| Beach-dune Tiger Beetle ( <i>Cicindela hirticollis</i> )        | G5     | SH    | --      | --    | -           | -     |
| Blueberry Gray ( <i>Glena cognataria</i> )                      | G4     | S3?   | --      | --    | 1           | 1     |
| Bog Elfin ( <i>Callophrys lanoraieensis</i> )                   | G3G4   | SH    | --      | --    | 1           | -     |
| Bog Tiger Moth ( <i>Grammia speciosa</i> )                      | G5     | SU    | --      | --    | -           | -     |
| Broad-lined Catopyrrha ( <i>Catopyrrha coloraria</i> )          | G3G4   | S1    | --      | --    | 1           | -     |
| Brook Snaketail ( <i>Ophiogomphus aspersus</i> )                | G4     | SNR   | --      | --    | -           | -     |
| Clemens' Sphinx ( <i>Sphinx luscitiosa</i> )                    | G4     | SU    | --      | --    | -           | -     |
| Cobblestone Tiger Beetle ( <i>Cicindela marginipennis</i> )     | G2     | S1    | --      | T     | -           | 5     |
| Cobweb Skipper ( <i>Hesperia metea</i> )                        | G4G5   | S3    | --      | --    | 2           | 3     |
| Columbine Duskywing ( <i>Erynnis lucilius</i> )                 | G4     | S1    | --      | --    | 3           | 1     |
| Delaware Skipper ( <i>Anatrytone logan</i> )                    | G5     | S3S4  | --      | --    | -           | 1     |
| Dusted Skipper ( <i>Atrytonopsis hianna</i> )                   | G4G5   | S3?   | --      | --    | -           | 2     |
| Early Hairstreak ( <i>Erora laeta</i> )                         | GU     | SU    | --      | --    | -           | -     |
| Ebony Boghaunter ( <i>Williamsonia fletcheri</i> )              | G4     | SU    | --      | --    | -           | 2     |
| Edwards' Hairstreak ( <i>Satyrium edwardsii</i> )               | G4     | S3    | --      | --    | 1           | 1     |
| Elusive Hydroporus Diving Beetle ( <i>Hydroporus elusivus</i> ) | GNRQ   | SH    | --      | --    | -           | -     |
| Fen Ant ( <i>Lasius minutus</i> )                               | GNR    | S1    | --      | --    | -           | 1     |
| Frosted Elfin Butterfly ( <i>Callophrys irus</i> )              | G3     | S1    | --      | E     | 2           | 5     |
| Golden Borer ( <i>Papaipema cerina</i> )                        | G2G4   | SH    | --      | --    | -           | -     |
| Gooseberry Spanworm ( <i>Itame ribearia</i> )                   | G4     | SX    | --      | --    | 1           | -     |



| Name   | Rank    |       | Listing |       | Known sites |       |
|--|---------|-------|---------|-------|-------------|-------|
|  | Global  | State | Federal | State | <1988       | 1988+ |
| Graceful Clearwing ( <i>Hemaris gracilis</i> )                 | G3G4    | S2S3  | --      | --    | 6           | 2     |
| Hackberry Butterfly ( <i>Asterocampa celtis</i> )              | G5      | S2?   | --      | --    | -           | 1     |
| Harpoon Clubtail ( <i>Gomphus descriptus</i> )                 | G4      | SNR   | --      | --    | -           | -     |
| Henry's Elfin ( <i>Callophrys henrici</i> )                    | G5      | S2S3  | --      | --    | 1           | -     |
| Hessel's Hairstreak ( <i>Callophrys hesseli</i> )              | G3G4    | SH    | --      | --    | 1           | -     |
| Hoary Comma ( <i>Polygonia gracilis</i> )                      | G5      | S1    | --      | --    | 3           | 1     |
| Hoary Edge ( <i>Achalarus lyciades</i> )                       | G5      | SNA   | --      | --    | -           | -     |
| Hoary Elfin ( <i>Callophrys polios</i> )                       | G5      | SH    | --      | --    | -           | -     |
| Horace's Dusky Wing ( <i>Erynnis horatius</i> )                | G5      | SU    | --      | --    | 1           | -     |
| Jutta Arctic ( <i>Oeneis jutta</i> )                           | G5      | S3S4  | --      | --    | -           | -     |
| Karner Blue Butterfly ( <i>Lycaeides melissa samuelis</i> )    | G5T2    | S1    | E       | E     | 4           | 1     |
| Laurentian Skipper ( <i>Hesperia comma laurentina</i> )        | G5T5    | SNR   | --      | --    | -           | -     |
| Little Bluet ( <i>Enallagma minusculum</i> )                   | G4      | SNR   | --      | --    | -           | 2     |
| Little Glassywing ( <i>Pompeius verna</i> )                    | G5      | SU    | --      | --    | -           | 1     |
| Martha's Pennant ( <i>Celithemis martha</i> )                  | G4      | S1S3  | --      | --    | -           | 2     |
| Mulberry Wing ( <i>Poanes massasoit</i> )                      | G4      | S1S3  | --      | --    | -           | 1     |
| Muskeg Darner ( <i>Aeshna subarctica</i> )                     | G5      | SNR   | --      | --    | -           | -     |
| New England Bluet ( <i>Enallagma laterale</i> )                | G3G4    | S1    | --      | --    | -           | 2     |
| New Jersey Tea Span Worm ( <i>Apodrepanulatrix liberaria</i> ) | G4      | S1S2  | --      | --    | 1           | 1     |
| No Common Name ( <i>Catocala sp. 1 nr. jair</i> )              | G5      | S1S2  | --      | --    | 1           | 1     |
| Noctuid Moth ( <i>Zale submediana</i> )                        | G4      | S3    | --      | --    | 1           | 1     |
| Olive Hairstreak ( <i>Callophrys gryneus</i> )                 | G5      | SH    | --      | --    | -           | -     |
| Persius Dusky Wing ( <i>Erynnis persius persius</i> )          | G5T1T3  | S1    | --      | E     | 3           | 3     |
| Phyllira Tiger Moth ( <i>Grammia phyllira</i> )                | G4      | S1    | --      | --    | 3           | 1     |
| Pine Barrens Itame ( <i>Itame sp. 1 nr. inextricata</i> )      | G3G4    | S1S2  | --      | --    | -           | 1     |
| Pine Barrens Zanclognatha Moth ( <i>Zanclognatha martha</i> )  | G4      | S1    | --      | T     | -           | 5     |
| Pine Devil ( <i>Citheronia sepulcralis</i> )                   | G4      | SX    | --      | --    | 3           | -     |
| Pine Pinion Moth ( <i>Lithophane lepida lepida</i> )           | G4T3T4Q | S1S2  | --      | T     | -           | 1     |
| Pinion Moth ( <i>Xylena thoracica</i> )                        | G4      | S2    | --      | --    | 2           | 1     |
| Pink Sallow ( <i>Psectraglaea carnosa</i> )                    | G3      | SH    | --      | --    | 4           | -     |
| Plum Sphinx ( <i>Sphinx drupiferarum</i> )                     | G4      | SU    | --      | --    | -           | -     |
| Puritan Tiger Beetle ( <i>Cicindela puritana</i> )             | G1G2    | SH    | T       | --    | -           | -     |
| Rapids Clubtail ( <i>Gomphus quadricolor</i> )                 | G3G4    | SNR   | --      | --    | -           | -     |
| Ringed Bog Haunter ( <i>Williamsonia lintneri</i> )            | G3      | S1    | --      | E     | -           | 5     |
| Satyr Anglewing ( <i>Polygonia satyrus</i> )                   | G5      | SU    | --      | --    | -           | -     |
| Semirelict Underwing ( <i>Catocala semirelictica</i> )         | G5      | SH    | --      | --    | -           | -     |
| Silvery Crescentspot ( <i>Chlosyne nycteis</i> )               | G5      | SH    | --      | --    | -           | -     |
| Sleepy Duskywing ( <i>Erynnis brizo brizo</i> )                | G5T5    | S2    | --      | --    | 1           | 2     |
| Southern Pine Sphinx ( <i>Lapara coniferarum</i> )             | G5      | S1S2  | --      | --    | -           | 2     |
| Southern Variable Dart Moth ( <i>Xestia elimata</i> )          | G5      | S3S4  | --      | --    | -           | 2     |
| Spine-crowned Clubtail ( <i>Gomphus abbreviatus</i> )          | G3G4    | SNR   | --      | --    | -           | 2     |
| Spiny Oakworm ( <i>Anisota stigma</i> )                        | G5      | SH    | --      | --    | 2           | -     |
| Superb Jewelwing ( <i>Calopteryx amata</i> )                   | G4      | SNR   | --      | --    | -           | -     |
| The Anointed Sallow ( <i>Pyreferra ceromatica</i> )            | GU      | SX    | --      | --    | -           | -     |
| The Cora Moth ( <i>Cerma cora</i> )                            | G3G4    | S1S2  | --      | --    | 2           | -     |
| The Tawny Emperor ( <i>Asterocampa clyton</i> )                | G5      | SNA   | --      | --    | -           | 1     |
| Twilight Moth ( <i>Lycia rachelae</i> )                        | G4G5    | S2    | --      | --    | 1           | 1     |



| Name  | Rank   |       | Listing |       | Known sites |       |
|---|--------|-------|---------|-------|-------------|-------|
|   | Global | State | Federal | State | <1988       | 1988+ |
| Twin-horned Snaketail ( <i>Ophiogomphus mainensis</i> )         | G4     | SNR   | --      | --    | -           | -     |
| Two-spotted Skipper ( <i>Euphyes bimacula</i> )                 | G4     | S3S4  | --      | --    | -           | -     |
| White Mountain Butterfly ( <i>Oeneis melissa semidea</i> )      | G5T2   | S2    | --      | --    | -           | 2     |
| White Mountain Fritillary ( <i>Boloria chariclea montinus</i> ) | G5T2   | S2    | --      | --    | -           | 3     |
| Wild Indigo Duskywing ( <i>Erynnis baptisiae</i> )              | G5     | S1    | --      | --    | 1           | -     |
| Zebra Clubtail ( <i>Stylurus scudderi</i> )                     | G4     | S1?   | --      | --    | -           | 1     |
| Zorro Clubtail ( <i>Lanthis parvulus</i> )                      | G4     | SNR   | --      | --    | -           | -     |
| <b>Vertebrates - Fish</b>                                       |        |       |         |       |             |       |
| American Brook Lamprey ( <i>Lampetra appendix</i> )             | G4     | S2    | --      | --    | 2           | 1     |
| Atlantic Sturgeon ( <i>Acipenser oxyrinchus</i> )               | G3     | S1    | --      | --    | -           | 1     |
| Banded Sunfish ( <i>Enneacanthus obesus</i> )                   | G5     | S3    | --      | --    | 7           | 22    |
| Blacknose Shiner ( <i>Notropis heterolepis</i> )                | G4     | SNA   | --      | --    | -           | -     |
| Bridled Shiner ( <i>Notropis bifrenatus</i> )                   | G3     | S3    | --      | --    | 7           | 11    |
| Eastern Silvery Minnow ( <i>Hybognathus regius</i> )            | G5     | SH    | --      | --    | -           | -     |
| Finescale Dace ( <i>Phoxinus neogaeus</i> )                     | G5     | S2    | --      | --    | 5           | 1     |
| Lake Chub ( <i>Couesius plumbeus</i> )                          | G5     | S4    | --      | --    | -           | -     |
| Lake Whitefish ( <i>Coregonus clupeaformis</i> )                | G5     | S3    | --      | --    | 8           | -     |
| Redbelly Dace ( <i>Phoxinus eos</i> )                           | G5     | S3    | --      | --    | 4           | 8     |
| Redbreast Sunfish ( <i>Lepomis auritus</i> )                    | G5     | S4    | --      | --    | -           | -     |
| Redfin Pickerel ( <i>Esox americanus americanus</i> )           | G5T5   | S4    | --      | --    | -           | 1     |
| Round Whitefish ( <i>Prosopium cylindraceum</i> )               | G5     | S3    | --      | --    | 1           | 2     |
| Shortnose Sturgeon ( <i>Acipenser brevirostrum</i> )            | G3     | SH    | E       | E     | -           | -     |
| Spottail Shiner ( <i>Notropis hudsonius</i> )                   | G5     | S4?   | --      | --    | -           | -     |
| Sunapee Trout ( <i>Salvelinus alpinus</i> )                     | G5     | SX    | --      | E     | -           | -     |
| Swamp Darter ( <i>Etheostoma fusiforme</i> )                    | G5     | S3    | --      | --    | 3           | 10    |
| Tessellated Darter ( <i>Etheostoma olmstedii</i> )              | G5     | S4    | --      | --    | -           | 1     |
| <b>Vertebrates - Amphibians</b>                                 |        |       |         |       |             |       |
| Fowler's Toad ( <i>Bufo fowleri</i> )                           | G5     | S3    | --      | --    | 2           | 3     |
| Jefferson Salamander ( <i>Ambystoma jeffersonianum</i> )        | G4     | S2S3  | --      | --    | 1           | 2     |
| Marbled Salamander ( <i>Ambystoma opacum</i> )                  | G5     | S1    | --      | E     | 2           | 2     |
| Northern Leopard Frog ( <i>Rana pipiens</i> )                   | G5     | S3    | --      | --    | 1           | 12    |
| Slimy Salamander ( <i>Plethodon glutinosus</i> )                | G5     | SH    | --      | --    | 1           | -     |
| <b>Vertebrates - Reptiles</b>                                   |        |       |         |       |             |       |
| Blanding's Turtle ( <i>Emydoidea blandingii</i> )               | G4     | S3    | --      | --    | 18          | 101   |
| Eastern Box Turtle ( <i>Terrapene carolina</i> )                | G5     | SNA   | --      | --    | 3           | 3     |
| Eastern Hognose Snake ( <i>Heterodon platirhinos</i> )          | G5     | S3    | --      | T     | 15          | 8     |
| Northern Black Racer ( <i>Coluber constrictor constrictor</i> ) | G5T5   | S3    | --      | --    | -           | 22    |
| Smooth Green Snake ( <i>Opheodrys vernalis</i> )                | G5     | S3    | --      | --    | -           | 11    |
| Spotted Turtle ( <i>Clemmys guttata</i> )                       | G5     | S3    | --      | --    | 8           | 62    |
| Timber Rattlesnake ( <i>Crotalus horridus</i> )                 | G4     | S1    | --      | E     | 10          | 1     |
| Wood Turtle ( <i>Glyptemys insculpta</i> )                      | G4     | S3    | --      | --    | -           | 114   |
| <b>Vertebrates - Birds</b>                                      |        |       |         |       |             |       |
| American Bittern ( <i>Botaurus lentiginosus</i> )               | G4     | S3B   | --      | --    | -           | 5     |
| American Pipit ( <i>Anthus rubescens</i> )                      | G5     | S1B   | --      | --    | -           | 1     |
| American Three-toed Woodpecker ( <i>Picoides dorsalis</i> )     | G5     | S1    | --      | T     | 2           | 5     |
| Arctic Tern ( <i>Sterna paradisaea</i> )                        | G5     | S1B   | --      | T     | -           | 2     |
| Bald Eagle ( <i>Haliaeetus leucocephalus</i> )                  | G5     | S1    | M       | E     | -           | 21    |
| Bicknell's Thrush ( <i>Catharus bicknelli</i> )                 | G4     | S2S3B | --      | --    | -           | 18    |



| Name  | Rank   |       | Listing |       | Known sites |       |
|---|--------|-------|---------|-------|-------------|-------|
|   | Global | State | Federal | State | <1988       | 1988+ |
| Black Guillemot ( <i>Cepphus grylle</i> )                       | G5     | S3    | --      | --    | -           | -     |
| Black-backed Woodpecker ( <i>Picoides arcticus</i> )            | G5     | S3S4  | --      | --    | -           | 6     |
| Black-crowned Night-heron ( <i>Nycticorax nycticorax</i> )      | G5     | SHB   | --      | --    | 1           | -     |
| Blue-winged Teal ( <i>Anas discors</i> )                        | G5     | S3B   | --      | --    | -           | -     |
| Brown Thrasher ( <i>Toxostoma rufum</i> )                       | G5     | S3    | --      | --    | -           | 2     |
| Cerulean Warbler ( <i>Dendroica cerulea</i> )                   | G4     | S3B   | --      | --    | -           | 2     |
| Common Goldeneye ( <i>Bucephala clangula</i> )                  | G5     | S3B   | --      | --    | -           | 1     |
| Common Loon ( <i>Gavia immer</i> )                              | G5     | S3B   | --      | T     | -           | 225   |
| Common Moorhen ( <i>Gallinula chloropus</i> )                   | G5     | S2    | --      | --    | 2           | 3     |
| Common Nighthawk ( <i>Chordeiles minor</i> )                    | G5     | S2B   | --      | T     | 2           | 8     |
| Common Tern ( <i>Sterna hirundo</i> )                           | G5     | S1    | --      | E     | 1           | 8     |
| Cooper's Hawk ( <i>Accipiter cooperii</i> )                     | G5     | S2B   | --      | T     | 2           | 1     |
| Field Sparrow ( <i>Spizella pusilla</i> )                       | G5     | S3    | --      | --    | -           | 1     |
| Fish Crow ( <i>Corvus ossifragus</i> )                          | G5     | S3    | --      | --    | 2           | 1     |
| Golden Eagle ( <i>Aquila chrysaetos</i> )                       | G5     | SHB   | --      | E     | -           | -     |
| Golden-winged Warbler ( <i>Vermivora chrysoptera</i> )          | G4     | S2B   | --      | --    | 3           | -     |
| Goshawk ( <i>Accipiter gentilis</i> )                           | G5     | S3    | --      | --    | -           | 2     |
| Grasshopper Sparrow ( <i>Ammodramus savannarum</i> )            | G5     | S1B   | --      | T     | 2           | 10    |
| Great Blue Heron (Rookery) ( <i>Ardea herodias</i> )            | G5     | S4B   | --      | --    | 30          | 8     |
| Green-winged Teal ( <i>Anas crecca</i> )                        | G5     | S3B   | --      | --    | -           | 1     |
| Henslow's Sparrow ( <i>Ammodramus henslowii</i> )               | G4     | SHB   | --      | --    | 1           | -     |
| Horned Lark ( <i>Eremophila alpestris</i> )                     | G5     | S3B   | --      | --    | -           | 4     |
| King Rail ( <i>Rallus elegans</i> )                             | G4     | SHB   | --      | --    | -           | -     |
| Least Bittern ( <i>Ixobrychus exilis</i> )                      | G5     | S1    | --      | --    | 1           | 3     |
| Least Tern ( <i>Sterna antillarum</i> )                         | G4     | SHB   | --      | E     | -           | -     |
| Loggerhead Shrike ( <i>Lanius ludovicianus</i> )                | G4     | SHB   | --      | --    | -           | -     |
| Long-eared Owl ( <i>Asio otus</i> )                             | G5     | SU    | --      | --    | -           | -     |
| Marsh Wren ( <i>Cistothorus palustris</i> )                     | G5     | S3    | --      | --    | -           | 1     |
| Merlin ( <i>Falco columbarius</i> )                             | G5     | S3B   | --      | --    | -           | 2     |
| Nelson's Sharp-tailed Sparrow ( <i>Ammodramus nelsoni</i> )     | G5     | S3B   | --      | --    | -           | 2     |
| Northern Harrier ( <i>Circus cyaneus</i> )                      | G5     | S2B   | --      | E     | 3           | 8     |
| Osprey ( <i>Pandion haliaetus</i> )                             | G5     | S2B   | --      | T     | 2           | 74    |
| Palm Warbler ( <i>Dendroica palmarum</i> )                      | G5     | S3B   | --      | --    | -           | -     |
| Peregrine Falcon ( <i>Falco peregrinus anatum</i> )             | G4T4   | S1    | M       | E     | 4           | 7     |
| Pied-billed Grebe ( <i>Podilymbus podiceps</i> )                | G5     | S1B   | --      | E     | 4           | 23    |
| Piping Plover ( <i>Charadrius melodus</i> )                     | G3     | S1    | T       | E     | -           | 1     |
| Purple Martin ( <i>Progne subis</i> )                           | G5     | S1B   | --      | E     | 9           | 9     |
| Red Shouldered Hawk ( <i>Buteo lineatus</i> )                   | G5     | S3    | --      | --    | -           | 1     |
| Ring-necked Duck ( <i>Aythya collaris</i> )                     | G5     | S3B   | --      | --    | 8           | 1     |
| Roseate Tern ( <i>Sterna dougallii dougallii</i> )              | G4T3   | S1B   | E       | T     | -           | 1     |
| Rusty Blackbird ( <i>Euphagus carolinus</i> )                   | G4     | S2    | --      | --    | -           | 8     |
| Saltmarsh Sharp-tailed Sparrow ( <i>Ammodramus caudacutus</i> ) | G4     | S3B   | --      | --    | -           | 8     |
| Seaside Sparrow ( <i>Ammodramus maritimus</i> )                 | G4     | S1B   | --      | --    | 1           | -     |
| Sedge Wren ( <i>Cistothorus platensis</i> )                     | G5     | S1    | --      | E     | 2           | 2     |
| Sora ( <i>Porzana carolina</i> )                                | G5     | S3B   | --      | --    | -           | 2     |
| Spruce Grouse ( <i>Falcipennis canadensis</i> )                 | G5     | S3    | --      | --    | -           | 8     |
| Upland Sandpiper ( <i>Bartramia longicauda</i> )                | G5     | S1    | --      | E     | 2           | 4     |
| Vesper Sparrow ( <i>Poocetes gramineus</i> )                    | G5     | S2S3B | --      | --    | 6           | 6     |



| Name  | Rank   |         | Listing |       | Known sites |       |
|---|--------|---------|---------|-------|-------------|-------|
|   | Global | State   | Federal | State | <1988       | 1988+ |
| Virginia Rail ( <i>Rallus limicola</i> )                        | G5     | S4B     | --      | --    | -           | 1     |
| Whip-poor-will ( <i>Caprimulgus vociferus</i> )                 | G5     | S3B     | --      | --    | -           | -     |
| Willet ( <i>Catoptrophorus semipalmatus</i> )                   | G5     | S3B     | --      | --    | -           | 5     |
| Wilson's Warbler ( <i>Wilsonia pusilla</i> )                    | G5     | S3B     | --      | --    | -           | -     |
| <b>Vertebrates - Mammals</b>                                    |        |         |         |       |             |       |
| American Marten ( <i>Martes americana</i> )                     | G5     | S2      | --      | T     | 2           | 67    |
| Canada Lynx ( <i>Lynx canadensis</i> )                          | G5     | S1      | T       | E     | -           | -     |
| Eastern Cougar ( <i>Felis concolor cougar</i> )                 | G5THQ  | SH      | E       | --    | -           | -     |
| Eastern Pipistrelle ( <i>Pipistrellus subflavus</i> )           | G5     | S1N,SUB | --      | --    | -           | 2     |
| Harbor Seal ( <i>Phoca vitulina</i> )                           | G5     | S4N     | --      | --    | -           | -     |
| Indiana Bat ( <i>Myotis sodalis</i> )                           | G2     | SNA     | E       | --    | -           | -     |
| New England Cottontail ( <i>Sylvilagus transitionalis</i> )     | G3     | S3      | --      | --    | -           | 20    |
| Northern Bog Lemming ( <i>Synaptomys borealis sphagnicola</i> ) | G4T3Q  | S1      | --      | --    | 2           | 1     |
| Small Footed Bat ( <i>Myotis leibii</i> )                       | G3     | S1      | --      | E     | -           | 2     |
| <b>Vertebrates - Bat Hibernacula</b>                            |        |         |         |       |             |       |
| Bat hibernaculum ( <i>Bat Hibernaculum</i> )                    | GNR    | S1      | --      | --    | -           | 7     |

**Rank Prefix:**

G = Global Rank  
 S = State Rank  
 T = Global or State Rank for  
 a subspecies or variety

**Rank Suffix:**

1 = Critically imperiled  
 2 = Imperiled  
 3 = Vulnerable  
 4 = Apparently secure  
 5 = Secure

B = Breeding population  
 N = Non-breeding population

H = Occurred historically, not seen recently  
 X = Extirpated

NR / U = Not ranked / Unknown  
 Q = Questionable taxonomy  
 ? = Uncertain

**Listing Codes:**

E = Endangered  
 T = Threatened

## Rare Species Occurrence Record

Please fill out this form to report the location of a rare plant or animal species to the New Hampshire Natural Heritage Bureau. Required information is indicated by an asterisk; other items are desirable but not required. Rare species lists are at: [www.nhnaturalheritage.org](http://www.nhnaturalheritage.org)  
Call (603) 271-2214 with any questions. Thank you!

If sent to NHB as a Word document, use the naming convention "Name Town Mon dd", where "Name" = what was seen (common or scientific) and town, month & day are where & when it was seen, e.g., "Loon Squam Aug 12" or "Scirpus longii Derry Sep 12".

### What and When

|                     |                   |
|---------------------|-------------------|
| * Scientific Name:  |                   |
| Common Name:        |                   |
| * Date(s) Observed: |                   |
| * Who Observed It:  | Phone # or email: |

### Location

|   |
|---|
| Town Name:  |
| * Map. Attach a map with the location marked. Ideally, use a USGS topographic map. If you hand-sketch the map, be sure to include a north arrow, scale, and landmarks such as roads and major water bodies. If you provide GPS coordinates, please tell us the model of the unit and the datum (e.g., WGS 84 or NAD 83).<br>Directions. Write this as if you are telling someone how to get back to the exact site: |

### Taxonomy

|  |
|--|
| * How did you identify the species? What traits helped you decide that you had seen this species? What similar species did you consider and how did you exclude them? Photos showing <b>key characteristics</b> are welcome. A specimen is usually required to document a new plant population, however, an entire plant should never be collected if there are < 20 plants present. |
| * Certainty of ID (1=dubious, 5=absolutely positive):  |
| If a specimen was collected, collector, collection number, and where the specimen is stored:   |

## Biology

\* How many? If there are a few, count them. If there are a lot, estimate (e.g. 50-100)

Plants: how are they distributed, in how large an area? For example: "In a tight clump about 2 feet square" or "Scattered over a 30 x 60 foot area"

Evidence of reproduction? Plants: flowers/fruit/seed. Animals: nests/youngsters... etc.

Local surroundings: what do you see when you look around the area? Is it a steep slope or the middle of a swamp? What are the most common plants?

## Conservation Status (if known):

\* Land ownership: name of owner (private) or area (if public).

Phone number of owner (if known):

Is the landowner aware that you are reporting this find to NH Heritage? Y/N

Factors that indicate how secure the occurrence is (e.g. evidence of disturbance / owner is interested in protecting it...)