

# AN ALL-TAXA BIODIVERSITY INVENTORY OF THE HURON MOUNTAIN CLUB

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## **DEDICATION**

*This project is dedicated to*

*Dr. William R. Manierre,*

*who is responsible, directly and indirectly, for documenting  
a large number of the taxa listed here.*

## INTRODUCTION

No complete species inventory exists for any area. Particularly charismatic groups – birds, large mammals, butterflies – are thoroughly documented for many areas (including the Huron Mountains), but even these groups present some surprises when larger or more remote areas are examined closely, and range changes lead to additions and subtractions. Other higher-level taxa are generally much more poorly documented; even approximate inventories exist for only a few, typically restricted locales. The most diverse taxa (most notably, in terrestrial ecosystems, insects) and many of the most ecologically important groups (decay fungi, soil invertebrates) are, with few exceptions, embarrassingly poorly documented.

The notion of an ‘all-taxon biodiversity inventory’ (or ATBI) – a complete listing of species, of all taxonomic groups for a defined locale – is of relatively recent vintage, originating with ecologist Daniel Janzen’s initiative to fully document the biota of Costa Rica’s Guanacaste National Park. Miller (2005) offers a brief a history of ATBI efforts, and notes that only three significant regional efforts appear to be ongoing. Two involve whole countries – Costa Rica and Sweden – and the third, the only one in the United States, covers Great Smoky Mountains National Park (GSMNP) (<http://www.dlia.org/>). This latter project has documented a vast number of range extensions and has led to the recognition of over 500 new species. Nonetheless, only about 15,000 of the estimated 100,000 species in the Park have been listed.

Even an inventory of only macroscopic biodiversity demands substantial and extended effort. Is that effort warranted? Are ATBI’s a good use of resources? Do they have scientific or conservation management value? These questions are not simply answered. However, if species can in some manner be considered one of the fundamental units in the biological world, it may be disconcerting that they are so sparsely documented. Aldo Leopold suggested, in *A Sand County Almanac*, that the “first rule of intelligent tinkering is to save all the parts.” The most immediate and practical values in documenting species diversity concern assessment and management of environmental and ecological change. Without knowledge of local and regional biotas, it is impossible to assess whether and how they might be changing.

Historical reports from research sponsored by the Huron Mt. Wildlife Foundation (HMWF) include many biodiversity studies, and these provided a substantial head-start on a ‘landscape-scale’ ATBI. The first version of this document, in 2007, was a compilation of species lists from existing reports from the previous approximately 50 years, with some effort to assess reliability and to check and update taxonomy. Spatially, this ATBI addresses the lands of the Huron Mt. Club (HMC), currently about 10,000 ha (HMC holdings have been increased, over the period of documentation, by several purchases). This is a small area compared to the ATBI’s mentioned in Miller (2005), and, from an ecological perspective, arbitrarily defined. However, the range of terrestrial and aquatic habitats within HMC lands is unusually large, as is the variety of disturbance histories and successional states. Large tracts of unlogged forest and unusually pristine lakes and streams are particularly notable, and likely to host species lost from more disturbed landscapes. Microclimatic diversity is high because of topographic diversity and proximity of Lake Superior. Consequently, HMC lands may be representative of a much larger landscape in the central and western Upper Peninsula of Michigan. The ‘hyper-diverse’ nature of this landscape is borne out by comparison with the GSMNP inventory; to date, the total diversity documented within the boundaries of the HMC is nearly 1/3 of that for the GSMNP, even though GSMNP is more than twenty times larger.

While many of the source documents for this list are published, many more are unpublished reports by investigators sponsored by HMWF. Copies of these reports can be obtained from the Foundation (see [www.hmwf.org](http://www.hmwf.org)). Most reports are from the last three decades, but some are much older (as early as the 1920s). Consequently, changes in taxonomic status are many. I have attempted to use current sources to bring nomenclature up to date (see documentation for particular taxonomic groups). This has been difficult for some groups, and I have been unable to determine the status of a few taxa. Consultation with specialists for each group would be prohibitive. The several revisions of this paper have focused on addition of new records; not all taxa have been thoroughly updated since 2007. However, while I can’t ensure perfect taxonomic correctness, and changes are rapid in some groups, I am confident that the vast majority of names listed are reasonably consistent with current accepted usage, and all can be tracked through any recent changes in taxonomy.

It is quickly apparent that not all taxa have not been equally well documented. Some groups have received unusually complete treatment, due to their charisma (most notably, of course, mammals and birds), or because they

have received the attention of particularly dedicated individuals (for example, bryophytes, lichens, and, among insects, Family Cerambycidae and Order Odonata). However, as in all diversity inventories, knowledge of the microbiota is particularly wanting. Soil-dwelling invertebrates, some groups of fungi, zooplankton, and other microorganisms are virtually unknown. Several groups of arthropods that surely host great diversity are little studied (there has been no documentation of spiders!). Extrapolating from other estimates of the relative diversity of different taxonomic groups, it would be reasonable to assume that the ca. 2500 arthropods documented thus far constitute no more than 10% of those actually present. Thus, the current total of around 5900 recognized taxa (Table 1) is a small sample of, likely, at least ten times that number of multi-cellular organisms, not to mention many thousands of species of microorganisms, likely present. To date, the total includes (subject to ongoing rearrangements of higher taxa) approximately, 10 kingdoms, 37 phyla, over 80 classes, over 275 orders, over 850 families, and over 2800 genera.

**Table 1: Documented distinct taxa: current totals by major groups**

Monera ('bacteria' including Cyanobacteria)	42
Archaea ('archaeobacteria')	1
Miscellaneous taxa of 'algae' and 'protozoa'	90
Plants (Kingdom Viridiplantae)	
Chlorophyta ('green algae') plus Charophyta	118
Bryophyta <i>sensu lato</i> (mosses and liverworts)	370
Tracheophyta (vascular plants)	853
Lichens	380
Kingdom Fungi	
Ascomycota	172
Basidiomycota	840
Other phyla	13
Kingdom Animalia	
Miscellaneous phyla of invertebrates	73
Phylum Mollusca	83
Arthropods	
Miscellaneous groups	96
Insecta	2417
Vertebrates	377
Grand Total	5910

#### **A NOTE ON THE 2023 VERSION/UPDATE**

The current listing is the sixth revision since the original 2007 ATBI, and it is the most thorough update so far. After accounting for a variety of taxonomic changes, I have added several hundred species documented by recent studies (since the previous – 2020 – version). The greatest number of these new observations are insects (particularly Lepidoptera and caddis-flies), but there are also additions for most major groups, including those considered relatively fully documented (e.g., vascular plants, birds). In addition, the advent of massive online data-bases pooling data from collections (mostly museums and universities) allows retrospective additions and I have begun incorporating data from these sources. This update includes several hundred species of fungi, arthropods (mostly insects), and molluscs 'harvested' from records in the Symbiota data-base ([www.symbiota.org](http://www.symbiota.org)). The largest proportion of these are from collections at the University of Michigan, but many other institutions hold collections from the lands of the Huron Mountain Club. All told, this version of the ATBI adds about 600 species since the 2020 version, bringing the total documented diversity of the lands of the Huron Mountain Club to just over 5900 taxa.

In addition to simply compiling new taxa, I have fully updated and reorganized several groups, including flowering plants, fungi, lichens, and several groups of single-celled organisms. All of these groups have undergone major taxonomic revisions, especially at the family and higher taxonomic levels, and the organization of previous lists was becoming badly out-dated. This is the largest effort at taxonomic updating since initial publication in 2007. Other groups are certainly equally in need of such updating, but they will have to wait.

## A NOTE ON TAXONOMIC PHILOSOPHY AND STRUCTURE

There are differing, sometimes conflicting philosophies of biological taxonomy. In the interests of combining a familiar, recognizable structure with modern evolutionary understanding, I have attempted to recognize and merge systems that are not always entirely compatible. The traditional taxonomic hierarchy of Kingdom, Phylum (or 'Division' for botanists), Class, Order, Family, Genus, Species has the virtue of familiarity (not to mention deep entrenchment). So far as possible, I have retained that familiar structure here; think of a series of containers of different sizes (each size corresponding to one of the seven taxonomic levels), each container belongs within one (and only one) of the next larger type of containers, and contains some variable number of containers of the next smaller type. Sometimes, as with lichens, this is not strictly possible. In any case, more modern taxonomic thinking focuses on *phylogeny*, or evolutionary relationships among lineages or clades rather than the traditional 'levels' of higher taxa; think of each modern species as a twig-tip at the top of a highly and intricately branched tree-like structure.

Branches of the tree can be equated roughly with traditional higher taxonomic levels ('main' branches with classes and phyla, more superficial branches with families and genera). However, some arbitrariness is evident. Just how deep in the branching structure does a branch have to originate to warrant 'class' status? Within any class, say, some of the internal branches will be quite deep (departing from other members of the class near the origin of the class), others less deep, yet we can't adequately recognize this in conventional nomenclature. Some taxonomists prefer to focus on the structure of the evolutionary or phylogenetic tree and de-emphasize the nomenclatural hierarchy; this is, more or less, the 'cladistic' school of thought (a 'clade' is a particular sub-branch – all of the descendants of some ancestral taxon). Within cladistics thought, some extreme positions advocate dropping the traditional taxonomic nomenclature altogether, but most taxonomists don't go that far.

Here, however, is a primary principle that pretty much everyone agrees to, and to which I've tried to adhere: *taxonomic categories should be monophyletic*; that is, they should apply to a single branch or clade in its entirety. A category should be defined by a particular common ancestor, and should include all the species descended from that common ancestor. If a species is descended from the first bird (Class Aves), it is a bird; if it is not descended from that ancestor, it is not a bird.

This has forced some significant reorganizations of traditional taxonomy. Perhaps most notoriously, the traditional Class Reptilia, including turtles, lizards, snakes, and crocodiles, has to be rejected; to include all descendants of the earliest ancestor of all these groups, 'Reptilia' would have to include birds and mammals as well. The traits that traditionally defined reptiles (leathery eggs, scales, etc.) are shared by all of those groups because they are very ancient traits that have not been lost by crocodiles, turtles, or birds; the ancestors of mammals and birds had them, too (think duck-billed platypus). So, Class Reptilia must either a) be limited to snakes and lizards (which are, in fact, quite recently related), b) be enlarged to include birds and mammals (and these groups thus demoted to sub-class status), or c) be discarded as a formal taxonomic category. Most taxonomists agree that the latter course is best.

The 'Reptilia' quandary has been appreciated for some time. More recently, the advent and increasing accessibility of genetic tools has allowed more and more precise analysis of evolutionary relationships. This has resulted in changed understanding of how many Kingdoms there should be. The old 'catch-all' Kingdom Protista (single-celled organisms with nuclei and some other stuff) continues to be reorganized, with some groups recognized as part of the fungal and plant Kingdoms (clades), and others assigned to varying numbers of other Kingdoms (from a handful to more than a dozen).

More definitively, the organization of species into monophyletic genera, families, and orders has been substantially re-configured, particularly among plants and fungi. I have tried to update those Kingdoms accordingly in this version of the ATBI. There are many changes in names and assignment to higher-level taxa. These taxonomies may be settling down, but I am sure there will be more changes to come.

My organization of higher-level taxa, from "DOMAIN" (groupings of kingdoms) down to Order follows various authorities, but I have leaned heavily on Tudge (2000) and the more recent Ruggiero et al. (2015). For species, genus, and family nomenclature/assignment, I have used several constantly updated on-line data-bases, mentioned

below in connection with specific groups. However, the Global Diversity Information Facility (GBIF.org) may be emerging as the comprehensive standard for current taxonomy.

There remain many ambiguities in taxonomic structure – several taxa recorded here have been switched back and forth between Kingdoms (not to mention families, classes, orders, phyla...) by different authorities. However, the cladistic approach has the clear advantage over earlier ones of making evolutionary sense. Throughout this document, I have tried to point to some of the more important modern reorganizations, remaining ambiguities, and equivalencies with older systems, in the comments on particular groups.

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## **DOMAIN BACTERIA**

Listings for Domain BACTERIA, Phylum Cyanobacteria, and the several Kingdoms of algae and protozoa are drawn primarily from unpublished reports by J.K. Shipley-Phillips (1998,1999,2001). The ‘green algae’ (traditionally, Chlorophyta) are included in Kingdom Plantae. All listings for other bacterial phyla are from an unpublished report from S. Techtmann (2019); in this work clades are, so far, identified to the level of Order through analysis of DNA extracted from lake waters and sediments. This analysis recognizes the presence of at least 300 microbial orders, but I list only identified, named orders. I have used ITIS (2002) as the primary taxonomic authority for all of these groups, and the ‘micro\*scope’ data-base at Woods Hole Marine Biological Laboratory (2003) and the uBio “Name-Server” (2004) as additional sources. In a few cases, no authority is given for a taxon, and these taxa are listed without authority. Many generic listings lack specific epithets; these are retained as long as they are clearly distinct from other listed taxa. Note that no members of DOMAIN ARCHAEA have been documented for the Huron Mountains, although they are sure to exist. In Domain BACTERIA, only the so-called ‘blue-green algae’, or Cyanobacteria, have received any attention. Prokaryotic diversity is poorly documented everywhere (in part, because the species concept applies only crudely in these domains), and this list is no exception.

## **KINGDOM MONERA**

### **Phylum ACTINOBACTERIA**

#### **Class Acidimicrobiia**

##### **Order Acidimicrobiales**

#### **Class Actinobacteria**

##### **Order Frankiales**

##### **Order Micrococcales**

### **Phylum BACTEROIDETES**

#### **Class Cytophagia**

##### **Order Cytophagales**

#### **Class Flavobacteriia**

##### **Order Flavobacteriales**

#### **Class Sphingobacteriia**

##### **Order Sphingobacteriales**

### **Phylum CYANOBACTERIA (CYANOPHYCOTA)**

The Cyanobacteria (or ‘blue-green algae’) are the largest group of photosynthetic monerans/bacteria. It is somewhat arbitrary whether they are called a phylum within Monera, or a kingdom within Domain Bacteria; they are a very ancient group – perhaps the first photosynthetic lineage. Ancient cyanobacteria gave rise, through endosymbiosis, to the chloroplasts of most, if not all, photosynthetic Eucarya, including plants. Thus, in an odd fashion, they are a genetic ‘part-sibling’ to those groups.

#### **Class Cyanophyceae**

**Order Chroococcales**

**Family Chroococcaceae**

*Aphanotheca saxicola* Naeg.  
*Anacystis* sp  
*Chroococcus giganteus* W. West  
*Chroococcus limneticus* Lemm.  
*Coelosphaerium naegelianum*  
*Dactylococcopsis raphidosides* Hansgirg  
*Eucapsis alpina* Cl. & Shantz  
*Gloeocapsa granosa* (Berk.) Kutz.  
*Gloeothece linearis* Nageli  
*Gomphosphaeria aponina* Kutz.  
*Holopedium irregulare* Lagerheim  
*Merismopedia glauca* (Ehr.) Naegeli  
*Merismopedia major* (G.Smith) Geitler  
*Merismopedia* sp  
*Microcystis aeruginosa* (Kutzing) Lemmerman  
*Microcystis flos-aquae* (Wittr.)  
*Microcystis* sp

**Order Nostocales**

**Family Nostocaceae**

*Anabaena spiroides*  
*Anabaena* sp  
*Aphanizomenon flosaquae* J.Ralfs Ex Bornet & Flah.  
*Aphanizomenon* sp  
*Lyngbya* sp  
*Nostoc* sp

**Family Oscillatoriaceae**

*Oscillatoria* sp

**Order Stigonematales**

**Family Stigonemataceae**

*Stigonema muscicola* (Thur.) Borzi

**Phylum NITROSPIRAE**

**Class Nitrospira**

**Order Nitrospirales**

**Phylum PLANKTOMYCETES**

**Class Planctomycetacia**

**Order Planctomycetales**

**Phylum PROTEOBACTERIA**

**Class Alphaproteobacteria**

**Order Rhizobiales**

**Order Rhodospirillales**

**SAR11 clade**

**Class Betaproteobacteria**

**Order Burkholderiales**  
**Order Methylophilales**  
**Order Nitrosomonadales**

**Class Gammaproteobacteria**

**Order Xanthomonadales**

**Phylum VERRUCOMICROBIA**

**Class Spartobacteria**

**Order Chthoniobacterales**

**Class Verrucomicrobia Incertae Sedis**

**Order unknown**

## **DOMAIN ARCHAEA**

Formerly classed with the 'true' bacteria, now Domain Eubacteria, the 'archaeans' were recognized in the 1970s as a distinct evolutionary branch, separate from the Eubacteria from a very early point in the evolution of life, and, in fact, showing a more recent genetic common ancestry with Domain Eukaryota. When initially recognized as a distinct group, known archaeans were nearly all 'extremophiles', associated with high temperatures, high salinity, etc. Understanding of the diversity and distribution of this Domain is still in flux, but archaeans have proven to be much more diverse and widely distributed than initially thought.

## **KINGDOM(?) WOESARCHAEOTA**

Studies by Techtman (unpublished report, 2019) found DNA sequences associated with this group in water and sediments of several lakes. This group is of recent recognition and of somewhat unclear standing (Kingdom? Sub-kingdom? Phylum?). Previously thought to be primarily associated with deep-sea thermal vents, 'Archaea' are now known to be much more widely spread. The Woesearchaeota are primarily associated with anoxic environments, and some appear to be autotrophic (carbon-fixing), possibly via multiple metabolic pathways. Techtmann's work documents presence of this group, but more detailed understanding of diversity and taxonomy within the group is not available.

## DOMAIN EUCARYA

This grouping includes all organisms with membrane-bound cell organelles – especially nuclei. The traditional kingdoms including multi-cellular organisms belong here, and the Eukaryotes are thought to be monophyletic. Until recently, all other eukaryotes -- a wide array of mostly (but not entirely) single-celled organisms – were grouped into Kingdom Protista. Protista was always recognized as a ‘catch-all’ grouping that was not truly monophyletic – in other words, a ‘grade’ based on structural similarity, and not a ‘clade’ based on common, monophyletic descent. In fact, some protist “phyla” are much more closely related to the ‘crown’ groups of plants, animals, and fungi than they are to other protists. It is likely that there will never be universal agreement on just how to arrange the old Protista into a more phylogenetically accurate kingdom-phylum-class structure, and paraphyletic groups will continue to be used for convenience. However, new genetic work is gradually resolving the likely pattern of evolutionary lineages within the group. In earlier versions of this ATBI, I followed Tudge (2000) in recognizing the larger, recognizable lineages of prokaryotes as kingdoms. Other authorities treat them differently, and, in this version, I have followed ITIS in merging some of the photosynthetic protists – the algae – into Kingdom Plantae, recognizing a broader phylogenetic unity.

## KINGDOM PROTOZOA/EUGLENOZOA

A group of long-confused relationship, phylogenetically. I follow GBIF and Ruggiero et al. (2015) here. Tudge (2000) calls them “protozoans like quaint little cigars with a gullet at the front and a forward-pointing flagellum”,

### Phylum EUGLENOZOA

#### Class Euglenophyceae

##### Order Euglenida

##### Family Euglenaceae

*Euglena caudata*

*Euglena* sp

*Euglena polymorpha* Dangeard

*Phacus brevicaudatus* (Kelbs) Lemmermann

*Phacus quinquemarginatus*

*Phacus lemmermannii* (Sevir.) Skvortzow

*Phacus* sp.

*Trachelomonas charkowensis*

*Trachelomonas hispida* (Perty) Stein

*Trachelomonas horrida*

*Trachelomonas volvocina* Ehrmb.

*Trachelomonas* sp

#### Class Paranemea

##### Order Paranemida

##### Family Paranemataceae

*Paranema* sp

## KINGDOM CHROMISTA

Phylogenetic relationships among a variety of mostly single-celled groups (and some macro-algae), for some time placed in several kingdoms, have now been resolved and several groups assigned to other kingdoms in previous revisions (including diatoms, pyrophytes, cryptomonads, dinoflagellates, and several others) are now folded into Kingdom Chromista with cladistics relationships recognized in several 'subkingdom' and 'superphylum' groupings.

## SUBKINGDOM HACROBIA

## Phylum CRYPTISTA (cryptomonads)

### Class Cryptophyceae

#### Order Cryptomonadales

##### Family Cryptomonadaceae

*Cryptomonas ovata* Ehren.

*Cryptomoas* sp.

## SUBKINGDOM HAROSA

This is a very large and diverse group including several groups previously assigned Kingdom status; the Stramenopiles (Heterokonta), Alveolata, and Rhizaria (thus, sometimes referred to as the "SAR Clade").

## Phylum MIOZOA (DINOZOA)

### Class Dinophyceae

#### Order Gonyaulacales

##### Family Ceratiaceae

*Ceratium hirundinella* Dujardin

*Ceratium* sp

#### Order Gymnodiniales

##### Family Gymnodiniaceae

*Gymnodinium palustre* Schilling

*Gymnodinium* sp

#### Order Peridinales

##### Family Glenodiniaceae

*Glenodinium montanum* Klebs

*Peridiniopsis pnardiforme* (Lindemann) Bourrelly

##### Family Glenodiniopsidaceae

*Hemidinium* sp

##### Family Peridiniaceae

*Peridinium cinctum* (Müller) Ehrenberg

*Peridinium limbatum*

*Peridinium* sp

#### Order Phytodinales

##### Family Phytodiniaceae

*Cystodinium* sp

*Hypnodinium sphaericum* Klebs

## SUBKINGDOM HETEROKONTA (STRAMENOPILES)

## Phylum OCHROPHYTA

### Class Raphidophyceae

#### Order Raphidomonadales

##### Family Vacuolariaceae

*Gonyostomum* sp

### Class Xanthophyceae

**Order Mischococcales**

**Family Pleurochloridaceae**

*Chloridella neglecta*  
*Elippsoidion* sp

**Order Rhizochloridales**

**Family Stipitococcaceae**

*Stipitococcus capense* Prescott

**Order Tribonematales**

**Family Tribonemataceae**

*Bumilleria sicula* Borzi  
*Tribonema minus*  
*Tribonema* sp

**Class Chrysophyceae**

**Order Chrysosphaerales**

**Family Chrysosphaeraceae**

*Chrysosphaera nitens*

**Order Ochromonadales**

**Family Dinobryaceae**

*Dinobryon bavaricum* Imhof  
*Dinobryon sertularia* Ehrenberg  
*Dinobryon divergens* Imhof  
*Dinobryon eurystoma* Hillard and Asmund  
*Dinobryon stipitatum* Stein

**Family Ochromonadaceae**

*Ochromonas* sp  
*Uroglenopsis* sp.

**Family Synuraceae**

*Mallomonas acaroides* Perty  
*Mallomonas caudata* Iwanoff  
*Mallomonas pseudocoronata* Prescott  
*Synura uvella* Ehrenberg  
*Synura* sp

**Order Rhizochrysidales**

**Family Rhizochrysidaceae**

*Rhizochrysis limnetica* G.M. Smith  
*Rhizochrysis scherffellii* Pascher

**Class Bacillariophyceae (Diatoms)**

**SubClass Bacillariophycidae**

**Order Achnanthes**

**Family Achnanthaceae**

*Achnanthes* sp  
*Cocconeis* sp.

**Order Cymbellales**

**Family Cymbellaceae**

*Cymbella tumida* (Breb.) Van Heurck  
*Cymbella* sp

**Family Gomphonemataceae**

*Gomphonema* sp

**Order Eunotiales**

**Family Eunotiaceae**

*Eunotia major* (W.Sm.) Rabenh.

*Eunotia* sp

**Order Naviculales**

**Family Naviculaceae**

*Navicula* sp

**Family Pinnulariaceae**

*Pinnularia* sp

**Family Stauroneidaceae**

*Stauroneis* sp

**Order Rhopalodiales**

**Family Rhopalodiaceae**

*Epithemia* sp

**Order Surirellales**

**Family Entomoneidaceae**

*Entomoneis ornata* (J.W.Bail.)C.W.Reimer

**Family Surirellaceae**

*Surirella* sp

**Order Thalassiophysales**

**Family Catenulaceae**

*Amphora* sp

**SubClass Coscinodiscophycidae**

**Order Melosirales**

**Family Melosiraceae**

*Melosira granulata* (Ehrenberg) Ralfs

*Melosira* sp

**Order Rhizosoleniales**

**Family Rhizosoleniaceae**

*Urosolenia eriensis* (H.L.Sm.)Round & R.M.Crawford

*Urosolenia longiseta* (Zach.) M.B. Edlund & Stoermer

**Order Thalassiosirales**

**Family Stephanodiscaceae**

*Cyclotella* sp 1

*Cyclotella* sp 2

*Stephanodiscus* sp

**SubClass Fragilariophycidae**

**Order Fragilariales**

**Family Fragilariaceae**

*Asterionella formosa* Hassal

*Fragilaria* sp

*Meridion circulare* (Grev.) C.Agardh

*Synedra* sp 1



*Synedra* sp 2

**Order Tabellariales**

**Family Tabellariaceae**

*Tabellaria fenestrata* (Lyng.) Kutzing

*Tabellaria flocculosa* (Roth.) Kut.

*Tabellaria* sp 1

*Tabellaria* sp 2

**Phylum PSEUDOFUNGI (OOMYCOTA)**

A group of odd single-celled organisms that have been traditionally classified as fungi, but genetic analysis shows that they clearly are not fungi.

**Class Oomycetes**

**Order Olpidiopsidales**

**Family Olpidiopsidaceae**

*Olpidiopsis* sp

**Order Pythiales**

**Family Pythiaceae**

*Pythium* sp

**Order Saprolegniales**

**Family Leptolegniaceae**

*Aphanomyces* sp

**Family Saprolegniaceae**

*Achlya* sp

*Saprolegnia ferax*

*Saprolegnia* sp

*Cornomyces pygmaeus*

**KINGDOM PLANTAE**

The traditional plant kingdom has been, for some time, merged with the green algae in Kingdom Plantae, recognizing clear monophyly. More recently, some groups of 'macro-algae' previously thought to be phylogenetically distinct and placed in separate kingdoms, have also been assigned to Kingdom Plantae. Of these, the only taxa present here are a few fresh-water species of 'red algae' (Rhodophyta), placed in sub-kingdom Biliphyta. Sub-kingdom Viridiaeplantae includes all other taxa in this list. Within Viridiplantae, green algae, phylum Chlorophyta, are sometimes recognized as an "Infrakingdom". Infrakingdom "Streptophyta" includes phyla Charophyta, the traditional bryophytes (Anthoocerotophyta, Bryophyta, Marchantiophyta – mosses and liverworts), and Tracheophyta (vascular plants; everything else). This higher-level classification maintains monophyletic organization, but assignment of 'rank' (phylum, sub-phylum, infrakingdom, etc.) sometimes varies.

**SUBKINGDOM BILIPHYTA**

**Phylum RHODOPHYTA**

**Class Florideophyceae**

**Order Nemaliales**

**Family Batrachospermaceae**

*Batrachospermum boryanum* Sirod.

*Batrachospermum gelatinosum* (L.) DC.  
*Batrachospermum macrosporum* Sirod.

## SUBKINGDOM VIRIDIPLANTAE

### INFRAKINGDOM CHLOROPHYTA

#### Phylum CHLOROPHYTA

Ca. 120 species of green algae (“algae” being recognized as a ‘grade’ – a level of organization among photosynthetic organisms – rather than a phylogenetic group or clade) documented here are primarily from unpublished reports by J.K. Shipley-Phillips (1999,2001). This group includes several orders, including “desmids” (Order Zygnemetales). The phylum is certainly under-documented

#### Class Chlorophyceae

##### Order Chaetophorales

###### Family Chaetophoraceae

*Aphanochaete polychaete* (Hansg.) Fritsch  
*Aphanochaete repens* A. Braun  
*Aphanochaete* sp  
*Draparnaldia judayi* Prescott  
*Draparnaldia* sp

##### Order Chlorococcales

###### Family Characiaceae

*Characium ambiguum* Hermann  
*Characium obtusum* A.Br.  
*Characium* sp

###### Family Coccomyxaceae

*Gloeocystis gigas* (Kutzing) Lagerhei  
*Gloeocystis vesiculosa* Naegeli

###### Family Dictyosphaeriaceae

*Botryococcus* sp  
*Dictyosphaerium pulchellum* Wood  
*Dictyosphaerium* sp

###### Family Hydrodictyaceae

*Pediastrum boryanum* (Turpin) Meneghini  
*Pediastrum duplex* Meyen  
*Pediastrum glanduliferum*  
*Pediastrum* sp

###### Family Micractiniaceae

*Golenkinia radiata* Chodat

###### Family Oocystaceae

*Ankistrodesmus falcatus* (Corda) Ralfs  
*Ankistrodesmus quarternus* W.West & G.S. West  
*Ankistrodesmus spiralis* Turner Lemm  
*Ceraterias irregulare* G.M. Smith  
*Kirchneriella obesa aperta* (Teil.) Brunthaler  
*Nephrocytium limneticum* (Smith)Kuetzing  
*Oocystis borgei* Snow  
*Oocystis lacustris* Chodat  
*Oocystis parva* West & West  
*Planktosphaeria gelatinosa* G.M.Smith  
*Quadrigula chodatii* (Tanner-Fullman) G.M. Smith

*Quadrigula closteriodes* (Bohlin.) Printz  
*Radiococcus nimbatus* (de Wild.) Schmidle

**Family Scenedesmaceae**

*Coelastrum angustae armatum* Skuja  
*Coelastrum cambricum* Archer  
*Coelastrum chodati* Duceell.  
*Coelastrum microporum* Naeg  
*Coelastrum* sp  
*Crucigena crucifera* (Wolle) Coilins  
*Crucigenia rectangularis* (Nag.) Gay  
*Crucigenia tetrapedia* (Kirch.) W. & G.S.West  
*Elakatothrix* sp.  
*Elakatothrix gelatinosa* Wille  
*Elakatothrix viridis* (Snow) Printz  
*bijuga alternans* (Reinsch) Hansg.  
*Scenedesmus obliquus* (Turpin) Kutzing  
*Scenedesmus quadricauda* (Turpin) Breb.  
*Scenedesmus* sp

**Order Microsporales**

**Family Microsporaceae**

*Microspora* sp

**Order Oedogoniales**

**Family Oedogoniaceae**

*Bulbochaete* sp  
*Oedogonium ambiceps* (Jao) Tiffany  
*Oedogonium* sp

**Order Tetrasporales**

**Family Palmellopsidaceae**

*Palmodictyon varium* (Naeg.) Lemm.  
*Palmodictyon* sp  
*Sphaerocystis schroeteri* Chodat

**Order Ulitrochales**

**Family Ulotrichaceae**

*Radiofilum conjunctivum* Schmidle  
*Ulothrix* sp

**Order Volvocales**

**Family Chlamydomonadaceae**

*Carteria polychloris* Pascher (synonymous with *Chlorangium polychlorum* Skuja?)  
*Chlamydomonas* sp  
*Gloeomonas ovalis* Klebs

**Family Volvocaceae**

*Carteria fretschii* Takeda  
*Eudorina elegans* Ehrenberg  
*Gonium* sp  
*Volvox* sp

**Order Zygnematales**

**Family Desmidiaceae**

*Arthrodesmus octocornis* Ehrenb.  
*Arthrodesmus impar* (J.Jacobsen) Grønblad  
*Arthrodesmus incus indentatus* West and West

*Arthrodesmus ralfsii* W.West  
*Arthrodesmus* sp  
*Bambusina* sp  
*Closterium acerosum* (Shrank) Ehrbg.  
*Closterium attenuatum* Ehrbg.  
*Closterium exile* W.West & G.S.West  
*Closterium intermedium* Ralfs  
*Clostrium lineatum* Ehrbg.  
*Closterium setaceum* Ehrbg.  
*Closterium* sp  
*Closterium* sp3  
*Cosmarium* sp  
*Desmidium aequale* West&West  
*Desmidium baileyi* (Ralfs) Nordstedt  
*Desmidium* sp  
*Euastrum gemmatum* Brebisson  
*Euastrum* sp.  
*Hyalotheca* sp  
*Micrasterias laticeps* Nordst.  
*Micrasterias* sp.  
*Penium margaritaceum* (Ehrenberg) Brebisson  
*Penium* sp  
*Pleurotanium constrictum* (Bailey) Wood  
*Pleurotanium ehrenbergii* (Brebisson) DeBary  
*Pleurotanium nodosum* (Bailey) Lundell  
*Pleurotanium subcoronulatum* Turner  
*Pleurotanium trabecula* (Ehrenberg) Naegeli  
*Pleurotanium* sp1  
*Pleurotanium* sp2  
*Sphaeroszoma* sp  
*Spondylosium* sp  
*Staurastrum rugosum* Irene-Marie  
*Staurastrum* sp  
*Staurastrum longiradiatum* West&West  
*Staurastrum pentaceruum obesum* G.M.Smith  
*Staurastrum sonthalianum* W.B.Turner  
*Staurastrum smithii* Teiling  
*Staurastrum zonatum* Borgesen  
*Staurodesmus cuspidatus* (Brebisson) Teil.  
*Xanthidium subhastiferum towerii* (Cushman) G.M.Smith  
*Xanthidium* sp.

**Family Mesotaeniaceae**

*Gonatozygon kinahani* (Archer)Rabh.  
*Gonatozygon* sp  
*Netrium digitus* (Breb. Ex Ralfs)Itzig. And Rothe  
*Netrium* sp.

**Family Zygnemataceae**

*Mougeotia* sp  
*Spirogyra* sp1  
*Spirogyra* sp2  
*Teilingia granulata* (Roy and Biss.) Bourrelly  
*Teilingia* sp  
*Zygnema* sp.

**INFRAKINGDOM STREPTOPHYTA**

This group approximates the 'classical' Kingdom Plantae  
**Phylum CHAROPHYTA**

**Class Charophyceae**

**Order Charales**

**Family Characeae**

*Chara* sp

\**Nitella flexilis* (L.) C. Agardh

**Superphylum EMBRYOPHYTA**

**Phylum BRYOPHYTA**

The 'bryophytes' (phyla: Bryophyta, the mosses; Marchantiophyta, or 'Hepatophyta', the liverworts; and Anthocerotophyta, the hornworts), with nearly 400 species listed, are unusually well-documented, primarily through the work of Dr. William Manierre (Manierre 1999, 2002, and subsequent personal communications) and this listing is drawn almost entirely from his work, aside from a very few species recorded by Nichols (1935) but not directly observed by Manierre. I have, in general, retained the species nomenclature of Manierre (which, in turn, follows Crum and Anderson (1981) and Anderson *et al.* (1990)), but have generally adhered to the family sequence from *Bryophyte Flora of North America* (Flora of North America Association 2001). The exceptions, where *Bryophyte Flora of North America*, changes names used by Manierre, are as follows: *Limprichtia cossonii* is reassigned to *Scorpidium*, *Desmatodon obtusifolius* to *Plaubelia springellii*, and *Haplohymenium* is reassigned to *Anomodon* (so *Haplohymenium triste* becomes *Anomodon tristis*). There have been substantial revisions in the group, especially at the level of families and orders, but I have not yet attempted to incorporate them.

**Class Sphagnopsida**

**Order Sphagnales**

**Family Sphagnaceae**

*Sphagnum angustifolium* (C. Jens. ex Russ.) C. Jens. in Tolf

*Sphagnum capillifolium* (Ehrh.) Hedw.

*Sphagnum centrale* C. Jens. in Arnell & C. Jens.

*Sphagnum compactum* DC. in Lam. & DC.

*Sphagnum contortum* Schultz

*Sphagnum cuspidatum* Ehrh. ex Hoffm.

*Sphagnum fallax* (Klinggr.) Klinggr.

*Sphagnum fimbriatum* Wils. in Wils & Hook. f. in Hook. f. var. *fimbriatum*

*Sphagnum fuscum* (Schimp.) Klinggr.

*Sphagnum girgensohnii* Russ.

*Sphagnum lescurii* Sull. in Gray

*Sphagnum magellanicum* Brid.

*Sphagnum magus* (Russ.) C. Jens.

*Sphagnum papillosum* Lindb.

*Sphagnum pulchrum* (Lindb. ex Braithw.) Warnst.

*Sphagnum pulustre* L.

*Sphagnum quinquefarium* (Lindb. ex Braithw.) Warnst.

*Sphagnum recurvum* P. Beauv.

*Sphagnum riparium* Aongstr.

*Sphagnum rubellum* Wils.

*Sphagnum russowii* Warnst.

*Sphagnum squarrosum* Crome

*Sphagnum subsecundum* Nees in Sturm var. *subsecundum*

*Sphagnum tenellum* (Brid.) Bory

*Sphagnum tenerum* Sull. & Lesq. in Sull. in Gray

*Sphagnum teres* (Schimp.) Aongstr. in Hartm.  
*Sphagnum warnstorffii* Russ.  
*Sphagnum wulfianum* Girg.

## **Class Andreaeopsida**

### **Order Andreaeales**

#### **Family Andreaeaceae**

*Andreaea rothii* Web. & Mohr var. *rothii*  
*Andreaea rupestris* Hedw. var. *rupestris*  
*Andreaea rupestris* var. *papillosa* (Lind.) Podp.

## **Class Bryopsida**

### **Order Tetraphidales**

#### **Family Tetraphidaceae**

*Tetraphis pellucida* Hedw.

### **Order Buxbaumiales**

#### **Family Buxbaumiaceae**

*Buxbaumia aphylla* Hedw.

### **Order Polytrichales**

#### **Family Polytrichaceae**

*Atrichum angustatum* (Brid.) Bruch & Schimp. in B.S.G.  
*Atrichum undulatum* (Hedw.) P. Beauv.  
*Polytrichastrum alpinum* (Hedw.) G.L. Sm. var. *alpinum*  
*Polytrichum commune* Hedw. var. *commune*  
*Polytrichum commune* Hedw. var. *perigoniale* (Michx.) Hampe  
*Polytrichum formosum* Hedw.  
*Polytrichum juniperinum* Hedw.  
*Polytrichum piliferum* Hedw.  
*Polytrichum strictum* Brid.

### **Order Buxbaumiales**

#### **Family Diphysciaceae**

*Diphyscium foliosum* (Hedw.) Mohr

### **Order Encalyptales**

#### **Family Encalyptaceae**

*Encalypta ciliata* Hedw.  
*Encalypta procera* Bruch

### **Order Funariales**

#### **Family Funariaceae**

*Funaria hygrometrica* Hedw.  
*Physcomitrium immersum* Sull.

#### **Family Ephemeraceae**

*Ephemerum spinulosum* Bruch & Schimp. in Schimp.

### **Order Grimmiales**

#### **Family Grimmiaceae**

*Dryptodon patens* (Hedw.) Brid.  
*Grimmia affinis* Hoppe & Hornsch. ex Hornsch.  
*Grimmia anodon* Bruch & Schimp. in B.S.G.  
*Grimmia anomala* Hampe ex Schimp.

*Grimmia donniana* Sm.  
*Grimmia hermannii* Crum  
*Grimmia olneyi* Sull.  
*Grimmia pilifera* P. Beauv.  
*Grimmia tenerrima* Ren. & Card.  
*Grimmia teretinervis* Limpr.  
*Grimmia trichophylla* Grev.  
*Grimmia unicolor* Hook. in Grev.  
*Racomitrium aciculare* (Hedw.) Brid.  
*Racomitrium canescens* (Hedw.) Brid. var. *canescens*  
*Racomitrium ericoides* (Web. ex Brid.) Brid.  
*Racomitrium fasciculare* (Hedw.) Brid.  
*Racomitrium heterostichum* (Hedw.) Brid.  
*Racomitrium microcarpon* (Hedw.) Brid.  
*Racomitrium sudeticum* (Funck) Bruch & Schimp. in B.S.G.  
*Schistidium apocarpum* (Hedw.) Bruch & Schimp. in B.S.G.  
*Schistidium rivulare* (Brid.) Podp. var. *rivulare*

## Order Seligeriales

### Family Seligeriaceae

*Blindia acuta* (Hedw.) Bruch & Schimp. in B.S.G.  
*Seligeria campylopoda* Kindb. in Mac. & Kindb.  
*Seligeria pusilla* (Hedw.) Bruch & Schimp. in B.S.G.  
*Seligeria recurvata* (Hedw.) Bruch & Schimp. in B.S.G.

## Order Dicranales

### Family Fissidentaceae

*Fissidens adianthoides* Hedw.  
*Fissidens bryoides* Hedw.  
*Fissidens bryoides* Hedw. “*minutulus* expression”, Crum & Anderson  
*Fissidens dubius* P. Beauv.  
*Fissidens osmundioides* Hedw.  
*Fissidens taxifolius* Hedw.

### Family Dicranaceae

*Cynodontium schisti* (Web. & Mohr) Lindb.  
*Cynodontium strumiferum* (Hedw.) Lindb.  
*Cynodontium tenellum* (Bruch & Schimp. in B.S.G.) Limpr.  
*Dichodontium pellucidum* (Hedw.) Schimp.  
*Dicranella grevilleana* (Brid.) Schimp.  
*Dicranella heteromalla* (Hedw.) Schimp.  
*Dicranella varia* (Hedw.) Schimp.  
*Dicranoweisia crispula* (Hedw.) Lindb. ex Milde  
*Dicranum condensatum* Hedw.  
*Dicranum flagellare* Hedw.  
*Dicranum fulvum* Hook.  
*Dicranum fuscescens* Turn. var. *fuscescens*  
*Dicranum montanum* Hedw.  
*Dicranum muehlenbeckii* Bruch & Schimp. in B.S.G.  
*Dicranum ontariense* Peters  
*Dicranum polysetum* Sw.  
*Dicranum scoparium* Hedw.  
*Dicranum spurium* Hedw.  
*Dicranum undulatum* Brid.  
*Dicranum viride* (Sull. & Lesq. in Sull.) Lindb.  
*Oncophorus virens* (Hedw.) Brid.  
*Oncophorus wahlenbergii* Brid.

*Paraleucobryum longifolium* (Hedw.) Loeske

**Family Bruchiaceae**

*Trematodon ambiguus* (Hedw.) Hornsch.

**Family Leucobryaceae**

*Leucobryum glaucum* (Hedw.) Aongstr. in Fries

**Family Ditrichaceae**

*Ceratodon purpureus* (Hedw.) Brid. var. *purpureus*

*Distichium capillaceum* (Hedw.) Bruch & Schimp. var. *capillaceum*

*Ditrichum pusillum* (Hedw.) Hampe

*Saelania glaucescens* (Hedw.) Broth. in Bomanss. & Broth.

**Family Rhabdoweisiaceae**

*Rhabdoweisia crispata* (With.) Lindb.

**Order Pottiales**

**Family Pottiaceae**

*Bryoerythrophyllum recurvum* (Griff.) Saito

*Didymodon fallax* (Hedw.) Zand. var. *fallax*

*Didymodon rigidulus* Hedw. var. *rigidulus*

*Gymnostomum aeruginosum* Sm.

*Gyroweisia reflexa* (Brid.) Schimp.

*Gyroweisia tenuis* (Hedw.) Schimp.

*Oxystegus tenuirostris* (Hook. & Tayl.) A.J.E. Sm.

*Plaubelia springellii* (Schwaegr.) Schimp.

*Tortella tortuosa* (Hedw.) Limpr.

*Tortula mucronifolia* Schwaegr.

*Tortula ruralis* (Hedw.) Gaertn. *et al.*

**Order Splachnales**

**Family Splachnaceae**

*Splachnum ampullaceum* Hedw.

*Tetraplodon angustatus* (Hedw.) Bruch & Schimp. in B.S.G.

**Order Orthotrichales**

**Family Orthotrichaceae**

*Orthotrichum affine* Brid.

*Orthotrichum anomalum* Hedw.

*Orthotrichum obtusifolium* Brid.

*Orthotrichum sordidum* Sull. & Lesq. in Aust.

*Orthotrichum speciosum* var. *elegans* (Schwaegr. In Hook.&Grev.) Warnst.

*Ulota crispa* (Hedw.) Brid.

*Ulota hutchinsiae* var. *rufescens* (Britt.) Dix.

*Ulota hutchinsiae* var. *hutchinsiae* (Sm.) Hammar

**Order Hedwigiales**

**Family Hedwigiaceae**

*Hedwigia ciliata* (Hedw.) P. Beauv.

**Order Bryales**

**Family Aulacomniaceae**

*Aulacomnium androgynum* (Hedw.) Schwaegr.

*Aulacomnium palustre* var. *imbricatum* B.S.G.

*Aulacomnium palustre* (Hedw.) Schwaegr.

**Family Bartramiaceae**

*Bartramia pomiformis* Hedw.

*Philonotis capillaris* Lindb. in Hartm.

*Philonotis fontana* var. *caespitosa* (Jur.) Schimp.



*Philonotis fontana* (Hedw.) Brid. var. *fontana*  
*Philonotis fontana* var. *pumila* (Turn.) Brid.

#### **Family Bryaceae**

*Bryum algovicum* Sendtn. ex C. Müll. var. *algovicum*  
*Bryum alpinum* Huds. ex With.  
*Bryum argenteum* Hedw.  
*Bryum argenteum* Hedw. var. *lanatum* (P.Blauv.) Hamf.  
*Bryum caespiticium* Hedw.  
*Bryum capillare* Hedw. var. *capillare*  
*Bryum flaccidum* Brid.  
*Bryum lisae* De Not. var. *cuspidatum* (Bruch. & Schimp. B.S.G.) Marg.  
*Bryum muehlenbeckii* Bruch & Schimp.  
*Bryum pallens* (Brid.) Sw. in Rohl.  
*Bryum pallescens* Schleich. ex Schwaegr.  
*Bryum pseudotriquetrum* (Hedw.) Gaertn. et al.  
*Bryum ruderale* Crundw. & Nyh.  
*Bryum violaceum* Crundw. & Nyh.  
*Pohlia bulbifera* (Warnst.) Warnst.  
*Pohlia cruda* (Hedw.) Lindb.  
*Pohlia nutans* (Hedw.) Lindb.  
*Pohlia prolifera* (Kindb. ex Breidl.) Lindb. ex Arnell  
*Pohlia wahlenbergii* (Web. & Mohr) Andrews

#### **Family Mniaceae**

*Cyrtomnium hymenophylloides* (Hüb.) Nyh. ex T. Kop.  
*Mnium ambiguum* H. Müll.  
*Mnium marginatum* (With.) Brid. ex P. Beauv.  
*Mnium spinulosum* Bruch & Schimp. in B.S.G.  
*Mnium thomsonii* Schimp.  
*Plagiomnium ciliare* (C. Müll) T. Kop.  
*Plagiomnium cuspidatum* (Hedw.) T. Kop.  
*Plagiomnium ellipticum* (Brid.) T. Kop.  
*Plagiomnium medium* (Bruch & Schimp. in B.S.G.) T. Kop var. *medium*  
*Plagiomnium rostratum* (Schrad.) T. Kop.  
*Pseudobryum cinclidioides* (Hüb.) T. Kop.  
*Rhizomnium appalachianum* T. Kop.  
*Rhizomnium magnifolium* (Horik.) T. Kop.  
*Rhizomnium pseudopunctatum* (Bruch & Schimp.) T. Kop.  
*Rhizomnium punctatum* (Hedw.) T. Kop.

### **Order Hypnales**

#### **Family Amblystegiaceae**

*Amblystegium serpens* (Hedw.) Schimp. in B.S.G. var. *juratzkanum*  
*Amblystegium serpens* (Hedw.) Schimp. in B.S.G. var. *serpens*  
*Amblystegium varium* (Hedw.) Lindb.  
*Calliergonella cuspidata* (Hedw.) Loeske  
*Hygroamblystegium luridum* (Hedw.) Jenn.  
*Hygroamblystegium fluviatile* (Hedw.) Loeske  
*Hygroamblystegium tenax* (Hedw.) Jenn. var. *tenax*  
*Leptodictyum humile* (P. Beauv.) Ochyra  
*Leptodictyum riparium* (Hedw.) Warnst.

#### **Family Cratoneuraceae**

*Cratoneuron filicinum* (Hedw.) Spruce

#### **Family Helodiaceae**

*Helodium blandowii* (Web. & Mohr) Warnst. var. *blandowii*

#### **Family Hylocomiaceae**

*Hylocomiastrum pyrenaicum* (Spruce) Fleisch. in Broth.

*Hylocomium splendens* (Hedw.) Schimp. in B.S.G.  
*Pleurozium schreberi* (Brid.) Mitt.  
*Rhytidiadelphus squarrosus* (Hedw.) Warnst.  
*Rhytidiadelphus triquetrus* (Hedw.) Warnst.

**Family Leskeaceae**

*Leskea gracilescens* Hedw.  
*Leskea polycarpa* Hedw.  
*Leskeella nervosa* (Brid.) Loeske  
*Lindbergia brachyptera* (Mitt.) Kindb.  
*Pseudoleskeella sibirica* (Arnell) P. Wils. & Norris

**Family Pterigynandraceae**

*Heterocladium dimorphum* (Brid.) Schimp. in B.S.G.  
*Heterocladium macounii* Best  
*Myurella julacea* Schwaegr. Schimp. in B.S.G.  
*Myurella sibirica* (C. Müll.) Reim  
*Myurella* anomalous form  
*Pterigynandrum filiforme* Hedw.

**Family Thuidiaceae**

*Abietinella abietina* (Hedw.) Fleisch.  
*Thuidium delicatulum* (Hedw.) Schimp. in B.S.G.  
*Thuidium philibertii* Limpr.  
*Thuidium recognitum* (Hedw.) Lindb.

**Family Campyliaceae**

*Calliergon cordifolium* (Hedw.) Kindb.  
*Calliergon giganteum* (Schimp.) Kindb.  
*Calliergon stramineum* (Brid.) Kindb.  
*Campylium chrysophyllum* (Brid.) J. Lange  
*Campylium hispidulum* (Brid.) Mitt.  
*Campylium polygamum* (Schimp. in B.S.G.) C. Jens.  
*Campylium radicale* (P. Beauv.) Grout  
*Campylium stellatum* (Hedw.) C. Jens. var. *stellatum*  
*Campylium stellatum* var. *protensum*  
*Drepanocladus aduncus* (Hedw.) Warnst. var. *kneiffii*  
*Drepanocladus aduncus* var. *aduncus*  
*Hygrohypnum molle* (Hedw.) Loeske  
*Hygrohypnum ochraceum* (Turn. ex Wils.) Loeske  
*Limprichtia cossonii* (Schimp.) Aongstr. in Hartm.  
*Sanionia uncinata* (Hedw.) Loeske var. *uncinata*  
*Tomentypnum falcifolium* (Ren. ex Nichols) Tuom. in Ahti & Fagers.  
*Warnstorfia fluitans* (Hedw.) Loeske var. *fluitans*

**Family Brachytheciaceae**

*Brachythecium acuminatum* (Hedw.) Aust.  
*Brachythecium oedipodium* (Mitt.) Jaeg.  
*Brachythecium oxycladon* (Brid.) Jaeg.  
*Brachythecium plumosum* (Hedw.) Schimp. in B.S.G.  
*Brachythecium populeum* (Hedw.) Schimp. in B.S.G.  
*Brachythecium reflexum* (Starke in Web. & Mohr) Schimp. in B.S.G. var. *reflexum*  
*Brachythecium rivulare* Schimp. in B.S.G.  
*Brachythecium rutabulum* (Hedw.) Schimp. in B.S.G.  
*Brachythecium salebrosum* (Web. & Mohr) Schimp. in B.S.G. var. *salebrosum*  
*Brachythecium turgidum* (Hartm.) Kindb.  
*Brachythecium velutinum* (Hedw.) Schimp. in B.S.G. var. *velutinum*  
*Bryhnia graminicolor* (Brid.) Grout  
*Bryhnia novae-angliae* (Sull. & Lesq. in Sull.) Grout  
*Eurhynchium hians* (Hedw.) Sande Lac.  
*Eurhynchium praelongum* (Hedw.) Schimp. in B.S.G.

*Eurhynchium pulchellum* (Hedw.) Jenn. var. *pulchellum*  
*Platyhypnidium riparioides* (Hedw.) Dix.  
*Steerecleus serrulatus* (Hedw.) Robins.

**Family Fabroniaceae**

*Fabronia ciliaris* (Brid.) Brid. var. *ciliaris*

**Family Plagiotheciaceae**

*Plagiothecium cavifolium* (Brid.) Iwats.  
*Plagiothecium denticulatum* (Hedw.) Schimp. in B.S.G.  
*Plagiothecium laetum* Schimp. in B.S.G.

**Family Fontinalaceae**

*Dichelyma capillaceum* (With.) Myr.  
*Dichelyma pallescens* Schimp. in B.S.G.  
*Fontinalis antipyretica* Hedw. var. *antipyretica*  
*Fontinalis antipyretica* Hedw. var. *gigantea* (Sull.) Sull.  
*Fontinalis dalecarlica* Schimp. in B.S.G.  
*Fontinalis flaccida* Ren. & Card.  
*Fontinalis hypnoides* var. *duriaei* (Schimp.) Husn.  
*Fontinalis missourica* Card.  
*Fontinalis neomexicana* Sull. & Lesq.  
*Fontinalis novae-angliae* Sull. var. *novae-angliae*  
*Fontinalis sullivantii* Lindb.

**Family Climaciaceae**

*Climacium americanum* Brid.  
*Climacium dendroides* (Hedw.) Web. & Mohr.

**Family Hypnaceae**

*Callicladium haldanianum* (Grev.) Crum  
*Ctenidium molluscum* (Hedw.) Mitt.  
*Herzogiella turfacea* (Lindb.) Iwats.  
*Homomallium adnatum* (Hedw.) Broth.  
*Hypnum cupressiforme* var. *resupinatum* (Tayl.) Schimp. In Spruce  
*Hypnum curvifolium* Hedw.  
*Hypnum fertile* Sendtn.  
*Hypnum lindbergii* Mitt.  
*Hypnum pallescens* (Hedw.) P. Beauv. var. *protuberans* (Brid.) Aust.  
*Hypnum pallescens* (Hedw.) P. Beauv. var. *pallescens*  
*Hypnum pratense* (Rabenh.) W. Koch ex Spruce  
*Isopterygiopsis pulchella* (Hedw.) Iwats.  
*Platydictya confervoides* (Brid.) Crum  
*Platydictya subtilis* (Hedw.) Crum  
*Platygyrium repens* (Brid.) Schimp. in B.S.G.  
*Pseudotaxiphyllum distichaceum* (Mitt.) Iwats.  
*Pseudotaxiphyllum elegans* (Brid.) Iwats.  
*Ptilium crista-castrensis* (Hedw.) De Not.  
*Pylaisiella polyantha* (Hedw.) Grout  
*Pylaisiella selwynii* (Kindb.) Crum *et al.*  
*Taxiphyllum deplanatum* (Bruch & Schimp. ex Sull.) Fleisch.

**Family Sematophyllaceae**

*Brotherella recurvans* (Michx.) Fleisch.

**Family Leucodontaceae**

*Leucodon brachypus* S.E. Bridel var. *andrewsianus*

**Family Neckeraceae**

*Homalia trichomanoides* (Hedw.) Schimp. in B.S.G.  
*Neckera pennata* Hedw.

**Family Anomodontaceae**

*Anomodon tristis* (Ces. in De Not.) Kindb.  
*Anomodon attenuatus* (Hedw.) Hüb.

*Anomodon minor* (Hedw.) Fűrnr.  
*Anomodon rostratus* (Hedw.) Schimp.  
*Anomodon rugelii* (C. Müll.) Keissl.

## Phylum MARCHANTIOPHYTA

### Class Marchantiopsida

#### Order Marchantiales

##### Family Conocephalaceae

*Conocephalum conicum* (L.) Lindb.

##### Family Marchantiaceae

*Marchantia polymorpha* L.

*Preissia quadrata* (Scop.) Nees

### Class Jungermanniopsida

#### Order Metzgeriales

##### Family Blasiaceae

*Blasia pusilla* L.

##### Family Pelliaceae

*Pellia epiphylla* (L.) Corda

*Pellia megaspora* Schust.

*Pellia neesiana* (Gott.) Limpr.

##### Family Pallaviciniaceae

*Moerckia hibernica* (Hook.) Gott.

*Pallavicinia lyellii* (Hook.) Carruth.

##### Family Aneuraceae

*Riccardia multifida* (L.) S. Gray var. *multifida*

##### Family Metzgeriaceae

*Metzgeria conjugata* Lindb.

*Metzgeria furcata* (L.) Dum. var. *furcata*

*Metzgeria furcata* (L.) Dum. var. *ulvula* Nees

#### Order Jungermanniales

##### Family Ptilidiaceae

*Ptilidium ciliare* (L.) Hampe

*Ptilidium pulcherrimum* (G. Web.) Hampe

##### Family Trichocoleaceae

*Trichocolea tomentella* (Ehrh.) Dum.

##### Family Pseudolepicoleaceae

*Blepharostoma trichophyllum* (L.) Dum. subsp. *trichophyllum*

##### Family Geocalyceae

*Chiloscyphus pallescens* (Ehrh. Ex Hoffm.) Dum. var. *pallescens*

*Chiloscyphus pallescens* (Ehrh. Ex Hoffm.) Dum. var. *fragilis* (Roth) K. Müll.

*Chiloscyphus polyanthos* (Schrad.) Nees var. *polyanthos*

*Chiloscyphus polyanthos* (Schrad.) Nees var. *rivularis*

*Geocalyx graveolens* (Schrad.) Nees

*Lophocolea heterophylla* (Schrad.) Dum.

*Lophocolea minor* Nees.

##### Family Plagiochilaceae

*Plagiochila porelloides* (Torrey ex Nees) Lindenb.

##### Family Calypogeiaceae

*Calypogeia trichomanis* (L.) Corda

##### Family Lepidoziaceae

*Bazzania trilobata* (L.) S. Gray var. *trilobata*

*Lepidozia reptans* (L.) Dum.

**Family Cephaloziaceae**

*Cephalozia bicuspidata* (L.) Dum. Ssp. *Bicuspidata*

*Cephalozia connivens* (Dicks.) Lindb. var. *connivens*

*Cephalozia loitlesbergeri* Schiffn.

*Cephalozia macounii* (Aust.) Aust.

*Cephalozia pleniceps* (Aust.) Lindb. var. *pleniceps*

*Odontoschisma denudatum* (Nees ex Mart.) Dum. var. *denudatum*

**Family Cephaloziellaceae**

*Cephaloziella divaricata* (Sm.) Schiffn. var. *divaricata*

*Cephaloziella hampeana* (Nees) Schiffn.

*Cephaloziella rubella* (Nees) Warnst.

**Family Jungermanniaceae**

*Anastrophyllum helleranum* (Nees) Schust.

*Anastrophyllum michauxii* (Web.) Buch ex Evans

*Anastrophyllum minutum* (Schreb.) Schust. var. *minutum*

*Barbilophozia attenuata* (Mart.) Loeske

*Barbilophozia barbata* (Schmid. ex Schreb.) Loeske

*Barbilophozia floerkei* (Web. et Mohr) Loeske var. *floerkei*

*Barbilophozia hatcheri* (Evans) Loeske

*Barbilophozia kunzeana* (Hüb.) Gams

*Barbilophozia lycopodioides* (Wallr.) Loeske

*Jamesoniella autumnalis* (DC.) Steph. var. *autumnalis*

*Jungermannia crenuliformis* Aust.

*Jungermannia exsertifolia* Steph. subsp. *cordifolia* (Dum.) Vana var. *cordifolia*

*Jungermannia gracillima* Sm.

*Jungermannia leiantha* Grolle

*Jungermannia pumila* With.

*Lophozia incisa* (Schrad.) Dum. var. *incisa*

*Lophozia obtusa* (Lindb.) Evans

*Lophozia sudetica* (Nees) Grolle

*Lophozia ventricosa* (Dicks.) Dum. var. *ventricosa*

*Tritomaria exsectiformis* (Breidl.) Loeske subsp. *exsectiformis*

*Tritomaria quinquedentata* (Huds.) Buch var. *quinquedentata*

**Family Gymnomitriaceae**

*Marsupella emarginata* (Ehrh.) Dum. subsp. *emarginata*

*Marsupella emarginata* (Ehrh.) Dum. subsp. *emarginata* var. *emarginata*

**Family Scapaniaceae**

*Scapania curta* (Mart.) Dum. var. *curta*

*Scapania cuspiduligera* (Nees) K. Müll. var. *cuspiduligera*

*Scapania irrigua* (Nees) Gott. et al. subsp. *irrigua*

*Scapania mucronata* Buch subsp. *mucronata*

*Scapania nemorosa* (L.) Dum.

*Scapania subalpina* (Nees) Dum.

*Scapania umbrosa* (Schrad.) Dum.

*Scapania undulata* (L.) var. *undulata*

**Family Porellaceae**

*Porella pinnata* L.

*Porella platyphylla* (L.) Pfeiff.

*Porella platyphylloidea* (Schwein.) Lindb.

**Family Jubulaceae**

*Frullania bolanderi* Aust.

*Frullania brittoniae* Evans

*Frullania eboracensis* Gott.

*Frullania inflata* Gott.

*Frullania oakesiana* Aust.

*Frullania selwyniana* Pears.

*Frullania tamarisci* (L.) Dum. subsp. *asagrayana* (Mont.) Hatt.

**Family Lejeuneaceae**

*Cololejeunea biddlecomiae* (Aust.) Evans

*Lejeunea cavifolia* (Ehrh.) Lindb. emend. Buch

*Lejeunea lamacerina* (Steph.) Schiffn. subsp. *gemminata* Schust.

**Family Radulaceae**

*Radula complanata* (L.) Dum.

*Radula obconica* Sull.

**Phylum ANTHOCEROTOPHYTA**

**Class Anthocerotopsida**

**Order Anthocerotales**

**Family Anthocerotaceae**

*Phaeoceros laevis* (L.) Prosk. subsp. *laevis*

**Phylum TRACHEOPHYTA (VASCULAR PLANTS)**

The vascular plant flora (flowering plants, conifers, ferns, and 'fern-allies') is based initially on the list by Wells and Thompson (1976), but with considerable modification through additions and taxonomic revision. This (2023) update of the ATBI includes a full updating of taxonomy of the flowering plants (Magnoliophyta) according to the Global Biodiversity Information Facility (GBIF.org), which involves very substantial reorganization of higher taxonomic levels – families, orders, and classes – springing largely from genetic studies of recent decades. Some 'familiar' families have largely disappeared into others (e.g., Scrophulariaceae), while others have expanded considerably (e.g. Plantaginaceae). There are also numerous changes at species and genus level, though these are more stable in general.

Several species listed here may be erroneous. Genetic work suggests populations in the Huron Mts. identified as *Quercus ellipsoidalis* are, in fact, northern red oak (*Quercus rubra*), though there may be some genetic introgression. Other species listed appear to be well beyond their documented range; these include *Viburnum dentatum*, *Carex riparia*, *Dichanthelium longiligulatum*, and *D. portoricense*. I have retained these for now. Other species listed by Wells and Thompson were dropped from previous versions of this ATBI for similar reasons, including: *Dryopteris filix-mas*, *Dryopteris filix-mas x marginalis*, *Gentiana linearis*, *Pinguicula vulgaris*, *Carex atherodes*, *Carex michauxiana*, and *Trillium grandiflorum* (Dr. William Manierre, personal communications).

Well over 100 species have been added to the Wells and Thompson list by a number of observers, and several have been dropped as implausible or corrected. The largest proportion of these changes were through the efforts of Dr. William Manierre; others are from observations in Rutherford (2022), unpublished reports by Ladd (2022), Knight et al (2020; for aquatic plants), and independently reported observations, . The total stands at around 800 species (the listing includes several taxa that are distinct only at subspecific level). Several new listings are adventives, and some of these may or may not fully naturalize. While this list may be regarded as unusually complete for a landscape of this size and complexity, small numbers of new records continue to crop up.

The following symbols, placed prior to species names, indicate particular status:

§ = sterile hybrid

\* = not in Wells and Thompson, documented subsequently

† = non-indigenous but assumed to be naturalized

‡ = non-indigenous, and possibly present only as planted specimens

**Subphylum LYCOPODIOPHYTINA**

**Class Lycopodiopsida**

**Order Lycopodiales**

**Family Lycopodiaceae**

*Diphasiastrum complanatum* (L.) Holub (ground-cedar)

*Diphasiastrum digitatum* (Dill.) Holub (ground-cedar)  
*Diphasiastrum tristachyum* (Pursh) Holub (ground-cedar)  
*Huperzia lucidula* (Michx.) Trevis. (shining club-moss)  
*Lycopodiella inundata* (L.) Holub (bog club-moss)  
*Lycopodium annotinum* L. (bristly club-moss)  
*Lycopodium clavatum* L. (club-moss)  
*Lycopodium obscurum* L. (ground-pine)

#### **Class Isoetopsida**

##### **Order Selaginellales**

###### **Family Selaginellaceae**

\**Selaginella apoda* (L.) Spring (spike-moss)  
*Selaginella rupestris* (L.) Spring (rock spike-moss)

##### **Order Isoetales**

###### **Family Isoetaceae**

*Isoetes echinospora* Durieu (quillwort)  
*Isoetes lacustris* L. (quillwort)

### **Subphylum POLYPODIOPHYTINA**

#### **Class Polypodiopsida**

##### **Subclass Equisetidae**

###### **Order Equisetales**

###### **Family Equisetaceae**

*Equisetum arvense* L. (horsetail)  
*Equisetum fluviatile* L. (horsetail)  
*Equisetum hyemale* L. (common scouring-rush)  
*Equisetum palustre* L. (horsetail)  
*Equisetum pratense* Ehrh. (horsetail)  
*Equisetum scirpoides* Michx. (dwarf scouring-rush)  
*Equisetum sylvaticum* L. (horsetail)  
*Equisetum x ferrissii* Clute (horsetail)  
*Equisetum x nelsonii* (A.A. Eaton) J.H. Schaffn. (horsetail)

##### **Subclass Ophioglossidae**

###### **Order Ophioglossales**

###### **Family Ophioglossaceae**

*Botrychium dissectum* Spreng. (grapefern)  
*Botrychium lanceolatum* ssp *angustisegmentum* (Pease & A.H. Moore) R.T. Clausen (grapefern)  
*Botrychium lunaria* (L.) Sw. (moonwort)  
*Botrychium matricariifolium* (Döll) A. Braun ex W.D.J. Koch (moonwort)  
*Botrychium minganense* Vict. (moonwort)  
*Botrychium multifidum* (S.G. Gmel.) Rupr. (grapefern)  
\**Botrychium oneidense* (Gilbert) House  
*Botrychium simplex* E. Hitch. (moonwort)  
*Botrychium virginianum* (L.) Sw. (rattlesnake fern)  
*Ophioglossum vulgatum* L. (adder's-tongue fern)

##### **Subclass Polypodiidae**

###### **Order Polypodiales**

###### **Family Osmundaceae**

*Osmunda claytoniana* L. (interrupted fern)  
*Osmunda regalis* L. (royal fern)  
*Osmundastrum cinnamomeum* (L.) C. Presl (cinnamon fern)

**Family Pteridaceae**

- Adiantum pedatum* L. (maidenhair fern)  
 \**Cryptogramma stelleri* (S.G. Gmelin) Prantl (cliff-brake)

**Family Dennstaedtiaceae**

- Pteridium aquilinum* (L.) Kuhn. (bracken)

**Family Thelypteridaceae**

- Phegopteris connectilis* (Michx.) Watt (northern beech-fern)  
*Phegopteris hexagonoptera* (Michx.) Fée (broad beech-fern)  
*Thelypteris palustris* (A. Gray) Schott (marsh fern)

**Family Aspleniaceae**

- Asplenium trichomanes* L. (maidenhair spleenwort)

**Family Dryopteridaceae**

- Athyrium filix-femina* (L.) Roth. (lady fern)  
*Athyrium filix-femina* var. *angustum* (Willd.) R.T. Clausen (northern lady fern)  
 \**Cystopteris bulbifera* (L.) Bernh. (bulblet fern)  
*Cystopteris fragilis* (L.) Bernh. (fragile fern)  
 \**Cystopteris laurentiana* (Weath.) Blasdell (*pro hybr.*) (fragile fern)  
*Deparia acrostichoides* (Sw.) M. Kato (silvery spleenwort)  
*Dryopteris carthusiana* (Vill.) H. P. Fuchs (wood-fern)  
*Dryopteris cristata* (L.) A. Gray (wood-fern)  
 §*Dryopteris cristata x intermedia* (wood-fern)  
 §*Dryopteris cristata x marginalis* (wood-fern)  
*Dryopteris expansa* (C. Presl) Fraser-Jenk. & Jermy (wood-fern)  
 §*Dryopteris expansa x marginalis* (wood-fern)  
*Dryopteris fragrans* (L.) Schott (fragrant wood-fern)  
*Dryopteris intermedia* (Muhl. ex Willd.) A. Gray (evergreen wood-fern)  
 §*Dryopteris intermedia x carthusiana* (wood-fern)  
 §*Dryopteris intermedia x marginalis* (wood-fern)  
*Dryopteris marginalis* (L.) A. Gray (marginal wood-fern)  
*Gymnocarpium dryopteris* (L.) Newman (oak-fern)  
*Metteuccia struthiopteris* (L.) Tod. (ostrich fern)  
*Onoclea sensibilis* L. (sensitive fern)  
*Polystichum braunii* (Spencer) Fée (braun's holly fern)  
*Woodsia ilvensis* (L.) R. Br. (rusty woodsia)  
*Woodsia oregana* D.C. Eaton (woodsia)  
 §*Woodsia x abbae* Butters (woodsia)

**Family Polypodiaceae**

- Polypodium virginianum* L. (polypody)

**Subphylum SPERMATOPHYTA****Class Pinopsida****Order Pinales****Family Pinaceae**

- Abies balsamea* (L.) Mill. (balsam fir)  
*Larix laricina* (DuRoi) K. Koch. (tamarack)  
 \*†*Picea abies* (L.) H. Karst. (Norway spruce)  
*Picea glauca* (Moench) Voss (white spruce)  
*Picea mariana* (Mill.) Britton, Sterns & Poggenb. (black spruce)  
*Pinus banksiana* Lamb. (jack pine)  
*Pinus resinosa* Aiton (red pine)  
*Pinus strobus* L. (eastern white pine)  
*Tsuga canadensis* (L.) Carrière (eastern hemlock)

**Family Cupressaceae**

- Juniperus communis* var. *depressa* (Steven) Boiss. (ground juniper)



*Juniperus horizontalis* Moench (creeping juniper)

*Thuja occidentalis* L. (northern white cedar)

**Family Taxaceae**

*Taxus canadensis* Marshall (american yew)

**Class Magnoliopsida**

**Order Nymphaeales**

**Family Cabombaceae**

\**Brasenia schreberi* J.F.Gmel. (water-shield)

**Family Nymphaeaceae**

\**Nuphar microphylla* (Pers.) Fernald

*Nuphar pumila* (Timm) DC. (small-leaved spatterdock)

*Nuphar variegata* Engelm. ex Durand (bullhead-lily, variegated pond-lily)

*Nymphaea odorata* Aiton (fragrant water-lily)

*Nymphaea odorata* ssp. *tuberosa* (Paine) Wiersoma & Hellquist (tuberous water-lily)

**Order Alismatales**

**Family Alismataceae**

*Alisma plantago-aquatica* L. (water-plantain)

*Sagittaria cuneata* E. Sheld. (wapato arrowhead)

*Sagittaria graminea* Michx. (arrowhead)

*Sagittaria latifolia* Willd. (arrowhead)

**Family Araceae**

*Arisaema triphyllum* (L.) Schott (jack-in-the-pulpit)

*Calla palustris* L. (wild calla)

**Family Hydrocharitaceae**

*Elodea canadensis* Michx. (waterweed)

*Najas flexilis* (Willd.) Rostk. & W.L.E. Schmidt (pondweed)

*Najas gracillima* (A. Braun ex Engelm.) Magnus (pondweed)

*Vallisneria americana* Michx. (eel-grass)

**Family Lemnaceae**

*Lemna minor* L. (duckweed)

*Lemna trisulca* L. (duckweed)

*Spirodela polyrhiza* (L.) Schleid. (duckweed)

**Family Potamogetonaceae**

*Potamogeton alpinus* Balb. (pondweed)

*Potamogeton amplifolius* Tuck. (pondweed)

*Potamogeton berchtoldii* Fieber (pondweed)

*Potamogeton epihydrus* Raf. (pondweed)

*Potamogeton foliosus* Raf. (pondweed)

*Potamogeton friesii* Rupr. (pondweed)

*Potamogeton gramineus* L. (pondweed)

*Potamogeton illinoensis* Morong (pondweed)

*Potamogeton natans* L. (pondweed)

*Potamogeton oakesianus* J. W. Robbins (pondweed)

*Potamogeton perfoliatus* L. (pondweed)

*Potamogeton praelongus* Wulfen (pondweed)

*Potamogeton pusillus* L. (pondweed)

*Potamogeton richardsonii* (A. Benn.) Rydb. (pondweed)

*Potamogeton robbinsii* Oakes (pondweed)

*Potamogeton spirillus* Tuck. (pondweed)

*Potamogeton strictifolius* A. Benn. (pondweed)

*Potamogeton zosteriformis* Fernald (pondweed)

*Stuckenia filiformis* (Pers.) Börner (pondweed)

*Stuckenia pectinata* (L.) Börner (sago pondweed)

## Order Liliales

### Family Colchicaceae

*Uvularia grandiflora* Sm. (bellwort)

### Family Liliaceae

*Clintonia borealis* (Aiton) Raf. (bluebead lily)

*Erythronium americanum* Ker Gawl. (yellow trout-lily)

*Streptopus amplexifolius* (L.) DC. (twisted-stalk)

*Streptopus lanceolatus* (Aiton) Reveal (rosy twisted-stalk)

### Family Melanthiaceae

*Trillium cernuum* L. (nodding trillium)

### Family Smilacaceae

\**Smilax ecirrhata* (Engelm. ex Kunth) S. Watson (greenbrier)

## Order Asparagales

### Family Amaryllidaceae

\**Allium tricoccum* Aiton. (ramps, wild leek)

### Family Asparagaceae

†*Asparagus officinalis* L. (asparagus)

*Maianthemum canadense* Desf. (canada mayflower)

*Maianthemum racemosum* racemosum (L.) Link (false solomon's seal)

*Maianthemum stellatum* (L.) Link (false solomon's seal)

*Maianthemum trifolium* (L.) Sloboda (false solomon's seal)

\**Polygonatum biflorum* (Walter) Elliott (solomon's seal)

*Polygonatum pubescens* (Willd.) Pursh (solomon's seal)

### Family Asphodelaceae

\*†*Hemerocallis lilioasphodelus* var. *flava* L. (yellow day-lily)

### Family Iridaceae

\*†*Iris sibirica* L. (Siberian iris)

*Iris versicolor* L. (wild blue flag wild iris)

*Sisyrinchium montanum* Greene (blue-eyed grass)

### Family Orchidaceae

\**Arethusa bulbosa* L. (arethusa)

\**Calopogon tuberosus* (L.) Britton Sterns & Poggenb. (grass-pink)

*Calypso bulbosa* (L.) Oakes (calypso)

*Corallorhiza maculata* (Raf.) Raf. (coral-root)

*Corallorhiza striata* Lindl. (coral-root)

*Corallorhiza trifida* Châtel. (early coral-root)

*Cypripedium acaule* Aiton (pink lady-slipper)

*Cypripedium arietinum* R.Br. (ram's-head lady-slipper)

*Cypripedium parviflorum* var. *pubescens* L. (Willd.) O.W. Knight (yellow lady-slipper)

*Dactylorhiza viridis* (L.) R.M. Bateman Pridgeon & M.W. Chase (frog-orchis)

\*†*Epipactis helleborine* (L.) Crantz (helleborine)

*Goodyera oblongifolia* Raf. (rattlesnake plantain)

*Goodyera pubescens* (Willd.) R.Br. (rattlesnake plantain)

*Goodyera repens* (L.) R.Br. (rattlesnake plantain)

*Goodyera tessellata* Lodd. (rattlesnake plantain)

*Liparis loeselii* (L.) Rich. (twayblade)

\**Malaxis monophyllos* (L.) Sw. (adder's-mouth)

*Malaxis unifolia* Michx. (green adder's-mouth)

*Neottia convallarioides* (Sw.) Torr. (twayblade)

*Neottia cordata* (L.) R.Br. (twayblade)

*Platanthera clavellata* (Michx.) Luer (green woodland orchis)

*Platanthera dilatata* (Pursh) Lindl. ex L.C. Beck (bog candle)

*Platanthera flava* var. *herbiola* (R. Br.) Luer (tuberclad orchis) (L.) Lindl. (tuberclad orchis)

*Platanthera hookeri* (Torr. ex. Gray) Lindl. (hooker's orchis)  
*Platanthera huronensis* (Nutt.) Lindl. (tall northern bog-orchid)  
 \**Platanthera lacera* (Michx.) G. Don (ragged fringed orchid)  
*Platanthera obtusata* (Banks ex Pursh) Lindl. (rein-orchis)  
*Platanthera orbiculata* (Pursh) Lindl. (round-leaved orchis)  
*Platanthera psycodes* (L.) Lindl. (purple fringed orchis)  
 \**Platanthera x andrewsii* (M. White) Luer (Andrews' bog orchid)  
*Pogonia ophioglossoides* (L.) Ker Gawl. (rose pogonia)  
 \**Spiranthes casei* Catling & Cruise (ladies' tresses)  
*Spiranthes cernua* (L.) Rich. (ladies' tresses)  
*Spiranthes lacera* (Raf.) Raf. (ladies' tresses)  
*Spiranthes romanzoffiana* Cham. (ladies' tresses)

## Order Commelinales

### Family Pontederiaceae

*Heteranthera dubia* (Jacq.) MacMill. (water star-grass)  
*Pontederia cordata* L. (pickerelweed)

## Order Poales

### Family Cyperaceae

*Carex aquatilis* Wahlenb. (sedge)  
*Carex arctata* Boott (sedge)  
 \**Carex argyrantha* Tuck. ex Dewey (sedge)  
*Carex aurea* Nutt. (sedge)  
 \**Carex backii* Boott (sedge)  
*Carex bebbii* (L.H. Bailey) Olney ex Fernald (sedge)  
*Carex brevior* (Dewey) Mack. ex Lunell (sedge)  
*Carex bromoides* Schkuhr ex Willd. (sedge)  
*Carex brunnescens* (Pers.) Poir. (sedge)  
*Carex canescens* L. (sedge)  
*Carex castanea* Wahlenb. (sedge)  
*Carex chordorrhiza* Ehrh. ex L. f. (sedge)  
*Carex communis* L.H. Bailey (sedge)  
*Carex crawfordii* Fernald (sedge)  
*Carex crinita* Lam. (sedge)  
*Carex cristatella* Britton & A. Br. (sedge)  
*Carex cryptolepis* Mack. (sedge)  
*Carex debilis* Michx. (sedge)  
*Carex deflexa* Hornem. (sedge)  
*Carex deweyana* Schwein. (sedge)  
*Carex diandra* Schrank (sedge)  
*Carex disperma* Dewey (sedge)  
*Carex echinata* Murray (sedge)  
 \**Carex exilis* Dewey (sedge)  
*Carex flava* L. (sedge)  
*Carex foenea* Willd. (sedge)  
*Carex gracillima* Schwein. (sedge)  
*Carex gynandra* Schwein. (sedge)  
*Carex houghtoniana* Torr. ex Dewey (sedge)  
*Carex hystericina* Muhl. ex Willd. (sedge)  
 \**Carex interior* L.H. Bailey (sedge)  
*Carex intumescens* Rudge (sedge)  
*Carex lacustris* Willd. (sedge)  
*Carex lasiocarpa* Ehrh. (sedge)  
*Carex laxiflora* Lam. (sedge)  
*Carex lenticularis* Michx. (sedge)

*Carex leptalea* Wahlenb. (sedge)  
*Carex leptonevia* (Fernald) Fernald (sedge)  
*Carex limosa* L. (sedge)  
*Carex livida* (Wahlen.) Willd. (sedge)  
*Carex lupulina* Muhl. ex Willd. (sedge)  
*Carex magellanica* Lamarck ssp. *irrigua* (Wahlen.) Hiitonen (sedge)  
*Carex oligosperma* Michx. (sedge)  
*Carex pauciflora* Lightf. (sedge)  
*Carex peckii* Howe (sedge)  
*Carex pedunculata* Muhl. ex Willd. (sedge)  
*Carex pennsylvanica* Lam. (sedge)  
*Carex projecta* Mack. (sedge)  
*Carex pseudocyperus* L. (sedge)  
*Carex retrorsa* Schwein. (sedge)  
*Carex riparia* Curtis (sedge)  
*Carex rosea* Schkuhr ex Willd. (sedge)  
*Carex rostrata* Stokes (sedge)  
*Carex scabrata* Schwein. (sedge)  
*Carex scoparia* Schkuhr ex Willd. (sedge)  
*Carex sterilis* Willd. (sedge)  
*Carex stipata* Muhl. ex Willd. (sedge)  
*Carex stricta* Lam. (sedge)  
*Carex tenera* Dewey (sedge)  
*Carex tenuiflora* Wahlen. (sedge)  
*Carex trisperma* Dewey (sedge)  
*Carex tuckermanii* Boott (sedge)  
*Carex umbellata* Schkuhr ex Willd. (sedge)  
*Carex vesicaria* L. (sedge)  
*Carex viridula* Michx. (sedge)  
*Carex vulpinoidea* Michx. (sedge)  
*Cladium mariscoides* (Muhl.) Torr. (twig-rush)  
*Dulichium arundinaceum* (L.) R. Br. (spikerush)  
*Eleocharis acicularis* (L.) R.&S. (spikerush)  
*Eleocharis elliptica* Kunth (spikerush)  
*\*Eleocharis erythropoda* Steud.  
*\*Eleocharis intermedia* Schult. (spikerush)  
*Eleocharis ovata* (Roth) Roem. & Schult. (spikerush)  
*Eleocharis palustris* (L.) R. Br. (spikerush)  
*Eriophorum gracile* W.D.J. Koch ex Roth (cotton-grass)  
*Eriophorum vaginatum* var. *spissum* L. (Fernald) B. Boivin (cotton-grass)  
*Eriophorum virginicum* L. (cotton-grass)  
*Rhynchospora alba* (L.) Vahl (beak-rush)  
*\*Rhynchospora capillacea* Torr. (beak-rush)  
*Schoenoplectus acutus* (Muhl. ex Bigelow) Á. Löve & D. Löve (bulrush)  
*\*Schoenoplectus pungens* (Vahl) Palla  
*Schoenoplectus subterminalis* (Torr.) Soják (bulrush)  
*Schoenoplectus tabernaemontani* (C.C. Gmel.) Palla (bulrush)  
*\*Schoenoplectus torreyi* (Olney) Palla (bulrush)  
*Scirpus atrovirens* Willd. (bulrush)  
*Scirpus cyperinus* Kunth (woolgrass)  
*Scirpus microcarpus* J. Presl. & C. Presl. (bulrush)  
*Trichophorum alpinum* (L.) Pers. (alpine cotton-grass)

#### **Family Eriocaulaceae**

*Eriocaulon melanocephalum* (Hill) Druce (pipewort)

#### **Family Juncaceae**

*Juncus articulatus* L. (rush)

\**Juncus balticus* Willd. (rush)  
*Juncus brevicaudatus* (Englem.) Fernald (rush)  
*Juncus bufonius* L. (rush)  
*Juncus canadensis* J.Gay (rush)  
*Juncus dudleyi* Wiegand (rush)  
*Juncus effusus* L. (rush)  
 \**Juncus greenei* Oakes & Tuck. (rush)  
*Juncus nodosus* L. (rush)  
*Juncus pelocarpus* E. Mey. (rush)  
*Juncus tenuis* Willd. (rush)  
 \**Juncus torreyi* Coville (rush)  
*Luzula acuminata* Raf. (wood rush)

#### Family Poaceae

\*†*Agrostis capillaris* (L.) (bentgrass)  
*Agrostis gigantea* Roth (redtop)  
*Agrostis perennans* (Walter) Tuck. (bentgrass)  
*Agrostis scabra* Willd. (ticklegrass)  
*Agrostis stolonifera* L. (bentgrass)  
*Anthoxanthum nitens* (Weber) Y. Schouten & Veldkamp (sweet grass)  
 †*Arrhenatherum elatius* (L.) P. Beauv. ex J. Presl & C. Presl (tall oatgrass)  
*Avenella flexuosa* (L.) Drejer (hairgrass)  
*Brachyelytrum erectum* (Schreb.) P. Beauv. (woodgrass)  
*Bromus ciliatus* L. (brome)  
 †*Bromus inermis* Leyss. (brome)  
*Calamagrostis breviligulata* (Fernald) Saarela (beach grass)  
*Calamagrostis canadensis* (Michx.) P. Beauv. (blue-joint)  
*Calamagrostis inexpansa* A. Gray (reed-bentgrass)  
*Calamagrostis stricta* (Timm) Koeler (reed grass)  
*Calamovilfa longifolia* (Hook.) Hack. ex Scribn. & Southw. (dune grass sand reed)  
*Cinna latifolia* (Trevir. ex Göpp.) Griseb. (wood-reed)  
 †*Dactylis glomerata* L. (orchard grass)  
 \**Danthonia compressa* Austin (wild oat-grass)  
*Danthonia intermedia* Vasey (wild oat-grass)  
*Danthonia spicata* (L.) P. Beauv. ex Roem. & Schult. (poverty oat-grass)  
*Deschampsia cespitosa* (L.) P. Beauv. (hairgrass)  
 \**Dichanthelium acuminatum* (Sw.) Gould & C.A. Clark (panic-grass)  
*Dichanthelium boreale* (Nash) Freckmann (panic grass)  
*Dichanthelium depauperatum* (Muhl.) Gould (panic-grass)  
*Dichanthelium lindheimeri* (Nash) Gould (panic-grass)  
*Dichanthelium longiligulatum* (Nash) Freckmann (panic-grass)  
*Dichanthelium oligosanthes* (Schult.) Gould (panic-grass)  
*Dichanthelium portoricense* (Desv. ex Ham.) B.F. Hansen & Wunderlin (panic-grass)  
*Dichanthelium villosissimum* (Nash) Freckmann (panic grass)  
*Dichanthelium xanthophysum* (A. Gray) Freckmann (panic-grass)  
 \*†*Digitaria ischaemum* (Schreb.) Muhl. (crab-grass)  
 †*Echinochloa crus-galli* (L.) P. Beauv. (barnyard grass)  
*Elymus canadensis* L. (wild rye)  
*Elymus hystrix* L. (bottle-brush grass)  
 †*Elymus repens* (L.) Gould (quackgrass witchgrass)  
*Elymus riparius* Wiegand (wild rye)  
*Elymus violaceus* (Hornem.) J.Feilberg (slender wheat grass)  
*Elymus virginicus* L. (wild rye)  
 \**Elymus x pseudorepens* (Scribn. & J.G. Sm. (pro sp.)) Barkworth & D.R. Dewey  
 \**Eragrostis pectinacea* (Michx.) Nees (love-grass)  
*Festuca occidentalis* Hook. (fescue)  
 †*Festuca ovina* L. (sheep fescue)

*Festuca rubra* L. (red fescue)  
*Festuca saximontana* Rydb. (fescue)  
*Glyceria borealis* (Nash) Batch. (mannagrass)  
*Glyceria canadensis* (Michx.) Trin. (mannagrass)  
*Glyceria grandis* S. Watson (mannagrass)  
\**Glyceria melicaria* (Michx.) F.T. Hubb. (mannagrass)  
*Glyceria striata* (Lam.) Hitchc. (fowl mannagrass)  
*Koeleria pyramidata* (Lam.) P. Beauv. (june grass)  
*Leersia oryzoides* (L.) Sw. (cut grass rice cut grass)  
*Leymus mollis* (Trin.) Pilg. (wild rye)  
\*†*Lolium perenne* L. (rye-grass)  
*Lolium pratense* (Huds.) Darbysh. (fescue)  
*Melica smithii* (Porter ex A. Gray) Vasey (melic grass)  
*Milium effusum* L. (tall millet)  
*Muhlenbergia glomerata* (Willd.) Trin. (muhly)  
*Muhlenbergia mexicana* (L.) Trin. (muhly)  
*Muhlenbergia racemosa* (Michx.) Britton Sterns & Poggenb. (muhly)  
*Oryzopsis asperifolia* Michx. (ricegrass)  
*Panicum capillare* L. (witch grass)  
\*†*Panicum miliaceum* L. (broom-corn millet)  
†*Phalaris arundinacea* L. (reed canary grass)  
*Phleum pratense* L. (timothy)  
*Phragmites australis* (Cav.) Trin. ex Steud. (common reed giant reed)  
*Piptatherum pungens* (Torr.) Dorn (ricegrass)  
*Poa alsodes* A. Gray (blue-grass)  
†*Poa annua* L. (blue-grass)  
†*Poa compressa* L. (blue-grass)  
*Poa glauca* Vahl. (blue-grass)  
*Poa nemoralis* L. (blue-grass)  
*Poa palustris* L. (blue-grass)  
*Poa pratensis* L. (blue-grass)  
*Poa saltuensis* Fern. & Wieg. (blue-grass)  
*Poa sylvestris* Gray (blue-grass)  
*Schizachne purpurascens* (Torr.) Swallen (false melic)  
†*Setaria viridis* (L.) P. Beauv. (green foxtail)  
*Torreyochloa pallida* (Torr.) G.L. Church (meadow grass)  
\**Trisetum spicatum* (L.) K. Richt. (false oats)

#### **Family Sparganiaceae**

*Sparganium americanum* Nutt. (bur-reed)  
*Sparganium androcladum* (Engelm.) Morong (bur-reed)  
*Sparganium angustifolium* Michx. (bur-reed)  
*Sparganium emersum* Rehmman (bur-reed)  
\**Sparganium eurycarpum* Engelm. (bur-reed)  
*Sparganium fluctuans* (Morong) B.L. Rob. (bur-reed)  
*Sparganium natans* L. (bur-reed)

#### **Family Typhaceae**

*Typha angustifolia* L. (narrow-leaved cat-tail)  
*Typha latifolia* L. (broad-leaved cat-tail)

### **Order Ranunculales**

#### **Family Berberidaceae**

\*†*Berberis thunbergii* DC. (Japanese barberry)  
†*Berberis vulgaris* L. (common barberry)  
*Caulophyllum thalictroides* (L.) Michx. (blue cohosh)

#### **Family Papaveraceae**

*Capnoides sempervirens* (L.) Borkh. (pale corydalis)

*Dicentra cucullaria* (L.) Bernh. (dutchman's breeches)

*Sanguinaria canadensis* L. (bloodroot)

**Family Ranunculaceae**

*Actaea pachypoda* Elliott (white baneberry)

*Actaea rubra* (Aiton) Willd. (red baneberry)

*Anemone canadensis* L. (canada anemone)

*Anemone quinquefolia* var. *quinquefolia* L. (wood anemone)

*Aquilegia canadensis* L. (columbine)

*Caltha palustris* L. (cowslip marsh-marigold)

\**Clematis occidentalis* (Hornem.) DC. (purple clematis)

*Clematis virginiana* L. (virgin's-bower)

*Coptis trifolia* (L.) Salisb. (goldthread)

*Hepatica nobilis* var. *obtusata* (Pursh) Steyerl. (hepatica)

*Ranunculus abortivus* L. (small-flowered crowfoot)

†*Ranunculus acris* L. (tall buttercup)

*Ranunculus aquatilis* L. (water-crowfoot)

*Ranunculus fascicularis* Muhl. ex Bigelow (early buttercup)

*Ranunculus flammula* L. (spearwort)

\**Ranunculus gmelinii* DC. (buttercup)

*Ranunculus hispidus* var. *caricetorum* Michx. (Greene) T. Duncan (swamp buttercup)

*Ranunculus pensylvanicus* L.f. (crowfoot)

*Ranunculus recurvatus* var. *recurvatus* Poir. (crowfoot)

*Ranunculus trichophyllus* ssp. *trichophyllus* L. With. (water-crowfoot)

*Thalictrum dasycarpum* Fisch. & Avé-Lall. (purple meadow-rue)

*Thalictrum pubescens* Pursh (tall meadow-rue)

**Order Santalales**

**Family Comandraceae**

*Comandra umbellata* (L.) Nutt. (false toadflax)

**Family Loranthaceae**

*Arceuthobium pusillum* Peck (dwarf mistletoe)

**Order Caryophyllales**

**Family Amaranthaceae**

†*Chenopodium album* L. (lamb's quarters)

*Chenopodium simplex* (Torr.) Raf. (maple-leaved goosefoot)

†*Corispermum hyssopifolium* L. (bugseed)

**Family Cactaceae**

*Opuntia fragilis* (Nutt.) Haw. (little prickly pear)

**Family Caryophyllaceae**

*Cerastium arvense* L. (field chickweed)

*Cerastium nutans* Raf. (mouse-ear chickweed)

†*Cerastium vulgatum* L. (chickweed)

\*†*Dianthus armeria* L. (Deptford pink)

*Minuartia michauxii* (Fenzl) Farw. (rock sandwort)

*Sagina procumbens* L. (birdseye low pearlwort)

\*†*Scleranthus annuus* L. (German knotweed)

\*†*Silene antirrhina* L. (sleepy catchfly)

†*Silene latifolia* Poir. (white campion)

†*Silene noctiflora* L. (catchfly)

†*Spergularia rubra* (L.) J. Presl & C. Presl. (sand spurry)

*Stellaria borealis* var. *borealis* Bigelow (chickweed)

†*Stellaria graminea* L. (chickweed)

†*Stellaria media* (L.) Vill. (common chickweed)

**Family Droseraceae**

*Drosera anglica* Huds. (sundew)  
*Drosera intermedia* Hayne (sundew)  
*Drosera rotundifolia* L. (sundew)

**Family Montiaceae**

*Claytonia caroliniana* Michx. (spring beauty)

**Family Nyctaginaceae**

*Mirabilis albida* (Walter) Heimerl (umbrella-wort)

**Family Polygonaceae**

*Fallopia cilinode* (Michx.) Holub (fringed bindweed)  
†*Fallopia convolvulus* (L.) Á. Löve (black bindweed)  
*Persicaria amphibia* var. *stipulacea* (L.) Gray N. Coleman (water smartweed)  
*Persicaria amphibia* (L.) Gray (water smartweed)  
*Persicaria hydropiper* (L.) Spach (water-pepper)  
*Persicaria lapathifolia* (L.) Gray (heart's ease dock-leaved smartweed)  
†*Persicaria maculosa* Gray (lady's-thumb)  
*Persicaria pennsylvanica* (L.) M. Gómez (knotweed)  
*Persicaria punctata* (Elliott) Small (smartweed)  
*Persicaria sagittata* (L.) H. Gross (tearthumb)  
*Polygonella articulata* (L.) Meisn. (jointweed)  
†*Polygonum aviculare* L. (creeping knotweed)  
*Polygonum douglasii* Greene (knotweed)  
†*Rumex acetosella* L. (sheep-sorrel)  
*Rumex britannica* L. (water-dock)  
†*Rumex crispus* L. (curly dock)  
†*Rumex obtusifolius* L. (bitter dock)  
*Rumex salicifolius* Weinm. (dock)

**Order Cornales**

**Family Cornaceae**

*Cornus alternifolia* L.f. (alternate-leaved dogwood)  
*Cornus canadensis* L. (bunchberry)  
*Cornus racemosa* Lam. (gray dogwood)  
*Cornus rugosa* Lam. (round-leaved dogwood)  
*Cornus sericea* L. (red-osier dogwood)

**Family Hydrangeaceae**

\*†*Philadelphus sp* L. (mock-orange)

**Order Ericales**

**Family Balsaminaceae**

*Impatiens capensis* Meerb. (touch-me-not jewelweed)

**Family Ericaceae**

*Andromeda polifolia* L. (bog rosemary)  
*Arctostaphylos uva-ursi* (L.) Spreng. (bearberry)  
\*†*Calluna vulgaris* (L.) Hull (heather)  
*Chamaedaphne calyculata* (L.) Moench (leatherleaf)  
*Chimaphila umbellata* (L.) Nutt. (prince's pine)  
*Epigaea repens* L. (trailing arbutus)  
*Gaultheria hispidula* (L.) Muhl. ex Bigelow (creeping-snowberry)  
*Gaultheria procumbens* L. (wintergreen checkerberry)  
*Gaylussacia baccata* (Wangenh.) K.Koch. (black huckleberry)  
*Hypopitys monotropa* Crantz (pinesap)  
*Kalmia polifolia* Wangenh. (bog-laurel)  
*Moneses uniflora* (L.) A. Gray (one-flowered shinleaf)  
*Monotropa uniflora* L. (indian pipe)  
*Orthilia secunda* (L.) House (shinleaf) [formerly *Pyrola*]  
*Pterospora andromedea* Nutt. (pine-drops)



*Pyrola chlorantha* Sw. (shinleaf)  
*Pyrola elliptica* Nutt. (shinleaf)  
*Pyrola rotundifolia* L. (shinleaf)  
*Rhododendron groenlandicum* Oeder (labrador tea)  
*Vaccinium angustifolium* Aiton (lowbush blueberry)  
*Vaccinium macrocarpum* Aiton (cranberry)  
*Vaccinium membranaceum* Douglas ex Torr. (bilberry)  
*Vaccinium myrtilloides* Michx. (blueberry)  
*Vaccinium ovalifolium* Sm. (bilberry)  
*Vaccinium oxycoccos* L. (cranberry)  
*Vaccinium pallidum* Aiton (blueberry)

#### **Family Primulaceae**

*Lysimachia borealis* (Raf.) U.Manns & Anderb. (star-flower)  
\**Lysimachia ciliata* L. (fringed loosestrife)  
*Lysimachia terrestris* (L.) Britton Sterns & Poggenb. (swamp candle)  
*Lysimachia thyrsoiflora* L. (swamp loosestrife)

#### **Family Sarraceniaceae**

*Sarracenia purpurea* L. (pitcher-plant)

### **Order Apiales**

#### **Family Apiaceae**

\*†*Aegopodium podagraria* L. (goutweed)  
*Cicuta bulbifera* L. (water-hemlock)  
\**Daucus carota* L. (queen anne's lace)  
*Heracleum lanatum* Michx. (cow-parsnip)  
*Osmorhiza berteroi* DC. (sweet cicely)  
*Osmorhiza claytonii* (Michx.) C.B. Clarke (sweet cicely)  
*Osmorhiza longistylis* (Torr.) DC. (sweet cicely)  
*Sanicula marilandica* L. (black snakeroot)  
*Sium suave* Walter (water-parsnip)

#### **Family Araliaceae**

*Aralia hispida* Vent. (bristly sarsaparilla)  
*Aralia nudicaulis* L. (wild sarsaparilla)  
*Aralia racemosa* L. (spikenard)  
*Panax trifolius* L. (dwarf ginseng)

### **Order Aquifoliales**

#### **Family Aquifoliaceae**

*Ilex mucronatus* (L.) M.Powell Savol. & S.Andrews (mountain-holly)  
*Ilex verticillata* (L.) A. Gray (winterberry)

### **Order Asterales**

#### **Family Asteraceae**

†*Achillea millefolium* L. (common yarrow)  
*Achillea ptarmica* L. (sneezeweed)  
*Adenocaulon bicolor* Hook. (trail-plant)  
*Ageratina altissima* (L.) R.M. King & H. Rob. (white snakeroot)  
†*Ambrosia artemisiifolia* L. (common ragweed)  
*Ambrosia psilostachya* DC. (western ragweed)  
*Anaphalis margaritacea* (L.) Benth. & Hook. f. (pearly everlasting)  
*Antennaria neglecta* Greene (pussy-toes)  
*Antennaria plantaginifolia* (L.) Hook. (pussy-toes)  
†*Arctium minus* Schkuhr. (burdock)  
†*Artemisia absinthium* L. (wormwood)  
*Artemisia campestris* L. (wormwood)  
*Artemisia caudata* Michx. (wormwood)

*Bidens beckii* Torr. ex Spreng. (water bur-marigold)  
*Bidens cernua* L. (bur-marigold)  
*Bidens frondosa* L. (devil's beggartick)  
† *Cirsium arvense* (L.) Scop. (canada thistle)  
*Cirsium muticum* Michx. (swamp thistle)  
*Cirsium palustre* (L.) Scop. (marsh thistle)  
† *Cirsium vulgare* (Savi) Ten. (bull thistle)  
*Conyza canadensis* (L.) Cronquist (horseweed)  
*Doellingeria umbellata* (Mill.) Nees (tall aster)  
*Doellingeria umbellata* var. *pubens* (A. Gray) Britton (aster)  
*Erechtites hieracifolia* (L.) Raf. ex DC. (fireweed)  
*Erigeron annuus* (L.) Pers. (daisy fleabane)  
*Erigeron philadelphicus* L. (daisy fleabane)  
*Erigeron strigosus* Muhl. ex Willd. (fleabane)  
*Eupatorium perfoliatum* L. (boneset)  
*Eurybia macrophylla* (L.) Cass. (large-leaved aster)  
*Euthamia caroliniana* (L.) Greene ex Porter & Britton (flat-topped goldenrod)  
*Euthamia graminifolia* (L.) Nutt. (flat-topped goldenrod)  
*Eutrochium maculatum* (L.) E.E. Lamont (joe-pye weed)  
*Gnaphalium uliginosum* L. (cudweed)  
*Helianthus annuus* L. (common sunflower)  
\*† *Hieracium caespitosum* Dumort. (hawkweed)  
*Hieracium kalmii* L. (hawkweed)  
*Hieracium piloselloides* Vill. (yellow hawkweed)  
*Hieracium scabrum* Michx. (hawkweed)  
*Hieracium umbellatum* L. (hawkweed)  
*Lactuca biennis* (Moench) Fernald (wild lettuce)  
*Lactuca canadensis* L. (wild lettuce)  
† *Leucanthemum vulgare* Lam. (ox-eye daisy)  
† *Matricaria discoidea* DC. (pineapple-weed)  
*Nabalus albus* (L.) Hook. (white lettuce)  
*Packera aurea* (L.) Á. Löve & D. Löve (golden ragwort)  
\**Packera indecora* (Greene) Á. Löve & D. Löve (groundsel)  
*Petasites frigidus* (L.) Fr. (sweet coltsfoot)  
*Pilosella aurantiaca* (L.) F.W.Schultz & Sch.Bip. (orange hawkweed)  
*Pseudognaphalium macounii* (Greene) Kartesz (cudweed)  
*Rudbeckia hirta* L. (black-eyed susan)  
*Solidago altissima* ssp. *altissima* (Muhl. ex Willd.) Torr. & A. Gray (tall goldenrod)  
*Solidago bicolor* L. (white goldenrod)  
*Solidago caesia* L. (goldenrod)  
*Solidago canadensis* L. (goldenrod)  
*Solidago flexicaulis* L. (goldenrod)  
*Solidago gigantea* Aiton (goldenrod)  
*Solidago hispida* Muhl. ex Willd. (goldenrod)  
*Solidago juncea* Aiton (goldenrod)  
*Solidago nemoralis* Aiton (goldenrod)  
\**Solidago ptarmicoides* (Torr. & A. Gray) B. Boivin (goldenrod)  
*Solidago speciosa* Nutt. (goldenrod)  
*Solidago uliginosa* Nutt. (goldenrod)  
\**Symphotrichum boreale* (Torr. & A. Gray) Á. Löve & D. Löve (bog-aster)  
*Symphotrichum ciliolatum* (Lindl.) Á. Löve & D. Löve (aster)  
*Symphotrichum cordifolium* (L.) G.L. Nesom (aster)  
*Symphotrichum firmum* (Nees) G.L. Nesom (aster)  
*Symphotrichum lanceolatum* (Willd.) G.L. Nesom (aster)  
*Symphotrichum lateriflorum* (L.) Á. Löve & D. Löve (calico aster)  
\**Symphotrichum pilosum* (Willd.) G.L. Nesom (aster)

*Symphotrichum puniceum* (L.) Á. Löve & D. Löve (aster)  
†*Tanacetum vulgare* L. (common tansy)  
†*Taraxacum officinale* F.H. Wigg. (common dandelion)  
†*Tragopogon pratensis* L. (goat's-beard)

**Family Campanulaceae**

*Campanula aparinoides* Pursh (marsh bellflower)  
*Campanula rotundifolia* L. (harebell)  
\*†*Campanula rapunculoides* (creeping bellflower)  
*Lobelia dortmanna* L. (water lobelia)

**Family Menyanthaceae**

*Menyanthes trifoliata* L. (bog buckbean)

**Order Dipsacales**

**Family Caprifoliaceae**

*Diervilla lonicera* Mill. (bush-honeysuckle)  
*Linnaea borealis* L. (twin-flower)  
*Lonicera canadensis* Bartram ex Marshall (fly honeysuckle)  
*Lonicera dioica* L. (wild honeysuckle)  
*Lonicera hirsuta* Eaton (hairy honeysuckle)  
†*Lonicera tatarica* L. (tartarian honeysuckle)  
*Symphoricarpus albus* S.F. Blake (snowberry)  
\*†*Valeriana officinalis* L. (garden heliotrope)

**Family Viburnaceae**

*Sambucus canadensis* L. (common elder)  
*Sambucus racemosa* ssp *racemosa* L. (red-berried elder)  
\**Viburnum acerifolium* L. (dockmackie)  
*Viburnum lentago* L. (nannyberry)  
*Viburnum nudum* L. (withe-rod)  
*Viburnum opulus* L. (highbush cranberry)  
\**Viburnum rafinesquianum* Schult.  
\**Viburnum recognitum* Fernald (arrow-wood)

**Order Boraginales**

**Family Boraginaceae**

†*Cynoglossum officinale* L. (hound's tongue)  
*Mertensia paniculata* (Aiton) G.Don (northern bluebell)  
†*Myosotis arvensis* (L.) Hill (forget-me-not)  
*Myosotis laxa* Lehm. (forget-me-not)

**Order Gentianales**

**Family Apocynaceae**

*Apocynum androsaemifolium* L. (dogbane)  
*Asclepias exaltata* L. (poke-leaved milkweed)  
*Asclepias incarnata* L. (swamp milkweed)  
*Asclepias syriaca* L. (common milkweed)

**Family Gentianaceae**

*Gentiana rubricaulis* Schwein. (gentian)  
*Halenia deflexa* (Sm.) Griseb. (spurred gentian)

**Family Rubiaceae**

*Galium aparine* L. (cleavers)  
*Galium asprellum* Michx. (bedstraw)  
*Galium tinctorium* L. (bedstraw)  
*Galium trifidum* L. (bedstraw)  
*Galium triflorum* Michx. (bedstraw)  
*Mitchella repens* L. (partridge-berry)

## Order Lamiales

### Family Lamiaceae

- †*Clinopodium vulgare* L. (wild basil)
- †*Galeopsis tetrahit* L. (hemp-nettle)
- Lycopus americanus* Muhl. (water-horehound)
- Lycopus uniflorus* Michx. (bugleweed)
- †*Mentha arvensis* L. (field mint      corn mint)
- †*Nepeta cataria* L. (catnip)
- †*Prunella vulgaris* L. (self-heal      heal-all)
- Scutellaria galericulata* L. (marsh skullcap)
- Scutellaria lateriflora* L. (mad-dog skullcap)
- Scutellaria x churchilliana* Fern. (churchill's skullcap)
- \*†*Stachys palustris* L.

### Family Lentibulariaceae

- Utricularia cornuta* Michx. (horned bladderwort)
- \**Utricularia gibba* L. (bladderwort)
- Utricularia intermedia* Hayne (bladderwort)
- \**Utricularia minor* L.
- \**Utricularia resupinata* B.D.Greene ex Hitchc.
- Utricularia vulgaris* L. (bladderwort)

### Family Oleaceae

- Fraxinus americana* L. (white ash)
- Fraxinus nigra* Marshall (black ash)
- Fraxinus pensylvanica* Marshall (green ash)
- \*†*Ligustrum vulgare* L. (privet)
- Syringa vulgaris* L. (common lilac)

### Family Orobanchaceae

- Conopholis americana* (L.) Wallr. (squawroot)
- Melampyrum lineare* Desr. (cow-wheat)

### Family Phrymaceae

- Erythranthe geyeri* (Torr.) G.L.Nesom (monkey-flower)
- Mimulus moschatus* Douglas ex Lindl. (monkey-flower)
- Mimulus ringens* L. (monkey-flower)

### Family Plantaginaceae

- Callitriche palustris* L. (water-starwort)
- Chelone glabra* L. (white turtlehead)
- Collinsia parviflora* Douglas ex Lindl. (blue-eyed mary)
- Gratiola neglecta* Torr. (hedge hyssop)
- Hippuris vulgaris* L. (mare's tail)
- Linaria vulgaris* Mill. (butter and eggs)
- \**Nuttallanthus canadensis* (L.) D.A.Sutton (blue toadflax)
- †*Plantago lanceolata* L. (english plantain)
- †*Plantago major* L. (common plantain)
- Plantago rugelii* Decne. (american plantain)
- Veronica americana* (Raf.) Schw. (brooklime      speedwell)
- †*Veronica arvensis* L. (corn speedwell)
- †*Veronica beccabunga* L. (brooklime)
- †*Veronica chamaedrys* L. (speedwell)
- †*Veronica officinalis* L. (speedwell)
- Veronica peregrina* L. (speedwell)
- Veronica scutellata* L. (speedwell)
- †*Veronica serpyllifolia* L. (speedwell)

### Family Scrophulariaceae

- Scrophularia lanceolata* Pursh (early figwort)
- †*Verbascum blattaria* L. (moth mullein)

† *Verbascum thapsus* L. (common mullein)

**Family Verbenaceae**

*Verbena hastata* L. (common vervain)

*Verbena urticifolia* L. (white verbena)

**Order Solanales**

**Family Convolvulaceae**

\*† *Convolvulus arvensis* L. (field bindweed)

**Family Solanaceae**

† *Solanum americanum* Mill. (bittersweet nightshade)

† *Solanum nigrum* L. (black nightshade)

**Order Saxifragales**

**Family Grossulariaceae**

\**Ribes americanum* Mill. (wild black currant)

*Ribes cynosbati* L. (dogberry wild gooseberry)

*Ribes glandulosum* Grauer (skunk currant)

*Ribes hirtellum* Michx. (wild gooseberry)

*Ribes hudsonianum* Richardson (black currant)

*Ribes lacustre* (Pers.) Poir. (spiny swamp-currant)

*Ribes oxycanthoides* L. (gooseberry)

\**Ribes triste* Pall. (red currant)

† *Ribes uva-crispa* L. (garden gooseberry)

**Family Haloragaceae**

*Myriophyllum alterniflorum* DC. (water-milfoil)

\**Myriophyllum farwellii* Morong

*Myriophyllum heterophyllum* Michx. (water-milfoil)

*Myriophyllum sibiricum* Kom. (water-milfoil)

*Myriophyllum tenellum* Bigelow (water-milfoil)

\*† *Myriophyllum verticillatum* L. (water-milfoil)

**Family Hamamelidaceae**

*Hamamelis virginiana* L. (witch hazel)

**Family Saxifragaceae**

*Chrysosplenium americanum* Schwein. ex Hook. (golden saxifrage)

*Micranthes virginiana* (Michx.) Small (early saxifrage)

*Mitella nuda* L. (miterwort)

**Order Vitales**

**Family Vitaceae**

\**Parthenocissus inserta* (A.Kern.) Fritsch

*Parthenocissus quinquefolia* (L.) Planch. (virginia creeper)

*Vitis riparia* Michx. (wild grape)

**Order Celastrales**

**Family Celastraceae**

\**Celastrus scandens* L. (bittersweet)

† *Euonymus europaeus* L. (spindle tree)

**Order Malpighiales**

**Family Hypericaceae**

*Hypericum boreale* (Britton) E.P. Bicknell (St. John's-wort)

*Hypericum canadense* L. (St. John's-wort)

*Hypericum ellipticum* Hook. (St. John's-wort)

*Hypericum kalmianum* L. (St. John's-wort)

\**Hypericum majus* (A. Gray) Britton

*Hypericum mutilum* L. (St. John's-wort)

†*Hypericum perforatum* L. (St. John's-wort)  
*Hypericum prolificum* L. (St. John's-wort)  
*Triadenum fraseri* (Spach) Gleason (marsh St. John's-wort)

#### Family Salicaceae

*Populus balsamifera* L. (balsam poplar)  
*Populus deltoides* W. Bartram ex Marshall (cottonwood)  
*Populus grandidentata* Michx. (big-toothed aspen)  
\*†*Populus nigra* var. *italica* (L.) Du Roi (Lombardy poplar)  
*Populus tremuloides* Michx. (quaking aspen)  
*Salix bebbiana* Sarg. (Bebb's willow)  
*Salix discolor* Muhl. (pussy-willow)  
*Salix eriocephala* Michx. (diamond willow)  
*Salix exigua* Nutt. forma interior (Rowlee) (willow)  
*Salix humilis* Marshall (willow)  
*Salix myricoides* Muhl. (willow)  
*Salix nigra* Marshall (black willow)  
*Salix pedicellaris* Pursh (willow)  
\**Salix pellita* (Andersson) Bebb (willow)  
*Salix petiolaris* Sm. (willow)  
*Salix petiolaris* var. *subsericea* Andersson (willow)  
*Salix pyrifolia* Andersson (willow)  
*Salix serissima* (L.H. Bailey) Fernald (willow)

#### Family Violaceae

*Viola adunca* Sm. (violet)  
*Viola arvensis* Murray (pansy)  
*Viola blanda* Willd. (large-leaved white violet)  
*Viola cucullata* Aiton (marsh blue violet)  
*Viola labradorica* Schrank (dog violet)  
*Viola lanceolata* L. (violet)  
*Viola macloskeyi* var. *pallens* Lloyd (Banks ex DC.) C.L. Hitchc. (white violet)  
*Viola nephrophylla* Greene (bog violet)  
*Viola pubescens* Aiton (yellow violet)  
*Viola renifolia* A. Gray (violet)  
\**Viola selkirkii* Pursh ex Goldie (violet)  
\**Viola sororia* Willd. (violet)

#### Order Oxalidales

##### Family Oxalidaceae

*Oxalis acetosella* L. (wood-sorrel)

#### Order Fabales

##### Family Fabaceae

*Amorpha fruticosa* L. (false indigo)  
*Amphicarpaea bracteata* (L.) Fernald (hog-peanut)  
‡*Caragana arborescens* Lam. (pea-tree)  
*Lathyrus japonicus* Willd. (beach pea)  
*Lathyrus ochroleucus* Hook. (white pea pale vetchling)  
\*†*Lotus corniculatus* L. (bird's-foot trefoil)  
†*Lupinus polyphyllus* Lindl. (giant lupine)  
†*Melilotus albus* Medik. (white sweet clover)  
†*Melilotus officinalis* (L.) Lam. (yellow sweet clover)  
\*†*Robinia pseudoacacia* L. (black locust)  
†*Trifolium aureum* Pollich (hop-clover)  
†*Trifolium hybridum* L. (alsike clover)  
†*Trifolium repens* L. (white clover)  
*Vicia americana* Muhl. ex Willd. (vetch)

† *Vicia sepium* L. (vetch hedge vetch)

† *Vicia villosa* Roth (hairy vetch)

**Family Polygalaceae**

*Polygala polygama* Walter (bitter milkwort)

*Polygaloides paucifolia* (Willd.) J.R. Abbott (fringed polygala)

**Order Fagales**

**Family Betulaceae**

*Alnus alnobetula* criska (Aiton) Raus (green alder)

*Alnus serrulata* (Aiton) Willd. (speckled alder)

*Betula alleghaniensis* Britton (yellow birch)

*Betula glandulosa* Michx. (dwarf birch)

*Betula papyrifera* Marshall (paper birch)

*Betula pumila* L. (swamp birch bog birch)

*Corylus cornuta* Marshall (beaked hazelnut)

*Ostrya virginiana* (Mill.) K. Koch (hop-hornbeam, ironwood)

**Family Fagaceae**

*Quercus ellipsoidalis* E.J. Hill. (jack oak, northern pin oak)

*Quercus rubra* L. (northern red oak)

**Family Juglandaceae**

‡ *Juglans cinerea* L. (butternut)

† *Juglans nigra* L. (black walnut)

**Family Myricaceae**

*Comptonia peregrina* (L.) J.M. Coult. (sweet-fern)

*Myrica gale* L. (sweet gale)

**Order Rosales**

**Family Cannabaceae**

† *Humulus lupulus* L. (hops)

**Family Moraceae**

‡ *Morus alba* L. (mulberry)

**Family Rhamnaceae**

*Ceanothus herbaceus* Raf. (redroot new jersey tea)

*Endotropis alnifolia* (L'Hér.) Hauenschild (buckthorn)

**Family Rosaceae**

*Agrimonia gryposepala* Wallr. (common agrimony)

*Amelanchier arborea* (F. Michx.) Fernald (serviceberry shadbush)

*Amelanchier bartramiana* (Tausch) M. Roem. (serviceberry shadbush)

*Amelanchier humilis* Wiegand (serviceberry shadbush)

\* *Amelanchier interior* E. L. Nielsen (serviceberry shadbush)

*Amelanchier laevis* Wiegand (serviceberry shadbush)

*Amelanchier sanguinea* (Pursh) DC. (serviceberry shadbush)

*Aronia melanocarpa* (Michx.) Elliott (black chokeberry)

*Comarum palustre* (L.) Scop. (marsh cinquefoil)

*Crataegus flabellata* (Bosc ex Spach) K. Koch (hawthorn)

*Dasiphora fruticosa* (L.) Rydb. (shrubby cinquefoil)

*Fragaria vesca* L. (wild strawberry)

*Fragaria virginiana* Duchesne (wild strawberry)

*Geum aleppicum* Jacq. (yellow avens)

*Geum canadense* Jacq. (white avens)

*Geum fragarioides* (Michx.) Smedmark (barren strawberry)

*Geum rivale* L. (water avens purple avens)

*Photinia floribunda* (Lindl.) K.R. Robertson & J.B. Phipps (purple chokeberry)

*Physocarpus opulifolius* (L.) Maxim. (ninebark)

*Potentilla argentea* L. (silvery cinquefoil)

† *Potentilla arguta* Pursh (tall cinquefoil)

*Potentilla canadensis* L. (creeping cinquefoil)  
*Potentilla norvegica* L. (cinquefoil)  
*Potentilla simplex* Michx. (cinquefoil)  
*Prunus nigra* Aiton (canada plum)  
*Prunus pensylvanica* L.f. (pin cherry)  
*Prunus pumila* L. (sand cherry)  
*Prunus serotina* Ehrh. (wild black cherry)  
*Prunus virginiana* L. (choke cherry)  
*Rosa acicularis* Lindl. (wild rose)  
*Rosa blanda* Aiton (wild rose)  
*Rosa carolina* L. (pasture rose)  
*Rosa palustris* Marsh. (swamp rose)  
†*Rosa rugosa* Thunb. (wild rose)  
†*Rosa spinosissima* L. (scotch rose)  
*Rosa virginiana* Mill. (wild rose)  
*Rubus allegheniensis* Porter (blackberry)  
*Rubus canadensis* L. (blackberry)  
*Rubus flagellaris* Willd. (blackberry)  
\**Rubus hispidus* L. (dewberry)  
*Rubus idaeus* ssp. *melanolasius* L. (red raspberry)  
\*†*Rubus laciniatus* Willd. (blackberry)  
*Rubus parviflorus* Nutt. (thimbleberry)  
*Rubus pubescens* Raf. (raspberry)  
*Sibbaldia tridentata* (Aiton) Paule & Soják (three-toothed cinquefoil)  
*Sorbus americana* Marshall (mountain-ash)  
†*Sorbus aucuparia* L. (mountain-ash)  
*Sorbus decora* (Sarg.) C.K. Schneid. (mountain-ash)  
*Spiraea alba* Du Roi (meadowsweet)  
*Spiraea salicifolia* L. (hardhack)

#### Family Ulmaceae

*Ulmus americana* L. (american elm)  
*Ulmus rubra* Muhl. (slippery elm red elm)

#### Family Urticaceae

*Laportea canadensis* (L.) Wedd. (wood nettle)  
*Pilea pumila* (L.) A. Gray (clearweed)  
†*Urtica dioica* L. (stinging nettle)

### Order Geraniales

#### Family Geraniaceae

*Geranium bicknellii* Britton (geranium)  
*Geranium rotundifolium* L. (geranium)

### Order Myrtales

#### Family Onagraceae

*Chamaenerion angustifolium* (L.) Scop. (fireweed)  
*Circaea alpina* L. (enchanter's nightshade)  
*Circaea lutetiana* var. *canadensis* L. L. (enchanter's nightshade)  
*Epilobium ciliatum* Raf. (willow-herb)  
*Epilobium ciliatum* ssp. *glandulosum* Lehm. (willow-herb)  
\**Epilobium coloratum* Biehler (willow-herb)  
*Epilobium palustre* L. (willow-herb)  
*Ludwigia palustris* (L.) Elliott (water purslane)  
*Oenothera biennis* L. (evening primrose)  
*Oenothera parviflora* L. (evening primrose)  
*Oenothera perennis* L. (little sundrops)  
*Oenothera villosa* Thunb. (evening primrose)



## Order Sapindales

### Family Aceraceae

- \**Acer negundo* L. (box-elder)
- Acer pensylvanicum* L. (striped maple)
- Acer rubrum* L. (red maple)
- Acer saccharum* Marshall (sugar maple)
- Acer spicatum* Lam. (mountain maple)

### Family Anacardiaceae

- Rhus glabra* L. (smooth sumac)
- Toxicodendron radicans* (L.) Kuntze (poison ivy)

### Family Rutaceae

- Ptelea trifoliata* L. (hop-tree)

## Order Malvales

### Family Cistaceae

- Crocianthemum canadense* (L.) Britton (frostweed)
- Hudsonia tomentosa* Nutt. (false heather)
- Lechea intermedia* (Britton & Hollick) Legg. (pinweed)

### Family Malvaceae

- †*Malva moschata* L. (musk mallow)
- Tilia americana* L. (basswood american linden)

### Family Thymelaeaceae

- Dirca palustris* L. (leatherwood)

## Order Brassicales

### Family Brassicaceae

- †*Barbarea vulgaris* W.T. Aiton (yellow rocket winter cress)
- †*Berteroa incana* (L.) DC. (hoary alyssum)
- Boechera divaricarpa* (A.Nelson) A.Löve & D.Löve (rockcress)
- Boechera holboellii* (Hornem.) Á. Löve & D. Löve (rockcress)
- †*Brassica junca* (L.) Czern. (field mustard)
- Cakile edentula* (Bigelow) Hook (sea rocket)
- \*†*Capsella bursa-pastoris* (L.) Medik. (shepherd's purse)
- Cardamine diphylla* (Michx.) Alph. Wood (toothwort)
- Cardamine parviflora* L. (bittercress)
- Cardamine pennsylvanica* Muhl. ex Willd. (Pennsylvania bittercress)
- Cardamine pratensis* L. (cuckoo-flower)
- \**Draba arabisans* Michx. ()
- †*Erysimum cheiranthoides* L. (wormseed-mustard)
- †*Lepidium densiflorum* Schrad. (peppergrass)
- †*Rorippa aquatica* (Eaton) E.J.Palmer & Steyerm. (lake-cress)
- Rorippa aquatica* (Eaton) E.J. Palmer & Steyerm. (yellow rocket, winter cress)
- Rorippa palustris* (L.) Besser (yellow cress)
- †*Sisymbrium altissimum* L. (hedge-mustard)

## KINGDOM FUNGI

Current concepts of the **Fungi** limit the kingdom to non-motile, filamentous or single-celled organisms, lacking chlorophyll, with chitinous cell walls, and reproducing by spores. Some produce large fleshy fruiting bodies (mushrooms). The Fungi are clearly understood to be monophyletic, but several microscopic groups previously placed in Fungi are now excluded as belonging in the Stramenopile clade. There have been several extensive surveys of fungi at the Huron Mts., but the Kingdom is certainly only partially documented, and cataloguing of the 'micro-fungi' has only begun.

Since the list of Huron Mountains Fungi was last curated, more than a decade ago, genetic studies have driven massive reorganization of understanding of phylogenetic relationships. Many taxa have been split, merged, renamed, and reassigned to higher taxa in the name of monophyly. Consequently, this list has been fully checked against current resources (primarily using [mycobank.org](http://mycobank.org) and [indexfungorum.org](http://indexfungorum.org)) and updated accordingly. A number of duplications in synonymy have been dropped, but it is likely that some remain. In earlier versions of the ATBI, listings for the two major phyla, Ascomycota and Basidiomycota, were from work by Dana L. Richter and Maria P. Beardslee of Michigan Technological University and based on a variety of reports and herbarium records, both published and unpublished.

Within phyla, species are organized alphabetically by class, order, and family. As far as possible, synonyms and duplications have been identified and eliminated, with the most current name retained.

The oldest published list of fungi from the Huron Mountains is from *The Book of Huron Mountain* (Dodge 1929) and includes 107 species; these are identified by asterisks in this list. Other sources include published compilations by Ammirati and Smith (1972), Banik and Burdsall (2000), Ginns (1994), Richter (1996, 2004), and Smith and Thiers (1971), and unpublished reports by Burdsall (1974), Harrison (1970), Mueller & Miller (2000), Olexia (1971), Petersen (1971), Richter (1995-2010), Wu (1995,1997), Arnold (2013), Levitis and Pringle (2016), and Karakehian (2021). Arnold's report focuses on endophytic fungi, many identified only to genus. Richter and Kangas (2007) compiled species documented in the University of Michigan Herbarium. About 180 species have been added to this version of the ATBI from listings at the Mycology Collections Portal ([mycoportal.org](http://mycoportal.org)) for collections from the Huron Mountain Club (these are all vouchered by specimens in collections listed at the site); these additions are prefaced by a "#". Mycoportal.org also lists many collections from studies cited above.

The current list includes 1025 taxa of non-lichenized fungi (listed separately here); 840 are in the Basidiomycota.

## **Phylum CHYTRIDIOMYCOTA ("water molds")**

The 'water-molds' are a large group of microfungi. This initial survey, listing 38 species, is from Gaertner and Sparrow (1966), but includes some ambiguity as to total number of distinct taxa, given the large number of unidentified species.

### **Class Chytridiomycetes**

#### **Order Chytridiales**

##### **Family Chytridiaceae**

*Phlyctidium* sp.  
*Phlyctochytrium africanum* A.Gaertn.  
*Phlyctochytrium bullatum* Sparrow  
*Phlyctochytrium irregulare* W.J. Koch  
*Phlyctochytrium palustre* A. Gaertn.  
*Phlyctochytrium planicorne* G.F. Atk.  
*Phlyctochytrium* sp. 1  
*Phlyctochytrium* sp. 2  
*Phlyctochytrium* sp. 3  
*Phlyctochytrium* sp. 4  
*Phlyctochytrium* sp. 5  
*Phlyctochytrium* sp. 6  
*Phlyctochytrium* sp. 7  
*Phlyctochytrium* sp. 8

## **Phylum RHIZOPHLYCTIDOMYCETES**

#### **Order Rhizophlyctidales**

##### **Family Rhizophlyctidaceae**

*Rhizophlyctis* sp.

## Phylum RHIZOPHYDIOMYCETES

### Order Rhizophidiales

#### Family Rhizophydiaceae

- Rhizophydium biporosum* Couch
- Rhizophydium carpophilum* Zopf
- Rhizophydium laterale* (A.Braun) Rabenh.
- Rhizophydium racemosum* A. Gaertn.
- Rhizophydium* sp. 1
- Rhizophydium* sp. 2
- Rhizophydium* sp. 3
- Rhizophydium* sp. 4
- Rhizophydium* sp. 5
- Rhizophydium* sp. 6
- Rhizophydium sphaerocarpum* (Zopf) Fisch.
- Rhizophydium sphaerotheca* Zopf
- Rhizophydium subangulosum* (A.Braun) Rabenh.

## Phylum MORTIERELLAMYCOTA

### Class Mortierellomycetes

#### Order Mortierellales

#### Family Mortierellaceae

- Mortierella ambigua* Mehrotra
- Mortierella isabellina* (Oued.) Zycha
- Mortierella nana* Linn.
- Mortierella ramanniana* (Moeller) Linn.
- Mortierella verticillata* Linn.
- Mortierella vinacea* Dixon-Stewart

## Phylum OLPIDIOMYCOTA

### Class Olpidiomycetes

#### Order Olpidiales

#### Family Olpidiaceae

- Olpidium luxurians* (Tomaschek) A.Fisch.
- Olpidium pendulum* Zopf
- Olpidium* sp

## Phylum MUCOROMYCOTA

### Class Mucoromycetes

#### Order Mucorales

#### Family Cunninghamellaceae

- Absidia repens* van Tieghem

#### Family Mucoraceae

- Mucor hiemalis* Wehmer
- Mucor microsporus* Naumov.
- Rhizopus arrhizus* Fischer

## Phylum BASIDIOMYCOTA

## Class Agaricomycetes

### Order Agaricales

#### Family Agaricaceae

#*Agaricus abruptibulbus* Peck  
*Agaricus admirabilis* Peck  
*Agaricus albogriseus* Peck  
*Agaricus arvensis* Schaeff.\*  
*Agaricus campestris* L.\*  
*Agaricus grayanum* Peck  
*Agaricus lachnophyllus* (Berk.) Murrill  
*Agaricus laevigatus* Lasch  
*Agaricus salmoneus* Peck  
*Agaricus silvicola* (Vittad.) Peck\*  
#*Bovista colorata* (Peck) Kreisel  
#*Lepiota clypeolaria* (Bull.) P. Kumm.  
*Leucoagaricus americanus* (Peck) Vellinga  
*Macrolepiota procera* (Scop. ex Fr.) Singer\*  
*Melanophyllum echinatum* (Roth) Singer

#### Family Agaricomycetidae

*Phlyctibasidium polyporoideum* (Berk. & M.A. Curtis) Jülich

#### Family Amanitaceae

*Amanita bisporigera* G.F.Atk.  
*Amanita brunnescens* Atk.  
*Amanita caesarea* (Scop.) Pers.\*  
*Amanita ceciliae* (B. & Br.) Bas  
*Amanita citrina* Schaeff. ex S.F.Gray  
*Amanita flavoconia* Atk.  
*Amanita floccocephala* G.F. Atk.\*  
*Amanita frostiana* (Peck) Saccardo  
*Amanita fulva* (Schaeff.) Pers.  
*Amanita gemmata* (Fr.) Gill.  
*Amanita inaurata* Secr.  
*Amanita muscaria* var. *formosa* (Pers. ex Fr.) Bert. in DeCham.\*  
*Amanita muscaria* var. *guessowii* Vesely  
*Amanita pantherina* (DC.) Krombh.  
*Amanita phalloides* Secr.\*  
*Amanita porphyria* (A. & S. ex Fr.) Secr.  
*Amanita rubescens* (Pers. ex Fr.) S.F.Gray  
*Amanita vaginata* (Bull.) Romagn.  
*Amanita virosa* Secr.

#### Family Amylocorticiaceae

*Plicaturopsis crispa* (Pers.) D.A. Reid

#### Family Bolbitiaceae

*Conocybe* sp

#### Family Clavariaceae

*Clavaria mucida* Pers.\*  
*Clavaria pampaeana* Speg.  
#*Clavulinopsis corniculata* (Schaeff.) Corner  
*Clavulinopsis fusiformis* (Sowerby) Corner  
#*Clavulinopsis laeticolor* (Berk. & M.A. Curtis) R.H. Petersen  
*Mucronella calva* (Alb. & Schwein.) Fr.  
*Ramaria rubella* (Schaeff.) R.H. Petersen  
*Ramariopsis kunzei* (Fr.) Corner

#### Family Cortinariaceae

*Cortinarius alboviolaceus* (Fr.) Fr.

*Cortinarius anomalus* (Fr.) Fr.  
*Cortinarius armillatus* (Fr.) Fr.\*  
*Cortinarius azureus* Fr.  
*Cortinarius camphoratus* (Fr.) Fr.  
*Cortinarius caperatus* (Pers.) Fr.  
*Cortinarius chrysolitus* Kauffman  
*Cortinarius collinitus* (Fr.) S.F.Gray  
*Cortinarius cylindripes* Kauffman\*  
*Cortinarius huronensis* Ammirati & Smith  
*Cortinarius huronensis* var. *olivaceus* Ammirati & Smith  
*Cortinarius incognitus* Ammirati & Smith  
*Cortinarius lilacinus* Pk.  
*Cortinarius lucorum* (Fr.) J.E. Lange  
*Cortinarius malicorius* Fr.  
*Cortinarius obtusus* Fr.  
*Cortinarius pellstonianus* Ammirati & Smith  
*Cortinarius purpureus* (Fr.) Maire  
#*Cortinarius salicinus* Bidaud & Carteret  
*Cortinarius sanguineus* Fr.  
*Cortinarius semisanguineus* (Fr.) Gill.  
*Cortinarius sphaerosporus* Peck  
*Cortinarius subcroceofolius* Ammirati & Smith  
*Cortinarius subcroceofolius* var. *sordidipes* Ammirati & Smith  
*Cortinarius traganus* (Weinm. ex Fr.) Fr.  
*Cortinarius trivialis* Lange  
*Cortinarius tubarius* var. *lutefolius* Ammirati & Smith  
*Cortinarius uliginosus* Ammirati & Smith  
*Cortinarius vibratilis* Fr. (cf)  
*Cortinarius violaceus* (L.) Gray\*

#### **Family Crepidotaceae**

*Crepidotus caspari* Velen  
*Crepidotus croceitinctus* Peck  
*Crepidotus crocophyllus* (Berk.) Sacc.  
*Crepidotus cuneiformis* Pat.  
*Crepidotus fimbriatus* Hesler & A.H.Sm.  
*Crepidotus fusisporus* Hesler & A.H.Sm.  
*Crepidotus malachus* var. *malachus* (Berk. & M.A.Curtis) Sacc.  
*Crepidotus mollis* (Schaeff.) Staude  
*Crepidotus nephrodes* (Berk. & M.A.Curtis) Sacc.  
*Crepidotus subverrucisporus* var. *subverrucisporus* Pilat  
*Crepidotus versutus* (Peck) Peck

#### **Family Cyphellaceae**

#*Granulobasidium vellereum* (Ellis & Cragin) Jülich

#### **Family Cystostereaceae**

#*Cystostereum murrayi* (Berk. & M.A. Curtis) Pouzar  
*Cystostereum pini-canadense* (Schwein.) Parmasto

#### **Family Entolomataceae**

#*Entoloma abortivum* (Berk. & M.A.Curtis) Donk  
*Entoloma celatum* (Mazzer) Noordel. & Co-David  
*Entoloma grande* Peck  
*Entoloma murrayi* (Berk. & M.A. Curftis)Sacc.  
*Entoloma sinuatum* (Bull. ex Fr.) Kum.  
*Pouzarella foetida* Mazzer  
#*Rhodophyllus* sp.

#### **Family Fistulinaceae**

*Fistulina hepatica* (Schaeff.) With.\*

**Family Geastraceae**

*Cycloderma indicum* Klotzsch.

**Family Hydnangiaceae**

*Laccaria amethystina* Cooke

*Laccaria bicolor* (Maire) Orton

*Laccaria laccata* (Scop. ex Fr.) Cke.

*Laccaria ochropurpurea* (Berk.) Peck

*Laccaria trullisata* (Ell.) Pk.

**Family Hygrophoraceae**

*Ampulloclitocybe clavipes* (Pers.) Redhead, Lutzoni, Moncalvo & Vilgalys

*Cuphophyllus pratensis* var. *pratensis* (Schaeff.) Bon.

*Cuphophyllus rainierensis* Hesler & A.H.Sm.

*Cuphophyllus virgineus* var. *virginea* (Wulfen) Kovalenko

*Gliophorus irrigatus* (Pers.) A.M. Ainsw. & P.M. Kirk

*Gliophorus irrigatus* var. *unguinus* (Pers.) A.M. Ainsw. & P.M. Kirk

*Gliophorus laetus* var. *laetus* (Pers.) Herink

*Gliophorus psittacina* var. *psittacina* (Schaeff.) Herink

*Humidicutus marginata* (Peck) Singer

*Humidicutus marginatus* var. *concolor* (Peck) Singer

*Hygrocybe acuticonica* var. *acutoconica* (Clem.) Singer

*Hygrocybe canescens* (A.H. Sm. & Hesler) P.D. Orton

*Hygrocybe cantharellus* (Schwein.) Murrill\*

*Hygrocybe chlorophana* (Fr.) Wünsche

*Hygrocybe coccinea* (Schaeff.) P. Kumm.

*Hygrocybe colemanniana* (A. Bloxam) P.D. Orton & Watling

*Hygrocybe conica* var. *conica* (Scop.) P. Kumm.

*Hygrocybe cremicolor* Murrill

*Hygrocybe helobia* (Arnolds) Bon

*Hygrocybe lacmus* (Schumach.) P.D. Orton & Watling

*Hygrocybe miniata* (Fr.) Kummer

*Hygrocybe pratensis* var. *pratensis* (Pers.) Bon

*Hygrocybe punicea* (Fr.) P. Kumm.

*Hygrocybe squamulosa* (Ellis & Everh.) Arnolds

*Hygrophorus agathosmus* Fr.

*Hygrophorus borealis* Peck

*Hygrophorus camarophyllus* (Alb. & Schwein.) Dumée, Grandjean & Maire

*Hygrophorus chrysodon* (Batsch) Fr.\*

*Hygrophorus discoxanthus* Rea -1908

*Hygrophorus eburneus* (Bull.) Fr.

*Hygrophorus flavodiscus* Frost apud Peck

*Hygrophorus fuliginus* Frost

*Hygrophorus fuscoalboides* Hesler & A.H.Sm.

*Hygrophorus glutinifer* Fr.

*Hygrophorus hypothejus* (Fr.) Fr.

*Hygrophorus marginatus* Peck

*Hygrophorus nitidus* Berk. & M.A.Curtis

*Hygrophorus parvulus* Peck

*Hygrophorus pudorinus* (Hesler & A.H. Sm.) Lebeuf

*Hygrophorus pustulatus* var. *aureofloccosus* (Pers.) Fr.

*Hygrophorus speciosus* Peck

*Hygrophorus stowelii* Hesler & A.H.Sm

*Hygrophorus subceraceus* (Murrill) Murrill

**Family Hymenogastraceae**

*Psilocybe fuscifolia* Peck

*Psilocybe subagraria* G.F. Atk.

**Family Inocybaceae**

*Inocybe lacera* (Fr.) Kummer

**Family Lachnocladiaceae**

*Dichosterum granulosa* (Fr.) Boldin & Lanq.

*Vararia investiens* (Schwein.) P. Karst.

**Family Lycoperdaceae**

*Bovista pila* Berk. & M.A. Curtis

*Calvatia gigantea* (Batsch) Lloyd

*Lycoperdon marginatum* Vittad.

*Lycoperdon norvegicum* Demoulin

*Lycoperdon peckii* Morgan

*Lycoperdon perlatum* Pers.\*

*Lycoperdon pyriforme* Pers.\*

*Lycoperdon subincarnatum* Peck

**Family Lyophyllaceae**

*Hypsizygus tessulatus* (Bull. ex Fr.) Singer

*Lyophyllum decastes* (Fr.: Fr.) Sing.

**Family Marasmiaceae**

*Atheniella amabilissima* (Peck) Redhead, Moncalvo, Vilgalys, Desjardin & B.A. Perry

*Atheniella flavoalba* (Fr.) Redhead, Moncalvo, Vilgalys, Desjardin & B.A. Perry

*Clitocybula abundans* (Peck) Singer

#*Hydropus fuliginarius* (Batsch) Singer

*Marasmius borealis* Gilliam

*Marasmius cohaerens* var. *cohaerens* (Alb. & Schwein.) Cooke & Quéf.

*Marasmius curreyi* Berk. & Broome

*Marasmius oreades* (Bolton) Fr.\*

*Marasmius rotula* (Scop. ex Fr.) Fr. (cf)

*Megacollybia platyphylla* (Pers.) Kotl. & Pouzar

*Merismodes anomala* (Pers.) Singer

*Mycetinis scorodoni* (Fr.) A.W. Wilson & Desjardin

*Mycopan scabripes* (Murrill) Redhead, Moncalvo & Vilgalys

#*Pleurocybella porrigens* (Pers.) Singer

*Pseudomarasmius pallidocephalus* (Gilliam) R.H. Petersen

**Family Mycenaceae**

#*Mycena aurantiaca* (Murrill) Murrill

*Mycena abramsii* Murrill

*Mycena acicula* (Fr.) Quel.

*Mycena alcalina* (Fr.) Quel. (sensu lato)

*Mycena algeriensis* Maire in Kuhner

*Mycena alnicola* A.H. Sm.

*Mycena capillaripes* Peck

*Mycena citrinomarginata* Gillet

*Mycena epipterygia* var. *epipterygia* (Scop.) Gray

*Mycena fusco-occula* Smith

*Mycena galericulata* sl (Fr.) S.F. Gray \*

*Mycena haematopus* sl (Fr.) Quel.

*Mycena leaiana* (Berk.) Sacc.

*Mycena maculata* P. Karst.

*Mycena megaspora* Kauffman in Kauffman & A.H. Sm.

*Mycena niveipes* Murrill

*Mycena pura* (Fr.) Quel.

*Mycena purpureofusca* (Peck) Sacc.

*Mycena rosella* (Fr.) Kumm.

*Mycena rutilantiformis* Murrill

*Mycena sanguinolenta* (Fr.) Quel.

*Mycena subcaerulea* (Peck) Sacc.

*Mycena subcana* A.H. Sm.

*Mycena thujina* A.H.Sm.  
*Mycena vulgaris* (Pers.) P. Kumm.\*  
*Panellus stipticus* (Bull.:Fr.) Karst.  
*Roridomyces roridus* (Fr.) Rexer  
*Xeromphalina campanella* (Batsch) Maire  
#*Xeromphalina caudicinalis* (Fr.) Kühner & Maire

**Family Nidulariaceae**

*Nidularia* sp.\*

**Family Omphalotaceae**

*Gymnopus acervatus* (Fr.) Murrill  
*Gymnopus dryophilus* (Bull.) Murrill  
*Rhodocollybia butyracea* f. *butyracea* (Bull.) Antonín & Noordel.  
*Rhodocollybia maculata* var. *gracilis* (Alb. & Schwein)  
*Rhodocollybia maculata* var. *maculata*

**Family Phyllitopsidaceae**

*Phyllotopsis nidulans* (Pers.: Fr.) Sing.

**Family Phyllotopsidaceae**

*Macrotrophula juncea* (Alb. & Schwein.) Berthier

**Family Physalacriaceae**

*Armillaria lutea* Gillet  
*Armillaria mellea* s.l. (Val.:Fr.) Kummer\*  
#*Cylindrobasidium evolvens* (Fr.) Jülich  
*Hymenopellis radicata* (Relhan) R.H. Petersen  
*Physalacria inflata* (Schw.:Fr.) Peck  
*Xerula longipes* (P. Kumm.) Maire\*

**Family Pleurotaceae**

*Hohenbuehelia petaloides* (Bull.) Schulzer  
*Pleurotus dryinus* (Pers.) P. Kumm.  
*Pleurotus ostreatus* (Jacq.:Fr.) Quél.\*  
*Pleurotus sapidus* Quél.

**Family Pluteaceae**

*Pluteus aurantiorugosus* (Trog) Sacc.  
*Pluteus cervinus* Schaeff.\*  
*Pluteus leoninus* (Schaeff.) P. Kumm.  
*Pluteus tomentosulus* Peck\*  
*Volvariella bombycina* (Schaeff. ex Fr.) Singer\*

**Family Porotheleaceae**

*Phloeomana speirea* (Fr.) Redhead

**Family Psathyrellaceae**

*Candolleomyces candolleanus* (Fr.) D. Wacht & A. Melzer  
*Coprinellus disseminatus* (Pers.) Gray  
*Coprinopsis atramentaria* (Bull.) Redhead  
#*Coprinopsis insignis* (Peck) Redhead, Vilgalys & Moncalvo  
*Homophron spadiceum* (P.Kumm.) Orstadius & E. Larss.  
*Panaeolus retirugis* (Fr.) Gillet  
*Psathyrella avellaneifolia* A.H.Sm.  
*Psathyrella fulvescens* var. *fulvescens* (Romagn.) M.M. Moser ex A.H. Sm.  
*Psathyrella huronensis* A.H.Sm.  
*Psathyrella incerta* (Peck) A.H.Sm.  
*Psathyrella incondita* A.H.Sm.  
*Psathyrella indecorosa* A.H.Sm.  
*Psathyrella iterata* var. *iterata* A.H.Sm.  
*Psathyrella kauffmanii* A.H.Sm.  
*Psathyrella pannucioides* A.H.Sm.  
*Psathyrella paradoxa* A.H.Sm.  
#*Psathyrella piluliformis* (Bull.) P.D.Orton



*Psathyrella rubiginosa* A.H.Sm.  
*Psathyrella septentrionalis* A.H.Sm.  
*Psathyrella spadiceogrisea* (Fr.) Maire  
*Psathyrella submontana* A.H.Sm.  
*Psathyrella superiorensis* A.H.Sm.  
*Psathyrella velibrunnescens* A.H.Sm.  
*Psathyrella vialis* A.H.Sm

**Family Pterulaceae**

*Coronicium alboglaucum* (Bourdot & Galzin) Jülich  
#*Radulomyces notabilis* (H.S. Jacks.) Parmasto

**Family Sarcomyxaaceae**

*Sarcomyxa serotina* (Pers.) V.Papp.

**Family Schizophyllaceae**

*Chondrostereum purpureum* (Pers.) Pouzar  
*Henningsomyces candidus* (Pers.) Kuntze  
*Porothelium fimbriatum* (Pers.) Fr.  
*Schizophyllum commune* Fr.:Fr.\*

**Family Squamanitaceae**

*Cystoderma fallax* Smith & Singer

**Family Stephanosporaceae**

#*Cristinia helvetica* (Pers.) Parmasto

**Family Strophariaceae**

*Flammula granulosa* Peck  
*Flammula malicola* (Fr.) P. Kumm.  
*Galerina naucorioides* A.H.Sm. & Singer  
*Galerina paludosa* (Fr.) Kuhner  
#*Galerina sphagnicola* (G.F. Atk.) A.H. Sm. & Singer  
*Galerina triscopa* f. *triscopa* (Fr.) Kuhner  
*Gymnopilus penetrans* (Fr. ex Fr.) Murr.  
*Gymnopilus sapineus* (Fr.) Murrill  
*Gymnopilus terrestris* Hesler (cf)  
*Hebeloma crustuliniforme* (Bull.) Quél.  
*Hebeloma mesophaeum* (Pers.:Fr.) Quél.  
*Hemistropharia albocrenulata* (Peck) Jacobsson & E. Larss.  
*Hypholoma elongatum* (pers.) Ricken  
*Hypholoma lateritium* (Schaeff.) P.Kumm  
*Kuehneromyces lignicola* (Peck) Redhead  
*Kuehneromyces rostratus* Singer & A.H.Sm.  
*Phaenonematoloma myosotis* (Fr.) Bon  
*Pholiota adiposa* (Batsch) Quél.\*  
*Pholiota aurivella* (Fr.) P.Kumm.  
*Pholiota flamimans* (Batsch) P. Kumm.  
*Pholiota limonella* (Peck) Sacc.  
*Pholiota mixta* (Fr.) Kuyper & Tjall.-Beuk.  
*Pholiota populnea* (Pers.) Kuyper & Tjall.-Beuk.  
*Pholiota squarrosoides* (Peck) Sacc.\*  
#*Stropharia hardii* G. F. Atk.  
*Stropharia rugosoannulata* Farl. ex Murrill

**Family Tricholomataceae**

*Arrhenia epichysium* (Pers.) Redhead  
*Arrhenia gerardiana* (Peck) Elborne  
*Artomyces pyxidatus* (Pers.) Jülich  
*Bonomyces sinopicus* (Fr.) Vizzini  
#*Cantharellula umbonata* (J.F. Gmel.) Singer  
*Clitocybe bartelliae* H.E. Bigelow & A.H.Sm.  
*Clitocybe dilatata* Pers. ex Karst.

*Clitocybe eccentrica* Peck  
*Clitocybe metachroa* (Fr.) P.Kumm.  
*Clitocybe multiceps* (Peck) Sacc.\*  
*Clitocybe nebularis* (Batsch) P.Kumm.  
*Clitocybe odora* (Fr.) P.Kumm.  
*Clitocybe radicellata* Godey  
*Clitocybe squamulosa* (Fr.) P.Kumm.  
#*Collybia cirrhata* (Schumach. ex Fr.) Quél.  
*Collybia radicata* Peck  
#*Collybia tuberosa* (Bull. ex Fr.) P. Kumm.  
#*Connopus acervatus* (Fries) R.H. Petersen  
*Hemimycena gracilis* (Quél.) Singer  
*Hemimycena rickenii* (A.H. Sm.) Singer  
*Infundibulicybe gibba* (Pers.) Harmaja  
*Lepista nuda* (Bull.) Cooke  
*Lepista personata* (Fr.) Cooke\*  
#*Lepista regularis* (Peck) Harmaja  
#*Leucopaxillus* sp  
*Melanoleuca resplendens* (Fr.) Murrill  
*Pseudoarmillariella ectypoides* (Peck) Singer  
*Pseudoclitocybe cyathiformis* (Bull.) Singer  
#*Resupinatus poriaeformis* Thorn, Moncalvo & Redhead  
*Singerocybe phaeophthalma* (Pers.) Harmaja  
#*Tricholoma cheilolaminum* Ovrebo & Tylutki  
*Tricholoma equestre* (L.) P.Kumm.  
*Tricholoma magnivelare* (Pk.) Redhead  
*Tricholoma pardinum* Quél.  
*Tricholoma saponaceum* (Fr.) Kum.  
*Tricholoma sejunctum* (Sow. ex Fr.) Quél.  
*Tricholoma rhizoideum* A.H. Sm.  
*Tricholomopsis decora* (Fr.) Singer  
*Tricholomopsis rutilans* (Fr.) Singer

#### **Family Typhulaceae**

*Typhula sclerotioides* (Pers.) Fr.

### **Order Atheliales**

#### **Family Atheliaceae**

*Athelia bombacina* (Pers.) Jülich  
#*Athelia scutellaris* (Berk. & M.A. Curtis) Gilb.  
#*Byssocorticium* sp.  
*Fibulomyces mutabilis* (Bres.) Jülich (Atheliaceae)  
*Myriococcum praecox* Fr.

#### **Family Byssocorticaceae**

*Leptosporomyces galzinii* (Bourd.) Jülich  
*Leptosporomyces mundus* (H.S. Jacks. & Dearden) Jülich  
*Leptosporomyces mutabilis* (Bres.) Krieglst.

#### **Family Pilodermataceae**

*Piloderma fallax* (Lib.) Stalpers

#### **Family Tylosporaceae**

*Amphinema byssoides* (Pers.:Fr.) Eriksson

### **Order Auriculariales**

#### **Family Auriculariaceae**

*Auricularia auricula-judae* (Bull.) Quél.

#### **Family Auriculariomycetidae**

*Alloexidiopsis calcea* (Pers.) L.W. Zhou & S.L. Liu

### Family Exidiaceae

*Basidiodendron caesiocinereum* (Höhn. & Litsch.) Luck-Allen  
*Basidiodendron cinereum* (Bres.) Luck-Allen  
*Basidiodendron deminutum* (Bourdot) Luck-Allen  
*Basidiodendron eyrei* (Wakef.) Luck-Allen  
*Bourdotia deminuta* (Bourdot) Bourdot & Galzin  
*Exidia glandulosa* (Bull.) Fr.,  
#*Exidiopsis calcea* (Pers.) K. Wells  
*Exidiopsis opalea* (Bourdot & Galzin) D.A. Reid  
*Myxarium fugacissimum* (Bourdot & Galzin) Malysheva & Spirin  
*Pseudohydnum gelatinosum* (Scop.: Fr.) P. Karst.  
*Sebacina cinerea* Bres.

### Order Boletales

#### Family Amylocorticiaceae

#*Amyloathelia amylacea* (Bourdot & Galzin) Hjortstam & Ryvarde  
*Amylocorticium cebennense* (Bourd.) Pouzar  
*Amylocorticium subincarnatum* (Peck) Pouzar  
#*Ceraceomyces eludens* K.H. Larss.  
*Ceraceomyces sublaevis* (Bres.) Jülich (Amylocorticiaceae)

#### Family Boletaceae

*Aureoboletus projectellus* (Murrill) Halling  
*Austroboletus gracilis* (Peck) Wolfe  
*Austroboletus mirabilis* (Murrill) Halling  
*Austroboletus russellii* (Frost) G.Wu & Shu L. Yang  
*Boletellus chrysenteroides* (Snell) Singer  
*Boletus albidipes* Peck  
#*Boletus bicolor* Raddi  
*Boletus edulis* Bull. ex Fr.\*  
*Boletus flammans* E.A. Dick & Snell  
*Boletus huronensis* A.H. Sm. & Thiers  
*Boletus miniatopallescens* A.H. Sm. & Thiers  
*Boletus morrisii* Peck  
*Boletus pallidus* Frost  
*Boletus paluster* Peck  
*Boletus pinophilus* Pilát & Dermek  
*Boletus piperatus* Bull. ex Fr.  
#*Boletus pseudo-olivaceus* A.H. Sm. & Thiers  
*Boletus pseudopeckii* A.H. Sm. & Thiers  
*Boletus punctipes* Peck  
*Boletus reticulatus* (Hoffm.) Pers.  
*Boletus rubroflammeus* A.H.Sm. & Thiers  
*Boletus rufocinnamomeus* A.H.Sm. & Thiers  
*Boletus spectabilis* Peck  
*Boletus subaureus* Peck  
*Boletus subluridellus* A.H. Sm. & Thiers  
*Boletus subpalustris* A.H.Sm. & Thiers  
#*Chalciporus piperatus* (Bull.) Bataille  
*Harrya chromipes* (Frost) Halling, Nuhn, Osmundson & Manfr. Binder  
*HemiLeccinum subglabripes* (Peck) Halling  
*Imleria pallida* (Frost) A. Farid, A.R. Franck, & J. Bolin  
*Leccinum albellum* Manfr.Binder  
*Leccinum ambiguum* A.H.Sm. & Thiers  
*Leccinum areolatum* A.H.Sm. & Thiers  
*Leccinum atrostipitatum* A.H.Sm., Thiers & Watling  
*Leccinum aurantiacum* (Fr.) S.F. Gray

*Leccinum cinnamomeum* A.H.Sm., Thiers & Watling  
*Leccinum holopus* (Rostk.) Watling  
*Leccinum insigne* A.H. Sm., Thiers & Watling  
*Leccinum insolens* A.H.Sm., Thiers & Watling  
*Leccinum proximum* A.H.Sm. & Thiers  
*Leccinum pseudoinsigne* A.H.Sm. & Thiers  
#*Leccinum rimulosum* A.H. Sm. & Thiers  
*Leccinum scabrum* (Fr.) S.F.Gray  
*Leccinum scabrum* var. *scabrum* (Fr.) S.F.Gray\*  
*Leccinum snellii* A.H.Sm., Thiers & Watling  
*Leccinum subrobustum* A.H.Sm., Thiers & Watling  
#*Leccinum subspadiceum* A.H. Sm., Thiers & Watling  
*Leccinum subtetaceum* var. *subtetaceum* A.H.Sm., Thiers & Watling  
*Leccinum versipelle* (Fr. & Hök) Snell  
*Leccinum vinaceopallidum* A.H.Sm., Thiers & Watling  
#*Leccinum vulpinum* Watling  
*Neoboletus erythropus* (Pers.) C. Hahn  
*Porphyrellus porphyrosporus* (Fr. & Hök) E.-J. Gilbert  
*Pulveroboletus ravenelii* (Berk. & M.A. Curtis) Murrill  
*Strobilomyces strobilaceus* (Scop.) Berk.\*  
*Suillelus subvelutipes* (Peck) Murrill  
*Sutorius eximius* (Peck) Halling, Nuhn, & Osmundson  
*Tylopilus felleus* (Bull. ex Fr.) Karst.  
*Tylopilus felleus* var. *felleus* (Fr.) P.Karst.  
*Tylopilus pseudoscaber* ( Secr.) A.H.Sm. & Thiers  
*Xanthoconium affine* (Peck) Singer  
*Xerocomus ferrugineus* (Schaeff.) Alessio  
*Xerocomus subtomentosus* (L.) Quél.  
*Xerocomus truncatus* Singer, Snell & E.A. Dick

#### **Family Coniophoraceae**

#*Coniophora arida* (Fr.) P. Karst.  
*Coniophora puteana* (Schum.:Fr.) Karst.  
#*Leucogyrophana romellii* Ginns

#### **Family Diplocystidiaceae**

*Astraeus hygrometricus* (Pers.) Morg.

#### **Family Gomphidiaceae**

*Chroogomphus vinicolor* (Pk.) Miller  
#*Gomphidius* sp.

#### **Family Gyroporaceae**

*Gyroporus castaneus* Fr.  
*Gyroporus cyanescens* (Bull.) Quél.

#### **Family Hygrophoropsidaceae**

*Hygrophoropsis aurantiaca* (Wulf. ex Fr.) Maire  
*Leucogyrophana mollusca* (Fr.) Pouzar

#### **Family Irpicaceae**

*Crystallicutis serpens* (Tode) El-Gharabawy, Leal-Dutra & G.W. Griff

#### **Family Paxillaceae**

*Melanogaster ambiguus* (Vitt.) Tul.  
*Paxillus involutus* (Bat. ex Fr.) Fr.

#### **Family Peniophoraceae**

*Metulodontia nivea* (P. Karst.) Parmasto

#### **Family Rhizopogonaceae**

*Rhizopogon roseolus* (Corda) A.H. Sm.

#### **Family Sclerodermataceae**

*Scleroderma citrinum* Pers.  
*Scleroderma septentrionale* Jeppson

**Family Suillaceae**

*Boletinus cavipes* (Klotzsch) Kalchbr.  
*Boletinus glandulosus* Peck  
*Suillus acidus* (Peck) Singer  
*Suillus albivelatus* A.H. Sm., Thiers & Miller  
*Suillus americanus* (Peck) Snell  
*Suillus brevipes* (Peck) Kuntze\*  
*Suillus glandulosipes* Thiers & A.H. Sm.  
*Suillus granulatus* (L. ex Fr.) Kuntze  
*Suillus grevillei* (Klotzsch) Singer  
*Suillus hirtellus* (Peck) Kuntze  
*Suillus intermedius* Smith & Thiers  
*Suillus luteus* (L.) Gray  
*Suillus placidus* (Bonord.) Singer  
*Suillus spraguei* (Berk. & Curt.) Kuntze  
*Suillus subluteus* (Peck) Snell apud Slipp & Snell  
*Suillus tomentosus* (Kauff.) Sing., Snell & Dick

**Family Tapinellaceae**

*Tapinella atrotomentosa* (Batsch) Sutara

**Order Cantharellales****Family Bankeraceae**

*Sarcodon ustalis* (K.A. Harrison) K.A. Harrison

**Family Botryobasidiaceae**

*Botryobasidium conspersum* Erikss.  
*Botryobasidium isabellinum* (Fr.) D.P.Rogers  
 #*Botryobasidium pruinaum* (Bres.) J. Erikss.  
*Botryobasidium subcoronatum* (Höhn. & Litsch.) Donk  
*Botryobasidium vagum* (Berk. & M.A.Curtis) D.P.Rogers

**Family Cantharellaceae**

*Cantharellus cibarius* (Fr.) Quéf.\*  
*Cantharellus ignicolor* Peterson  
*Cantharellus lutescens* (Pers.) Fr.  
*Craterellus cornucopioides* (L.) Pers.\*  
 #*Craterellus fallax* A.H. Sm.  
*Craterellus foetidus* A.H.Sm.  
 #*Craterellus lutescens* (Fr.) Fr.  
*Craterellus tubaeformis* (Fr.) Quéf.  
 #*Repetobasidium vile* (Bourdot & Galzin) J. Erikss.  
 #*Sistotrema coronilla* (Höhn.) Donk ex D.P. Rogers  
 #*Sistotrema porulosum* Hallenb.  
 #*Sistotrema resinicystidium* Hallenb.

**Family Ceratobasidiaceae**

#*Ceratobasidium* sp.  
*Rhizoctonia solani* J.G. Kuhn

**Family Hydnaceae**

*Clavulina coralloides* (L.) J. Schröt.  
*Hydnum repandum* L.\*  
*Sistotrema brinkmanii* (Bres.) Erikss.  
*Sistotrema eximum* (H.S. Jacks.) Ryvarden & Solheim  
*Sistotrema raduloides* (Karst.) Donk

**Family Tapinellaceae**

*Pseudomerulius aureus* (Fr.) Julich

**Family Tulasnellaceae**

*Tulasnella eichleriana* Bres.  
*Tulasnella violacea* (Johan-Olsen) Juel.

## Order Corticiales

### Family Corticiaceae

- Corticium roseocarneum* (Schwein.) Hjortstam
- Dendrothele acerina* (Pers.:Fr.) Lemke
- #*Dendrothele americana* Nakasone
- Dendrothele griseocana* (Bres.) Bourd. & Galz.
- Dendrothele microspora* (Jackson & Lemke) Lemke
- Dendrothele pachysterigmata* Jackson & Lemke
- Kurtia argillacea* (Bres.) Karasinski
- Vuilleminia maculata* (H.S. Jacks. & P.A. Lemke) Parmasto

### Family Dendrominiaceae

- Dendrominia dryina* (Pers.) Ghobad-Nejhad & Duhem.
- Dendrominia maculata* (H.S. Jacks. & P.A. Lemke) Ghob.-Nejh. & Duhem

## Order Geastrales

### Family Geastraceae

- #*Geastrum quadrifidum* Pers.:Pers.

## Order Gloeophyllales

### Family Gloeophyllaceae

- Neolentinus lepideus* (Fr.) Redhead & Ginns\*
- Veluticeps abietina* (Pers.) Hjortstam & Telleria

## Order Gomphales

### Family Clavariadelphaceae

- Clavariadelphus pistillaris* (L.) Donk\*
- Clavariadelphus sachalinensis* (Imai) Corner
- Clavariadelphus truncatus* (Quél.) Donk
- Gautieria graveolens* Vittad.

### Family Gomphaceae

- Corallium formosum* (Pers.) G.Hahn
- Gomphus clavatus* (Pers.) Gray
- #*Phaeoclavulina flaccida* (Fr.) Giachini
- #*Phaeoclavulina murrillii* (Coker) Franchi & M. Marchetti
- #*Phaeoclavulina mutabilis* (Schild & R.H. Petersen) Giachini
- #*Phaeoclavulina subdecurrens* (Coker) Franchi & M. Marchetti
- Ramaria apiculata* (Fr. : Fr.) Donk
- Ramaria botrytis* (Pers.) Ricken
- Ramaria eumorpha* (P. Karst.) Corner
- #*Ramaria rubrievanescens* Marr & D.E. Stuntz
- Ramaria stricta* (Pers.) Quél.
- Ramaria testaceoflava* (Bres.) Corner
- Ramaria xanthosperma* (Pk.) Corner (cf)
- Turbinellus floccosus* (Schwein.) Earle ex Giachini & Castellano

### Family Lentariaceae

- Kavinia alboviridis* (Morgan) Gilb. & Budington
- Kavinia himantia* (Schw.) Erikss.

## Order Hymenochaetales

### Family Chaetoporellaceae

- Kneiffiella abieticola* (Bourdot & Galzin) Jülich & Stalpers
- Kneiffiella pilaecystidiata* (S. Lundell) Jülich & Stalpers
- Kneiffiella subalutacea* (P. Karst.) Jülich & Stalpers

### Family Hymenochaetaceae

- Coltricia perennis* (L.:Fr.) Murr.\*

*Fomitiporia viticola* (Schwein.) Murrill  
*Fomitiporia punctata* (P. Karst.) Murrill  
*Fuscoporia ferruginosa* (Schr.) Murrill  
*Fuscoporia viticola* (Schwein.) Donk  
*Hastodontia hastata* (Litsch.) Hjortstam & Ryvarden  
#*Hydnoporia tabacina* (Sowerby) Spirin, Miettinen & K.H. Larss.  
#*Hymenochaete burdsallii* Parmasto  
#*Hymenochaete fuliginosa* (Pers.) Lév.  
#*Hymenochaete jobii* Parmasto  
#*Hymenochaete pinnatifida* Burt  
#*Hymenochaete sprete* Peck  
#*Hymenochaetopsis corrugata* (Fr.) S.H.He & Jiao Yang  
*Hymenochaetopsis olivacea* (Schwein.) S.H. He & Jiao Yang  
*Inonotus obliquus* (Fr.) Pilat  
#*Onnia circinata* (Fr.) P. Karst.  
*Onnia tomentosa* (Fr.) P. Karst.  
#*Phellinopsis conchata* (Pers.) Y.C. Dai  
#*Phellinus chrysoloma* (Fr.) Donk  
#*Phellinus fragrans* M.J. Larsen & Lombard  
*Phellinus igniarius* (L.: Fr.) Quél.  
#*Phellinus pini* (Brot.) Pilát  
#*Phellinus tremulae* (Bondartsev) Bondartsev & P.N. Borisov  
*Rigidonotus glomeratus* (Peck) Y.C. Dai, F. Wu, L.W. Zhou, Vlasak & B.K. Cui  
#*Tubulicrinis glebulosus* (Fr.) Donk

#### **Family Hyphodontaceae**

#*Hyphodontia abieticola* (Bourdot & Galzin) J. Erikss.  
*Hyphodontia alutaria* (Burt) J.Erikss  
*Hyphodontia arguta* (Fr.) Erikss.  
#*Hyphodontia barba-jovis* (Bull.) J. Erikss.  
#*Hyphodontia granulosa* (Pers.) Bernicchia  
*Hyphodontia pallidula* (Bres.) Erikss.  
#*Hyphodontia spathulata* (Schr.) Parmasto

#### **Family Oxyporaceae**

*Oxyporus populinus* (Schum. ex Fr.) Donk

#### **Family Rickenellaceae**

*Atheloderma orientale* Parmasto  
#*Odonticium romellii* (S. Lundell) Parmasto  
#*Odonticium septocystidia* (Burt) Zmitr. & Spirin  
#*Peniophorella echinocystis* (J. Erikss. & Å. Strid) K.H. Larss.  
#*Peniophorella praetermissa* (P. Karst.) K.H. Larss.  
*Peniophorella pubera* (Fr.) P.Karst.  
*Resinicium bicolor* (Alb. & Schw.: Fr.) Parm.  
*Rickenella fibula* (Bull.) Raithehl.  
*Skvortsovia furfuracea* (Bres.) G.Gruhn & Hallenberg

#### **Family Schizoporaceae**

*Aluaceodontia alutacea* (Fr.) Hjortstam & Ryvarden  
*Basidioradulum radula* (Fr.) Nobles  
*Lyomyces crustosus* (Pers.) P. Karst.)  
#*Lyomyces juniperi* (Bourdot & Galzin) Riebesehl & Langer  
#*Lyomyces pruni* (Lasch) Riebesehl & Langer  
*Lyomyces sambuci* (Pers.) P. Karst.)  
#*Xylodon asperus* (Fr.) Hjortstam & Ryvarden  
*Xylodon brevisetus* (P. Karst.) Hjortstam & Ryvarden  
*Xylodon papillosum* (Fr.) Riebesehl, Yurchenko & E. Langer  
#*Xylodon radula* (Fr.) Tura, Zmitr., Wasser & Spirin  
#*Xylodon rimosissimus* (Peck) Hjortstam & Ryvarden

#*Xylodon sambuci* (Pers.) Tura, Zmitr., Wasser & Spirin  
*Xylodon spathulatus* (Schrad.) Kuntze  
#*Xylodon verruculosus* (J. Erikss. & Hjortstam) Hjortstam & Ryvarden

**Family Tubulicrinaceae**

*Sphaerobasidium minutum* (J. Erikss.) Oberw. Ex Julich  
*Tubulicrinis gracillimus* (Ellis & Everh. ex D.P. Rogers & H.S. Jacks.)  
*Tubulicrinis subulatus* (Bourdot & Galzin) Donk

**Order Hypocreales**

**Family Hypocreaceae**

*Hypocrea sulphurea* (Schwein.) Sacc.

**Order Hysterangiales**

**Family Hysterangiaceae**

*Hysterangium coriaceum* Hesse

**Order Phallales**

**Family Phallaceae**

*Mutinus caninus* (Huds.: Pers.) Fr.  
*Phallus impudicus* L.\*  
*Phallus indusiatus* Vent.  
*Phallus ravenelii* Berk. & M.A. Curtis

**Order Polyporales**

**Family Fomitopsidaceae**

#*Calcipostia guttulata* (Sacc.) B.K. Cui, L.L. Shen & Y.C. Dai,  
#*Fomitopsis mounceae* J.-E. Haight & Nakasone  
#*Fomitopsis officinalis* (Vill.) Bondartsev & Singer  
*Fomitopsis pinicola* (Schwartz & Fr.) Karst.  
#*Ischnoderma resinatum* (Schrad.) P. Karst.  
*Laricifomes officinalis* (Vill.) Kotl. & Pouzar  
*Osteina obducta* (Berk.) Donk  
*Phaeolus schweinitzii* (Fr.) Pat.  
*Piptoporus betulinus* (Fr.) Karst.  
#*Postia lowei* (Pilát) Jülich  
*Rhodoformes cajanderi* (P.Karst.) B.K. Cui, M.L. Han & Y.C. Dai  
*Rhodoformes roseus* (Alb. & Schwein.) Kotl. & Pouzar

**Family Ganodermataceae**

*Ganoderma applanatum* (Pers. ex Wall.) Pat.\*  
*Ganoderma lucidum* (Curtis) P. Karst.\*  
*Ganoderma tsugae* Murr.

**Family Hyphodermataceae**

*Hyphoderma diffinita* (Jackson) Donk  
*Hyphoderma guttuliferum* (P. Karst.) Donk  
*Hyphoderma luridum* (Bourdot & Galzin) J. Erikss. & Hjortstam  
#*Hyphoderma occidentale* (D.P. Rogers) Boidin & Gilles  
*Hyphoderma orientale* (Parmasto) Julich  
*Hyphoderma pilosum* (Burt) Gilb. & Budington  
*Hyphoderma setigerum* (Fr.) Donk  
*Hyphoderma tenue* (Pat.) Donk

**Family Incrustoporiaceae**

*Tyromyces chioneus* (Fr.) P. Karst.

**Family Irpicaceae**

*Crystallicutis serpens* (Tode) El-Gharabawy, Leal-Dutra & G.W. Griff.  
*Gloeoporus dichrous* (Fr.: Fr.) Bres.  
*Irpex lacteus* (Fr.) Fr.



*Irpex rosettiformis* C.C. Chen & Sheng H. Wu

**Family Laetiporaceae**

*Laetiporus huroniensis* Burds. and Banik

*Laetiporus sulphureus* (Bull. ex Fr.) Bondarzew & Singer

**Family Meruliaceae**

*Atheliachaete sanguinea* (Fr.) Spirin & Zmitrovitch

#*Cabalodontia cretacea* (Romell ex Bourdot & Galzin) Piątek

*Crustoderma dryinum* (Berk. & Curt.) Parm.

*Gelatoporia pannocincta* (Romell) Niemela

#*Gloeoporus taxicola* (Pers.) Gilb. & Ryvardeen

*Gyrophanopsis polonensis* (Bres.) Stalpers & P.K. Buchanan

#*Hermanssonia centrifuga* (P. Karst.) Zmitr.

*Hypochnicium bombycinum* (Sommerf.) J. Erikss.

#*Hypochnicium eichleri* (Bres. ex Sacc. & P. Syd.) J. Erikss. & Ryvardeen

*Hypochnicium lundellii* (Bourd.) Erikss.

*Merulius tremellosus* Schrad.

*Mycoacia fuscoatra* (Fr.) Donk

#*Mycoacia livida* (Pers.) Zmitr.

*Neohypochnicium punctulatum* (Cooke) N. Maek..

#*Phlebia acerina* Peck

*Phlebia phleboides* (H.S. Jacks. & Dearden) Donk

*Phlebia rufa* (Pers.) M.P. Christ.

*Phlebia serialis* (Fr.) Donk

#*Phlebia tremellosa* (Schrad.) Nakasone & Burds.

#*Radulodon americanus* Ryvardeen

#*Sarcodontia delectans* (Peck) Spirin

#*Sarcodontia pachyodon* (Pers.) Spirin

*Scopuloides hydroides* (Cooke & Masee) Hjortstam & Ryvardeen

#*Steccherinum ciliolatum* (Berk. & M.A. Curtis) Gilb. & Budington

#*Stereophlebia tuberculata* (Berk. & M.A. Curtis) Zmitr

*Vitreoporus dichrous* (Fr.) Zmitr.

*Xanthoporus peckianus* (Cooke) Audet

**Family Panaceae**

*Panus lecomtei* (Fr.) Corner

**Family Phanerochaetaceae**

#*Antrodiella romellii* (Donk) Niemelä

*Bjerkandera adusta* (Willd.) P.Karst.

#*Byssomerulius* sp.

*Ceriporia spissa* (Schwein. Ex Fr.) Rajchenb.

*Climacodon septentrionalis* (Fr.) P. Karst.

*Hapalopilus rutilans* (Pers.) Murrill

*Phanerochaete affinis* (Burt.) Parm.

#*Phanerochaete carnososa* (Burt) Parmasto

#*Phanerochaete laevis* (Fr.) J. Erikss. & Ryvardeen

*Phanerochaete sordida* (P. Karst.) J. Erikss. & Ryvardeen

*Phanerochaete velutina* (D.C.:Fr.) Karst.

*Phlebiopsis gigantea* (Fr.) Jülich

**Family Polyporaceae**

*Amyloporia xantha* (Fr.) Bondartsev & Singer

*Bresadolia uda* (Jungh.) Audet.

#*Ceriporus scutellatus* (Schwein.) Zmitr

*Cerrena unicolor* (Fr.) Murr.

#*Cinereomyces lindbladii* (Berk.) Jülich

*Cryptoporus volvatus* (Peck) Shear

*Datronia mollis* (Sommerf.) Gorjon

*Fomes fomentarius* (L. ex Fr.) Kicks.\*

*Lentinus brumalus* (Pers.) Smitr.  
*Lentinus chrysopeplus* Ber., & M.A. Curtis  
*Perenniporia ohiensis* (Berk.) Ryvarden  
*Picipes admirabilis* (Peck) J.L. Zhou & B.K. Cui  
*Podiformes mollis* (Sommerf.) Zmitr. & Kovalenko  
*Polyporus arcularius* (Batsch) Fr.  
*Polyporus badius* (Pers.) Schwein.  
*Polyporus umbellatus* (Pers.) Fr.\*  
*Polyporus varius* Grev.  
*Poriella subacida* (Peck) C.L. Zhao  
*Trametes hirsuta* (Wulf.:Fr.) Pil.  
*Trametes pubescens* (Schumach.:Fr.) Pilát  
*Trametes versicolor* (Fr.) Pil.  
*Trichaptum abietinum* (Dicks.) Ryvarden  
*Trichaptum bifforme* (Fr.) Ryv.

**Family Steccherinaceae**

*Steccherinum fimbriatum* (Pers.:Fr.) Erikss.  
*Steccherinum ochraceum* (Pers.:Fr.) S.F.

**Order Russulales**

**Family Albatrellaceae**

*Albatrellus confluens* (Alb. & Schwein.) Kotlaba & Pouzar  
*Albatrellus ovinus* (Schaeff.:Fr.) Kotlaba & Pouzar  
*Albatrellus subrubescens* (Murr.) Pouzar  
*Laeticutis cristata* (Schaeff.) Audet  
*Leucogaster rubescens* Zeller & C.W. Dodge  
*Neoalbatrellus caeruleoporus* (Peck) Audet

**Family Auriscalpiaceae**

*Lentinellus cochleatus* (Pers.:Fr.) Karst.  
*Lentinellus ursinus* (Fr.) Kühn.  
*Lentinellus vulpinus* (Fr.) Kuhner & Maire

**Family Echinodontiaceae**

*Laurilia sulcata* (Burt) Pouzar

**Family Gloeocystidiellaceae**

#*Gloeocystidiellum clavuligerum* (Höhn. & Litsch.) Nakasone  
*Gloeocystidiellum porosum* (Berek. & Curt.) Donk  
*Scytinostromella heterogenea* (Bourdot & Galzin) Parmasto  
#*Scytinostromella olivaceoalba* (Bourdot & Galzin) Ginns & M.N.L. Lefebvre

**Family Hericiaceae**

*Hericium coralloides* (Fr.) S. F. Gray\*  
*Hericium erinaceus* (Bull.) Pers.\*

**Family Lachnocladiaceae**

#*Asterostroma andinum* Pat.  
#*Baltazaria galactina* (Fr.) Leal-Dutra, Dentinger & G.W. Griff.  
*Scytinostroma eurasiaticogalactinum* Boidin & Lanq.

**Family Peniophoraceae**

#*Peniophora nuda* (Fr.) Bres.  
#*Peniophora pithya* (Pers.) J. Erikss.  
*Peniophora violaceo livida* (Sommerf.) Masee

**Family Russulaceae**

*Lactarius affinis* Peck  
*Lactarius alnicola* var. *pungens* A.H.Sm. in Hesler & A.H.Sm.  
*Lactarius aquifluus* Peck  
*Lactarius argillacifolius* Hesler & Smith  
*Lactarius camphoratus* (Bull.) Fr.  
*Lactarius carbonicola* A.H.Sm. in Hesler & A.H.Sm.

*Lactarius chelidonium* var. *chelidonium* Peck  
*Lactarius chrysorrheus* Fr.  
*Lactarius circellatus* var. *borealis* Hesler & A.H.Sm.  
*Lactarius deliciosus* (L.) Gray\*  
*Lactarius fumosus* var. *fumosoides* (A.H.Sm. & Hesler) Hesler & A.H.Sm.  
*Lactarius glutinopallens* F.H.Moller & J.E.Lange  
*Lactarius glyciosmus* (Fr.) Fr.  
*Lactarius griseus* Peck  
*Lactarius hepaticus* Plowr.  
*Lactarius hibbariae* Peck  
*Lactarius indigo* (Schwein.) Fr.\*  
*Lactarius lignyotus* Fr.\*  
*Lactarius lignyotus* var. *canadensis* A.H.Sm. & Hesler  
*Lactarius mackinawensis* Hesler & A.H.Sm.  
*Lactarius mucidus* Burl.  
*Lactarius nancyae* Hesler & A.H.Sm.  
*Lactarius paradoxus* Beard. & Burl.  
*Lactarius proximellus* Beardslee & Burl.  
*Lactarius pyrogalus* (Fr.) Fr.  
*Lactarius repraesentaneus* Britzelm.  
*Lactarius resimus* var. *regalis* Peck  
*Lactarius rimosellus* Peck  
*Lactarius rufus* (Fr.) Fr.  
*Lactarius salicis-reticulatae* Kühner  
*Lactarius scrobiculatus* var. *canadensis* (A.H.Sm.) Hesler & A.H.Sm.  
*Lactarius sordidus* Peck  
*Lactarius subdulcis* var. *oculatus* Peck  
*Lactarius subpalustris* Hesler & A.H.Sm.  
*Lactarius subpurpureus* Peck  
*Lactarius thynos* A.H. Sm.  
*Lactarius torminosus* (Fr.) S.F. Gray\*  
*Lactarius trivialis* (Fr.) Fr.  
*Lactarius uvidus* (Fr.) Fr.  
*Lactarius vietus* (Fr.) Fr.  
*Lactarius vinaceorufescens* Smith  
*Lactarius zonarius* (Secr.) Fr.  
*Lactifluus deceptivus* (Peck) Kuntze  
*Lactifluus gerardii* var. *gerardii* (Peck) Kuntze  
*Lactifluus piperatus* (L.) Kuntze  
*Lactifluus subgerardii* A. H. Sm. & Hesler  
*Lactifluus vellereus* (Fr.) Fries  
*Lactifluus volemus* (Fr.) Fr.\*  
*Russula atropurpurea* (Krombh.) Britzelm.\*  
*Russula chloroides* (Krombh.) Bres.  
*Russula claroflava* Groves  
*Russula compacta* Frost  
*Russula cyanoxantha* Banning  
*Russula decolorans* Fr.\*  
*Russula emetica* (Schaeff. ex Fr.) S.F. Gray.\*  
*Russula flava* Lindl.\*  
*Russula foetens* (Pers.) Fr.\*  
*Russula fragilis* (Pers. ex Fr.) Fr.\*  
*Russula laurocerasi* Melzer  
*Russula nigricans* Fr.\*  
*Russula nobilis* Velen.  
*Russula ochroleucoides* Kauff.

*Russula olivacea* (Schaeff.) Fr.\*  
*Russula paludosa* Britz.  
*Russula redolens* Burl.  
*Russula roseipes* Secr. ex Bres.\*  
*Russula ventricosipes* Peck  
*Russula virescens* (Schaeff.) Fr.\*  
*Russula xerampelina* Fr.

#### **Family Stereaceae**

#*Acanthophysellum canadense* (Parmasto) Sheng H.Wu, Boidin & C.Y.Chien  
*Acanthophysellum lividocoeruleum* (P. Karst.) Parmasto  
#*Acanthophysium oakesii* (Berk. & M.A. Curtis) Parmasto  
*Aleurodiscus amorphus* (Fr.) Schroet.  
*Aleurodiscus botryosus* Burt.  
*Aleurodiscus canadensis* Skolk.  
*Aleurodiscus cerussatus* (Bres.) Hohn. & Litsch.  
#*Aleurodiscus farlowii* Burt  
*Aleurodiscus penicillatus* Burt.  
*Amylostereum laevigatum* (Fr.) Boidin  
#*Conferticum* sp.  
*Stereum hirsutum* (Wild.:Fr.) S.F.  
#*Stereum ochraceoflavum* (Schwein.) Sacc.  
#*Stereum sanguinolentum* (Alb. & Schwein.) Fr.  
#*Stereum subtomentosum* Pouzar  
*Xylobolus subpileatus* (Berk. & M.A. Curtis) Boidin

#### **Incertae sedis**

#*Gloeohypochnicium analogum* (Bourdote & Galzin) Hjortstam

#### **Order Sistotrematales**

##### **Family Sistotremastraceae**

*Sistotremastrum suecicum* Litsch. ex J. Erikss.

#### **Order Thelephorales**

##### **Family Bankeraceae**

*Boletopsis subsquamosa* (L. ex Fr.) Kotl. & Pouz.  
*Hydnellum aurantiacum* (Fr.) Karst.  
*Hydnellum caeruleum* (Horn. ex Pers.) Karst.  
#*Hydnellum chrysinum* K.A. Harrison  
*Hydnellum concrescens* (Pers.) Banker  
*Hydnellum ferrugineum* (Fr.) P. Karst.  
*Hydnellum scrobiculatum* (Fr. ex Secr.) Karst.  
*Hydnellum suaveolens* (Scop. ex Fr.) Karst.  
*Hydnellum underwoodii* (Banker) E. Larss., K.H. Larss. & Koljalg.  
*Phellodon fuligineoalbum* (J.C. Schmidt) Baird  
*Phellodon tomentosus* (L.) Banker  
*Sarcodon imbricatus* (L. ex Fr.) Karst.

##### **Family Thelephoraceae**

#*Pseudotomentella* sp.  
*Thelephora terrestris* Ehrenb:Fr.  
#*Tomentella atrorubra* (Peck) Bourdot & Galzin  
*Tomentella crinalis* (Fr.) M.J. Larsen  
*Tomentella feruginella* Bourd. & Galz.  
*Tomentella fusca* (Pers.) J. Schrot  
*Tomentella lilacinogrisea* Wakef.  
#*Tomentellopsis echinospora* (Ellis) Hjortstam  
#*Tomentellopsis zygodesmoides* (Ellis) Hjortstam

## Order Trechisporales

### Family Hydnodontaceae

- #*Brevicellicium olivascens* (Bres.) K.H. Larss. & Hjortstam
- Luellia recondita* (H.S. Jacks.) K.H. Larss. & Hjortstam
- Subulicystidium longisporum* (Pat.) Parmasto
- Trechispora cohaerens* (Schwein.) Jülich & Stalpers
- Trechispora confinis* (Bourdot & Galzin)
- Trechispora farinacea* (Pers.) Liberta.
- Trechispora microspora* (Karst.) Liberta
- Trechispora mollusca* (Pers.:Fr.) Liberta
- Trechispora praefocata* (Bourd. & Galz.) Liberta

## Order Xenasmatales

### Family Xenasmataceae

- Xenasmatella vaga* (Fr.) Stalpers

## Class Atractiellomycetes

### Order Atractiellales

#### Family Phleogenaceae

- #*Helicogloea exigua* Spirin & V. Malysheva
- Helicogloea lagerheimii* Pat.

## Class Dacrymycetes

### Order Dacrymycetales

#### Family Corticiaceae

- Calocera cornea* (Batsch:Fr.) Fr.
- Dacrymyces capitatus* Schwein.
- #*Dacrymyces chrysospermus* Berk. & M.A. Curtis
- Dacrymyces ellisii* Coker
- Dacrymyces minor* Peck
- Dacrymyces palmatus* (Schw.) Bres.

## Class Exobasidiomycetes

### Order Exobasidiales

#### Family Exobasidiaceae

- Exobasidium sp*

## Class Pucciniomycetes

### Order Pucciniales

#### Family Coleosporiaceae

- Chrysomyxa ledicola* Lagerh.

#### Family Cronartiaceae

- #*Cronartium comandrae* Peck
- Cronartium ribicola* Fischer

#### Family Septobasidiaceae

- #*Septobasidium sp.*

## Class Tremellomycetes

### Order Tremellales

#### Family Tremellaceae

- #*Tremella encephala* Pers.

*Tremella foliacea* Pers.:Fr.  
*Tremella lutescens* Pers.\*  
#*Tremella mesenterica* Schumach.

## Phylum ASCOMYCOTA

The Ascomycota (or ‘sac fungi’) are probably the most diverse phylum in Kingdom Fungi, but they are much more poorly documented than the Basidiomycota (which include most of the familiar ‘mushrooms’, shelf fungi, etc.). Recent discoveries, using genetic analyses, show that many species of Ascomycota (and a few Basidiomycota) live as ‘endophytic’ fungi, carrying out their life-cycle entirely within the cells and tissues of vascular plants and lichens. Researchers believe that, in most or all cases, these fungi are symbiotic mutualists, with host plants benefiting from fungal chemicals that defend against herbivores. Endophytic fungi can be identified only by isolating and culturing them and using genetic analyses to assign them, usually, only to genus level. Dr. Elizabeth Arnold (Arnold 2013, unpublished report) cultured over 1000 endophytic fungal specimens from samples of plants (several conifers and members of the Ericaceae) and lichens from the Huron Mts, and identified about 60 genera of ascomycetes and two basidiomycetes. Most of the species listed here by genus without species identification are from that work.

### Class Ascomycetes (Fungi imperfecti)

#### Family Myxotrichaceae

*Oidiodendron cereale* (Thom) Barron  
*Oidiodendron flavum* Szilvinyi  
*Oidiodendron citrinum* Barron

### Class Dothideomycetes

#### Order Botryosphaerales

##### Family Botryosphaeriaceae

*Guignardia* sp

#### Order Capnodiales

##### Family Cladosporiaceae

*Cladosporium herbarum* (Pers.) Link

##### Family Mycosphaerellaceae

*Mycosphaerella* sp

##### Family Teratosphaeriaceae

*Penidiella* sp  
*Teratosphaeria* sp

#### Order Dothideales

##### Family Dothideaceae

*Dothidea* sp

##### Family Saccoteciaceae

*Aureobasidium pullulans* (de Bary) Arnaud

#### Order Pleosporales

##### Family Cucurbitariaceae

*Pyrenochaeta* sp  
*Pyrenochaetopsis* sp

##### Family Didymellaceae

*Cytospora* sp  
*Phoma humicola* Gilman and Abbot  
*Stagonosporopsis* sp  
*Didymella* sp

##### Family Lophiostomataceae

*Herpotrichia macrotricha* (Berk. & Broome) Sacc.

##### Family Massariaceae

*Massaria* sp

**Family Massarinaceae**

*Massarina* sp

**Family Pleosporaceae**

*Alternaria alternata* (Fr.) Keissler

*Cochliobolus* sp

*Ulocladium botrytis* Preuss

**Family Sorormiaceae**

*Elaphomyces septatus* Vittad.

**Family Sporormiaceae**

*Sporormiella lageniformis* (Fuckel) S.I. Ahmed & Cain.

**Order Rhytismatales**

**Incertae sedis**

*Mellitiosporium hysterinum* (Fr.) Gillet

*Mellitiosporium propolidoides* (Rehm) Rehm

**Family Rhytismataceae**

*Propolis farinose* (Pers.) Fr.

*Propolis huronensis* sp. nov

*Propolis rhodoleuca* (Pers.) Fr.

*Rhytisma punctatum* (Pers.) Fr.

**Family Tribliidiaceae**

*Triblidium caliciiforme* Rebertsch: Fries

**Order Venturiales**

**Family Cyndrosympodiaceae**

*Cyndrosympodium* sp

**Family Venturiaceae**

*Venturia* sp

**Class Eurotiomycetes**

**Order Chaetothyriales**

**Family Herpotrichiellaceae**

*Cladophialophora* sp

*Phialophora fastigiata* (Lager and Melin) Conant

**Order Elaphomycetales**

**Family Elaphomycetaceae**

*Elaphomyces granulatus* var. *asperulus* (Vitt.) Hawker

**Order Eurotiales**

**Family Aspergillaceae**

*Aspergillus fumigatus* Fres.

*Aspergillus niger* van Tiegem

*Eurotium* sp

*Penicillium funiculosum* Thom

*Penicillium janthinellum* Biourge

*Penicillium lagena* (Delitsch) Stolk & Samson

*Penicillium nigricans* Bainier

*Penicillium resticulosum* Birk., Raist. and Smith

*Penicillium thomii* Maire

**Family Thermoascaceae**

*Byssochlamys* sp

*Paecilomyces variotii* Bainer

**Family Trichocomaceae**

*Talaromyces* sp

**Order Phaeomoniellales**

**Family Phaeomoniellaceae**

*Phaeomoniella* sp

**Order Verrucariales**

**Family Verrucariaceae**

*Thelidium* sp

**Class Geoglossomycetes**

**Order Geoglossales**

**Family Geoglossaceae**

*Geoglossum* sp

**Class Lecanoromycetes**

**Order Acarosporales**

**Family Acarosporaceae**

*Acarospora* sp

**Order Ostropales**

**Family Odontotremataceae**

*Xerotrema tetraspora* sp.nov.

**Order Teloschistales**

**Family Teloschistaceae**

*Fulgensia* sp

**Class Leotiomycetes**

**Order Chaetomellales**

**Family Chaetomellaceae**

#*Corniculariella spina* (Berk. & Ravenel) DiCosmo

**Family Marthamycetaceae**

*Mellitiosporiella pulchella* Höhn.

**Order Cyrtariales**

**Family Cordieritidaceae**

#*Ionomidotis irregularis* (Schwein.) E.J. Durand

**Order Helotiales**

**Family Cenangiaceae**

#*Moellerodiscus lentus* (Berk. & Broome) Dumont

**Family Cudoniaceae**

*Spathularia flavida* Pers.\*

*Spathulariopsis velutipes* (Cooke) Geest.\*

**Family Dermateaceae**

*Cryptosporiopsis* sp

**Family Geoglossaceae**

*Leotia lubrica* (Scop.) Pers.

*Microglossum rufum* (Schwein.) Underw.

**Family Helotiaceae**

*Bisporella citrina* (Batsch) Korf & S.E.Carp.

#*Bisporella subpallida* (Rehm) Dennis



#Bisporella sulfurina (Quél.) S.E. Carp.  
*Chlorociboria aeruginascens* (Nyl.) Kanouse\*  
#Cudoniella clavus (Alb. & Schwein.) Dennis  
*Durella subsidua* (Cooke & Ellis) Magnes  
#Hymenoscyphus albidus (Gillet) W. Phillips  
#Hymenoscyphus epiphyllus (Pers.) Rehm ex Kauffman  
#Hymenoscyphus herbarum (Pers.) Dennis  
#Hymenoscyphus monticola (Berk.) Baral  
*Strossmayeria* sp  
#Tatraea macrospora (Peck) Bara

**Family Hyaloscyphaceae**

*Catenulifera* sp  
#Cistella acuum (Alb. & Schwein.) Svrček  
*Hyphodiscus* sp

**Family Lachnaceae**

#Dasyscyphella nivea (R. Hedw.) Raitv  
#Lachnum nudipes (Fuckel) Nannf.  
#Lachnum virgineum (Batsch) P. Karst.

**Family Mollisiaceae**

#Mollisia cinerea (Batsch) P. Karst.  
#Mollisia ventosa P. Karst.

**Family Rutstroemiaceae**

#Rutstroemia firma (Pers.) P. Karst.

**Family Sclerotiniaceae**

#Ciboria batschiana (Zopf) N.F. Buchw.  
#Myriosclerotinia curreyana (Berk.) N.F. Buchw.  
#Sclerotinia sclerotiorum (Lib.) de Bary

**Family Vibrisseaceae**

#Vibrissea truncorum (Alb. & Schwein.) Fr.

**Incertae sedis**

*Phragmiticola desertorum* sp.nov.

**Order Rhytismatales**

**Family Pezizellaceae**

#Bisporella pallescens (Pers.) S.E. Carp. & Korf

**Class Pezizomycetes**

**Order Pezizales**

**Family Ascodesmidaceae**

#Lasiobolus macrotrichus Rea

**Family Discinaceae**

*Gyromitra ambigua* (Karst.) Harmaja  
*Gyromitra esculenta* (Fr.) Fr.  
*Gyromitra* sp  
*Gyromitra sphaerospora* (Peck) Sacc.

**Family Helvellaceae**

*Helvella crispa* (Scop.) Fr.  
*Helvella elastica* Bull.  
*Helvella lacunosa* Afz.:Fr.  
*Helvella macropus* (Pers.) P. Karst.  
*Helvella palustris* Peck  
*Helvella pezizoides* Afzel.  
*Helvella subglabra* N.S.Weber  
*Hydnотrya cubispora* (Bessey & Thomps.) Gilkey

**Family Pezizaceae**

#*Adelphella babingtonii* (Berk. & Broome) Pfister, Matočec & I. Kušan  
#*Pachyella violaceonigra* (Rehm) Pfister  
#*Peziza ampliata* Pers.  
#*Peziza arvernensis* Roze & Boud.  
*Peziza repanda* P. Karst.  
#*Peziza spissa* Berk.  
#*Peziza succosa* Berk.

**Family Pyronemataceae**

*Aleuria aurantia* (Pers.: Fr.) Fuckel  
#*Cheilymenia ciliata* Maas Geest.  
#*Cheilymenia raripila* (W. Phillips) Dennis  
*Cheilymenia stercorea* (Pers.: Fr.) Boud.  
*Geopyxis* sp  
*Gilkeya* sp  
*Humaria hemisphaerica* (H.A.Wigg. ex Fr.) Fuckel  
*Scutellinia scutellata* (L.) Lamb.  
#*Scutellinia trechispora* (Berk. & Broome) Lambotte

**Family Rhizinaceae**

#*Psilopezia nummularia* Berk.

**Family Sarcoscyphaceae**

*Pithya* sp

**Family Sarcosomataceae**

*Plectania* sp  
*Pseudoplectania* sp  
*Sarcosoma* sp

**Family Tuberaceae**

*Tuber* sp

**Class Sordariomycetes**

**Order Boliniales**

**Family Boliniaceae**

*Camarops* sp

**Order Coniochaetales**

**Family Coniochaetaceae**

*Coniochaeta* sp

**Order Diaporthales**

**Family Valsaceae**

*Alternaria* sp  
*Radulum casearium* (Morgan) Lloyd

**Order Glomerellales**

**Family Plectosphaerellaceae**

*Verticillium terrestre* (Pers.) Sacc.

**Order Hypocreales**

**Family Clavicipitaceae**

*Camarosporium* sp  
*Claviceps purpurea* (Fr.) Tul.

**Family Cordycipitaceae**

*Beauveria* sp  
*Preussia* sp

**Family Hypocreaceae**

*Trichoderma album* Preuss

*Trichoderma deliquescens* (Sopp) Jaklitsch

*Trichoderma harzianum* Rifai

*Trichoderma koningii* Oued.

*Trichoderma lignorum* (Tode) Harz.

**Family Ophiocordycipitaceae**

*Ophiocordyceps* sp

*Tolyptocladium ophioglossoides* (J.F.Gmel.) C.A.Quandt, Kepler & Spatafora

**Order Ophiostomatales**

**Family Ophiostomataceae**

*Leptographium* sp

*Ophiostoma ulmi* (Buisman) Nannf.

**Order Sordariales**

**Family Annulatascaceae**

*Ceratostomella subdenudata* (Peck) M.E. Barr

**Family Ceratocystidaceae**

*Ceratocystis fimbriata* Ell. & Hallst.

*Ceratocystis ips* (Rumb.) Moreau

*Ceratocystis perfecta* Davidson

*Ceratocystis pilifera* (Fr.) Moreau

*Ceratocystis virescens* (Davidson) Moreau

**Family Chaetomiaceae**

*Chaetomium* sp

**Family Chaetosphaeriaceae**

*Chaetosphaeria* sp

**Family Lasiosphaeriaceae**

*Cercophora caudata* (Curr.) N.Lundq.

*Lasiochaeria hirsuta* Fr.

*Lasiochaeria hispida* (Tode) Fuckel

*Lasiochaeria ovina* (Pers.) Ces.&De Not.

*Lasiochaeria* sp

*Lasiochaeria spermoides* (Hoffm.) Ces.&De Not.

**Family Sordariaceae**

*Sordaria* sp.

**Order Xylariales**

**Family Apiosporaceae**

*Nigrospora* sp

**Family Diatrypaceae**

*Eutypella parasitica* Davidson & Lorenz

**Family Graphostromataceae**

*Biscogniauxia* sp

*Obolarina* sp

**Family Hypoxylaceae**

#Hypoxylon sp

**Family Xylariaceae**

*Anthostomella* sp

*Dicyma biophila* (Cif.) Ellis

*Kretzschmaria deusta* (Hoffm.) P.M.D. Martin

*Nemania* sp

#Ustulina sp.

#Xylaria hypoxylon (L.) Grev.

*Xylaria polymorpha* (Pers.) Grev.

*Xylaria* sp

## LICHENS

The placement of lichens in a phylogenetic arrangement of organisms is not straightforward. While they exist as ecologically independent entities of consistent and recognizable kinds, they are, in fact, an association between a fungus and a single-celled photosynthetic autotroph – an alga – each maintaining its genetic identity. Current convention classifies lichens according to the fungal associate involved in the organism. I have maintained a distinct listing here, but the higher taxonomic levels follow the conventions of fungus taxonomy. While lichens may be formed by fungi of both the Ascomycota and (much more rarely) the Basidiomycota, all of the taxa so far known for the area of this list are of the Ascomycota. Two Classes – Dothidiomycetes and Eurotiomycetes – occur as both 'lichenized' species and independent fungal taxa. The remaining lichen Classes are all present only in lichenized form. Class Lecanoromycetes constitutes the large majority of the lichen taxa present in the Huron Mts.

The photosynthetic partners may be either green algae (Kingdom Plantae) or cyanobacteria (Kingdom Monera, or Eubacteria), or occasionally both. The algal or cyanobacterial species involved generally exist also as independent cells, while the fungal partners are found only in the lichen relationship (but some lichen-forming species of fungi can associate with more than one algal species resulting in different lichen forms, even though the fungal partner gives shape to the 'body' of the lichen, and they are consequently given different names). The upshot is that, although distinct lichen forms are classified as species (and into genera, families, etc.), and I have followed that form, lichen 'species' are not phylogenetic units in a simple sense, but 'form species'.

The first extensive listings of lichens for the Huron Mountains were published by Dr. William Manierre (1999, 2001, 2002). Manierre notes a handful of earlier species records from the area, but the vast majority of his listings were from his own observations and collections. An initial visit by Doug Ladd resulted in addition of about 50 additional species (Ladd, unpublished report, 2022). Ladd also reviewed and updated taxonomy of Manierre's listings and the listing here is reflects these updates. Several taxa listed previously are dropped here as synonyms or varieties not sufficiently distinct for taxonomic status. Ladd's report also notes several of Manierre's listings of uncertain status, and these are denoted by a "(?)" preceding the species name until examination of herbarium specimens allows resolution. Altogether, around 380 distinct taxa are so far recognized for the Huron Mts., but more are certainly present.

### Phylum ASCOMYCOTA (Lichens)

#### Class Arthoniomycetes

##### Order Arthoniales

##### Family Arthoniaceae

*Arthonia cyrtisi* A. Massal.  
*Arthonia didyma* Körb.  
*Arthonia diffusa* Nyl.  
*Arthonia dispersa* Dufour  
*Arthonia patellulata* Nyl.  
*Arthonia radiata* (Pers.) Ach.

##### Family Chrysothricaceae

*Chrysothrix caesia* (Flot.) Ertz & Tehler  
(?) *Chrysothrix candelaris* (L.) J.R.Laundon  
*Chrysothrix chlorina* (Ach.) J.R.Laundon  
*Chrysothrix xanthina* (Vain.) Kalb

##### Family Lecanographaceae

*Alyxoria varia* (Pers.) Ertz & Tehler

##### Family Opegraphaceae

*Cresponsea chloroconia* (Nyl.) Vain.  
*Opegrapha niveoatra* (Borrer) J.R.Laundon

## Class Candelariomycetes

### Order Candelariales

#### Family Candelariaceae

- Candelaria concolor* (Dicks.) Arnold
- Candelaria fibrosa* (Fr.) Müll.Arg.
- Candelariella aurella* (Hoffm.) Zahlbr.
- Candelariella efflorescens* R.C.Harris & W.R.Buck
- Candelariella vitellina* (Ehrh.) Müll.Arg.
- Candelariella xanthostigma* (Pers. ex Ach.) Lettau

## Class Coniocybomycetes

### Order Coniocybales

#### Family Coniocybaceae

- Chaenotheca chrysocephala* (Ach.) Th.Fr.
- Chaenotheca laevigata* Nád.v.

## Class Dothidiomycetes

### Order Dothideales

#### Family Micropeltidaceae

- Mycoglaena meridionalis* (Zahlbr.) Szatala

### Order Hysteriales

#### Family Hysteriaceae

- Hysterographium fraxini* (Pers.) De Not.

### Order Monoblastiales

#### Family Monoblastaceae

- Acrocordia cavata* (Ach.) R.C.Harris
- Acrocordia megalospora* (Fink) R.C.Harris

### Order Pleosporales

#### incertae sedis

- Berkleasium conglobatum* (Cooke & Ellis) R.T.Moore

### Order Strigulales

#### Family Strigulaceae

- Strigula stigmatella* (Ach.) R.C.Harris

### Order Trypethiales

#### Family Polycoccaceae

- Clypeococcum hypocenomycidis* D.Hawksw.

## Class Eurotiomycetes

### Order Mycocaliciales

#### Family Mycocaliciaceae

- Chaenothecopsis pusilla* (Ach.) A.F.W.Schmidt
- Mycocalicium subtile* (Pers.) Szatala
- Stenocybe major* Körb.
- Stenocybe pullatula* (Ach.) Stein

#### Family Sphinctrinaceae

- Sphinctrina anglica* Nyl.
- Sphinctrina turbinata* Fr.

## Order Pyrenulales

### Family Pyrenulaceae

*Pyrenula pseudobufonia* (Rehm) R.C.Harris

## Order Verrucariales

### Family Verrucariaceae

*Agonimia allobata* (Stizenb.) P.James  
*Dermatocarpon luridum* var. *luridum* (Dill. ex With.) J.R.Laundon  
*Dermatocarpon miniatum* (L.) W.Mann  
*Dermatocarpon moulinsii* (Mont.) Zahlbr.  
*Normandina pulchella* (Borrer) Nyl.  
*Staurothele areolata* (Ach.) Lettau  
*Staurothele fissa* (Taylor) Zwackh.  
*Verrucaria* unknown sp

## Class Lecanoromycetes

## Order Acarosporales

### Family Acarosporaceae

*Acarospora fuscata* (Schrader) Arnold  
*Acarospora glaucocarpa* (Ach.) Korber  
*Acarospora privigna* (Ach.) A.Schneid.  
*Myriospora smaragdula* (Wahlenb.) Nägeli ex Uloth

## Order Baeomycetales

### Family Baeomycetaceae

*Baeomyces rufus* (Huds.) Rebert.

### Family Trapellaceae

*Trapeliopsis flexuosa* (Fr.) Coppins & P.James  
*Trapeliopsis granulosa* (Hoffm.) Lambsch.  
*Trapeliopsis viridescens* (Schrad.) Coppins & P.James

### Family Xylographaceae

*Xylographa parallela* (Ach.) Fr.

## Order Caliciales

### Family Caliciaceae

*Amandinea dakotensis* (H.Magn.) P.F.May & Sheard  
*Amandinea punctata* (Hoffm.) Coppins & Scheid.  
*Buellia arnoldii* Servit  
*Buellia disciformis* (Fr.) Mudd  
*Buellia erubescens* Arnold  
*Buellia schaeferi* De Not.  
*Calicium lucidum* (Th.Fr.) M.Prieto & Wedin  
*Calicium parvum* Tibell  
*Calicium salicinum* Pers.  
*Calicium tigillare* (Ach.) Pers.  
*Calicium trabinellum* (Ach.) Ach.  
*Chrimofulvea dialyta* (Nyl.) Marbach  
*Dimelaena oreina* (Ach.) Norman  
*Pyxine soredata* (Ach.) Mont.

### Family Physciaceae

*Anaptychia palmulata* (Michx.) Vain.  
*Heterodermia hypoleuca* (Ach.) Trevisan  
*Heterodermia speciosa* (Wulfen) Trevis.  
*Phaeophyscia adiastrata* (Essl.) Essl.

*Phaeophyscia erythrocardia* (Tuck.) Essl.  
*Phaeophyscia hirsuta* (Mereschk.) Essl.  
*Phaeophyscia hirtella* Essl.  
*Phaeophyscia hispidula* (Ach.) Essl.  
*Phaeophyscia orbicularis* (Neck.) Moberg  
*Phaeophyscia pusilloides* (Zahlbr.) Essl.  
*Phaeophyscia rubropulchra* (Degel.) Essl.  
*Phaeophyscia sciastra* (Ach.) Moberg  
*Physcia adscendens* H.Olivier  
*Physcia aipolia* var. *aipolia* (Ehrh. ex Humb.) Fürnr.  
*Physcia caesia* (Hoffm.) Fürnr.  
*Physcia dubia* (Hoffm.) Lettau  
(?) *Physcia millegrana* Degel.  
*Physcia phaea* (Tuck.) J.W.Thomson  
*Physcia stellaris* (L.) Nyl.  
(?) *Physcia subtilis* Degelius  
*Physcia tenella* (Scop.) DC.  
*Physcia thomsoniana* Essl.  
*Physcia tribacia* (Ach.) Nyl.  
*Physciella chloantha* (Ach.) Essl.  
*Physconia detersa* (Nyl.) Poelt  
*Physconia enteroxantha* (Nyl.) Poelt  
*Physconia leucoleiptes* (Tuck.) Essl.  
*Physconia muscigena* (Ach.) Poelt  
*Physconia perisidiosa* (Erichsen) Moberg  
*Rinodina archaea* (Ach.) Arnold  
*Rinodina populicola* H. Magn.

**incertae sedis**

*Dictyocatenulata alba* Finley & E.F.Morris

**Order Lecanorales**

**Family Cladoniaceae**

*Cladonia acuminata* (Ach.) Norrl.  
*Cladonia arbuscula* subsp. *arbuscula* (Wallr.) Flot.  
*Cladonia arbuscula* subsp. *mitis* (Sandst.) Ruoss  
*Cladonia bacilliformis* (Nyl.) Glück  
*Cladonia botrytes* (K.G.Hagen) Willd.  
*Cladonia cariosa* (Ach.) Spreng.  
*Cladonia carneola* (Fr.) Fr.  
*Cladonia cenotea* (Ach.) Schaer.  
*Cladonia chlorophaea* (Flörke ex Sommerf.) Spreng.  
*Cladonia coccifera* (L.) Willd.  
*Cladonia coniocraea* (Flörke) Spreng.  
*Cladonia conista* (Ach.) Robbins  
*Cladonia cornuta* (L.) Hoffm.  
*Cladonia crispata* (Ach.) Flotow  
*Cladonia cristatella* Tuck.  
*Cladonia decorticata* (Flörke) Spreng.  
*Cladonia deformis* L. (Hoffm.)  
*Cladonia digitata* L. (Hoffm.)  
*Cladonia ecmocyna* Leight.  
*Cladonia farinacea* (Vain.) A.Evans  
*Cladonia fimbriata* L. (Fr.)  
*Cladonia floerkeana* (Fr.) Flörke  
*Cladonia furcata* (Huds.) Schrad.  
*Cladonia gracilis* (L.) Willd.

*Cladonia grayi* G.Merr. Ex Sandst.  
*Cladonia humilis* (With.) J.R.Laundon  
*Cladonia macilenta* var. *bacillaris* (Leighton) Arnold  
*Cladonia multififormis* G.K.Kerr.  
*Cladonia ochrochlora* Flörke  
*Cladonia peziziformis* (With.) J.R.Laundon  
*Cladonia phyllophora* Ehrh. Ex Hoffm.  
*Cladonia pleurota* (Flörke) Schaer  
*Cladonia pocillum* (Ach.) O.J.Rich.  
*Cladonia pyxidata* (L.) Hoffm.  
*Cladonia ramulosa* (With.) J.R.Laundon  
*Cladonia rangiferina* (L.) Weber ex F.H.Wigg.  
*Cladonia rei* Schaer.  
*Cladonia robbinsii* A.Evans  
*Cladonia scabriuscula* (Delise) Nyl.  
*Cladonia squamosa* var. *squamosa* (Scop.) Hoffm.  
*Cladonia stellaris* (Opiz) Pouzar & V?zda  
*Cladonia subcariosa* (fumarprotocetraric acid strain) Nyl.  
*Cladonia subcariosa* (norstictic acid strain) Nyl.  
*Cladonia sulphurina* (Michx.) Fr.  
*Cladonia symphyrcarpia* (Ach.) Fr.  
*Cladonia turgida* Ehrh. Ex Hoffm.  
*Cladonia uncialis* subsp. *uncialis* (L.) Weber  
*Cladonia verticillata* (Hoffm.) Schaer.

#### Family Lecanoraceae

*Lecanora albella* var. *rubescens* (Imshaug & Brodo) Lumbsch  
*Lecanora allophana* Nyl.  
*Lecanora argopholis* (Ach.) Ach.  
*Lecanora caesiorubella* var. *caesiorubella* (Mudd) H.Mayrhofer  
*Lecanora carpinea* (L.) Vainio  
*Lecanora cateilea* (Ach.) A.Massal.  
*Lecanora cenisia* Ach.  
*Lecanora chlarotera* Nyl.  
*Lecanora chlorophaeodes* Nyl.  
*Lecanora conizaeoides* Nyl.  
*Lecanora glabrata* (Ach.) Malme  
 (?) *Lecanora impudens* Degel.  
*Lecanora polytropa* (Ehrh.) Rabenh.  
*Lecanora pulicaris* (Pers.) Ach.  
*Lecanora strobilina* (Spran.) Kieff.  
*Lecanora symmicta* (Ach.) Ach.  
*Lecanora thysanophora* R.C. Harris  
*Lecanora varia* (Hoffm.) Ach.  
*Lecidella stigmatea* (Ach.) Hertel & Leuckert  
*Myriolecis crenulata* (Ach.) ?liwa Zhao Xin & Lumbsch  
*Myriolecis dispersa* (Pers.) ?liwa Zhao Xin & Lumbsch  
*Protoparmeliopsis muralis* (Schreb.) M.Choisy  
*Rhizoplaca chrysoleuca* (Sm.) Zopf  
*Rhizoplaca melanophthalma* subsp. *melanophthalma* (DC.) Leuckert  
*Rhizoplaca subdiscrepans* (Nyl.) R.Sant.

#### Family Parmeliaceae

*Ahtiana aurescens* (Tuck.) Thell & Randle  
*Bryoria furcellata* (Fr.) Brodo & D.Hawksw.  
*Bryoria fuscescens* (Gyeln.) Brodo & D.Hawksw.  
*Bryoria trichodes* subsp. *trichodes* (Michx.) Brodo & D.Hawksw.  
*Cetraria arenaria* Kärnef.



*Cetrelia chicitae* (W.L.Culb.) W.L.Culb. & C.F.Culb.  
*Cetrelia olivetorum* (Nyl.) W.L.Culb. & C.F.Culb.  
*Dolichousnea longissima* (Ach.) Articus  
*Evernia mesomorpha* Nyl.  
*Evernia prunastri* (L.) Ach.  
*Flavoparmelia baltimorensis* (Gyeln. & F6riss) Hale  
*Flavoparmelia caperata* (L.) Hale  
*Hypogymnia physodes* (L.) Nyl.  
*Hypogymnia tubulosa* (Schaer.) Hav.  
*Hypogymnia vittata* (Ach.) Parrique  
*Imshaugia aleurites* (Ach.) S.L.F.Mey  
*Imshaugia placorodia* (Ach.) S.L.F.Mey  
(?) *Melanelixia fulginosa* (Fr.ex Duby) O.Blanco, A.Crespo, Divakar, Essl, D.Hawksw. & Lumbsch  
*Melanelixia subargentifera* (Nyl.) O.Blanco, A.Crespo, Divakar, Essl., D.Hawksw. & Lumbsch  
*Melanelixia subaurifera* (Nyl.) O.Blanco, A.Crespo, Divakar, Essl., D.Hawksw. & Lumbsch  
*Melanohalea elegantula* (Zahlbr.) O.Blanco, A.Crespo, Divakar, Essl., D.Hawksw. & Lumbsch  
*Melanohalea exasperata* (De Not.) O.Blanco, A.Crespo, Divakar, Essl. D.Hawksw. & Lumbsch  
*Melanohalea exasperatula* (Nyl.) O.Blanco, A.Crespo, Divakar, Essl., D.Hawksw. & Lumbsch  
*Melanohalea olivacea* (L.) O.Blanco, A.Crespo, Divakar, Essl., D.Hawksw. & Lumbsch  
*Melanohalea septentrionalis* (Lyn.) O.Blanco, A.Crespo, Divakar, Essl, D.Hawksw. & Lumbsch  
*Melanohalea subolivacea* (Nyl.) O.Blanco, A.Crespo, Divakar, Essl., D.Hawksw. & Lumbsch  
*Montanelia disjuncta* (Erichsen) Divakar, A.Crespo, Wedin & Essl.  
*Montanelia panniformis* (Nyl.) Divakar, A.Crespo, Wedin & Essl.  
*Montanelia sorediata* (Ach.) Divakar, A.Crespo, Wedin & Essl.  
*Myelochroa aurulenta* (Tuck.) Elix&Hale  
*Myelochroa galbina* (Ach.) Elix.&Hale  
*Parmelia saxatilis* (L.) Ach.  
*Parmelia squarrosa* Hale  
*Parmelia sulcata* Taylor  
*Parmeliopsis ambigua* (Hoffm.) Nyl.  
*Parmotrema crinitum* (Ach.) M.Choisy  
*Platismatia tuckermanii* (Oakes) W.L.Culb. & C.F.Culb.  
*Protoparmelia hypotremella* Herk et al.  
*Pseudevernia consocians* (Vainio) Hale & W.L.Culb.  
*Punctelia bolliana* (M6ll.Arg.) Krog  
(?) *Punctelia caseana* Lendemmer&B.P.Hodk.  
(?) *Punctelia graminicola* (B.de Lesd.) Egan  
*Punctelia missouriensis* Wilhelm & Ladd  
*Punctelia rudecta* (Ach.) Kong  
*Tuckermanella fendleri* (Nyl.) Essl.  
*Tuckermannopsis americana* (Sprengel) Hale  
*Tuckermannopsis ciliaris* (Ach.) Gyelnik  
*Tuckermannopsis orbata* (Nyl.) M.J.Lai  
*Tuckermannopsis sepincola* (Ehrh.) Hale  
*Usnea cavernosa* Tuck.  
*Usnea ceratina* Ach.  
*Usnea hirta* (L.) Weber ex F.H.Wigg.  
*Usnea perplexans* Stirt.  
*Usnea rubicunda* Stirt.  
*Usnea subfloridana* Stirt.  
*Usnocetraria oakesiana* (Tuck.) M.J.Lai & J.C.Wei  
*Vulpicida pinastri* (Scop.) J.-E.Mattsson & M.J.Lai  
*Xanthoparmelia conspersa* (Ehrh. Ex Ach.) Hale  
*Xanthoparmelia cumberlandia* (Gyernic) Hale  
*Xanthoparmelia cumberlandia* 'narrow-lobed form' (Gyernic) Hale  
*Xanthoparmelia lineola* (E.C.Berry) Hale

*Xanthoparmelia plittii* (Gyeln.) Hale  
*Xanthoparmelia stenophylla* (Ach.) Ahti & D.Hawksw.

**Family Pilocarpaceae**

*Micarea melaena* (Nyl.) Hedl.  
*Micarea peliocarpa* (Anzi) Coppins & R.Sant.

**Family Psilolechiaceae**

*Psilolechia lucida* (Ach.) M.Choisy

**Family Psoraceae**

*Protoblastenia rupestris* (Scop.) J.Steiner  
*Psora globifera* (Ach.) A.Massal.

**Family Ramalinaceae**

*Bacidia bagliettoana* (A.Massal. & De Not.) Jatta  
*Bacidia laurocerasi* (Delise ex Duby) Zahlbr.  
*Bacidia rubella* (Hoffm.) A.Massal.  
*Bacidia schweinitzii* (E. Michener) A.Schneider  
*Biatora vernalis* (L.) Fr.  
*Bilimbia sabuletorum* (Sommerf.) Hafellner & Coppins  
*Ramalina americana* Hale  
*Ramalina calicaris* (L.) Röhl.  
*Ramalina dilacerata* (Hoffm.) Hoffm.  
*Ramalina farinacea* (L.) Ach.  
*Ramalina intermedia* (Delise ex Nyl.) Nyl.  
*Ramalina labiosorediata* Gasparyan, Sipman & Lücking  
*Ramalina obtusata* (Arnold) Bitter  
*Toninia populorum* (A.Massal.) Kistenich, Timdal, Bendiksbj & S.Ekman

**Family Sarrameanaceae**

*Loxospora elatina* (Ach.) A.Massal.

**Family Scoliciosporaceae**

*Scoliciosporum chlorococcum* (Graewe ex Stenh.) V?zda  
*Scoliciosporum umbrinum* (Ach.) Lojka

**Family Stereocaulaceae**

*Lepraria finkii* (de Lesd.) R.C.Harris  
*Lepraria incana* (L.) Ach.  
*Lepraria membranacea* (Dicks.) Vain.  
*Lepraria neglecta* (norstictic acid strain) (Nyl.) Erichsen  
*Lepraria vouauxii* (Hue) R.C.Harris  
*Stereocaulon condensatum* Hoffm.  
*Stereocaulon dactylophyllum* Flörke  
*Stereocaulon paschale* (L.) Hoffm.  
*Stereocaulon saxatile* H.Magn.  
*Stereocaulon subcoralloides* Nyl.  
*Stereocaulon tomentosum* Fr.

**Family Tephromelataceae**

(?) *Mycoblastus sanguinarioides* Kantvilus  
(?) *Mycoblastus sanguinarius* (L.) Norman

**Order Lecidiales**

**Family Lecidiaceae**

*Bryobilimbia hypnorum* (Lib.) Fryday, Printzen & S.Ekman  
*Lecidea tessellata* Flörke  
*Lecidea turgidula* Fr.  
*Mycobilimbia berengeriana* (Massal.) Hafellner & V. Wirth  
*Mycobilimbia pilularis* (Körber) Hafellner & Türk  
*Porpidia albocaerulescens* (Wulfen) Hertel & Knoph  
*Porpidia crustulata* (Ach.) Hertel & Knoph

## Order Ostropales

### Family Coenogoniaceae

- Coenogonium luteum* (Dicks.) Kalb & Lücking
- Coenogonium pineti* (Ach.) Lücking & Lumbsch

### Family Graphidaceae

- Diploschistes scruposus* (Schreb.) Norman
- Graphis scripta* (L.) Ach.

### Family Stictidaceae

- Stictis brunnescens* Gilenstam, H.Döring & Wedin (2006)
- Stictis urceolata* (Ach.) Gilenstam
- Thelotrema lepadinum* (Ach.) Ach.

### Family Thelenellaceae

- Julella fallaciosa* (Arnold) R.C.Harris

## Order Peltigerales

### Family Collemataceae

- Collema furfuraceum* (Schaer.) Du Rietz
- Collema pulcellum* Ach.
- Collema subflaccidum* Degel.
- Enchylium conglomeratum* (Hoffm.) Otálora P.M.Jørg. & Wedin
- Enchylium polycarpon* Otálora P.M.Jørg. & Wedin
- (?) *Leptogium burnetiae* Dodge
- Leptogium corticola* (Taylor) Tuck.
- Leptogium cyanescens* (Ach.) Körb.
- Leptogium milligranum* Sierk
- Leptogium saturninum* (Dicks.) Nyl.

### Family Lobariaceae

- Lobaria pulmonaria* (L.) Hoffm.
- Ricasolia quercizans* (Michx.) Stizenb.

### Family Massalongiaceae

- Polychidium muscicola* (Sw.) Gray

### Family Nephromataceae

- Nephroma bellum* (Spreng.) Tuck.
- Nephroma helveticum* subsp. *helveticum* Ach.
- Nephroma parile* (Ach.) Ach.
- Nephroma resupinatum* (L.) Ach.

### Family Pannariaceae

- Fuscopannaria leucosticta* (Tuck. ex E.Michener) P.M.Jørg.

### Family Peltigeraceae

- Peltigera apthosa* (L.) Willd.
- Peltigera canina* (L.) Willd.
- Peltigera degenii* Gyeln.
- (?) *Peltigera didactyla* (With.) J.R.Laundon
- Peltigera elisabethae* Gyeln.
- Peltigera evansiana* Gyeln.
- Peltigera extenuata* (Nyl.) Vain.
- Peltigera lepidophora* (Vain.) Bitter
- Peltigera leucophlebia* (Nyl.) Gyeln.
- Peltigera malacea* (Ach.) Funck
- Peltigera membranacea* (Ach.) Nyl.
- Peltigera polydactylon* subsp. *udeghe* Magain Mi?dl. & Sérus.
- Peltigera praetextata* (Flörke ex Sommerf.) Zopf
- Peltigera rufescens* (Weiss.) Humb.
- Solorina spongiosa* (Ach.) Anzi

### Family Placynthiaceae

- Placynthium nigrum* (Huds.) Gray

**Family Vahliellaceae**

*Vahliella leucophaea* (Vahl) P.M.Jørg.

**Order Pertusariales****Family Icmadophilaceae**

*Icmadophila ericetorum* (L.) Zahlbr.

**Family Megasporaceae**

*Aspicilia cinerea* (L.) Körb.

*Circinaria caesiocinerea* (Nyl. ex Malbr.) A.Nordin Savi? & Tibell

*Megaspora verrucosa* (Ach.) Hafellner & V.Wirth

**Family Ochrolechiaceae**

*Ochrolechia arborea* (Kreyer) Almb.

*Ochrolechia trochophora* var. *trochophora* (Vainio) Oshio

*Varicellaria velata* (Turner) I.Schmitt & Lumbsch

**Family Pertusariaceae**

*Lepra amara* (Ach.) Hafellner

*Lepra multipunctoides* (Dibben) Lendemer & R.C.Harris

*Lepra ophthalmiza* (Nyl.) Hafellner

*Lepra pustulata* (Brodo & W.L.Culb.) Lendemer & R.C.Harris

*Lepra trachythallina* (Erichsen) Lendemer & R.C.Harris

*Pertusaria alpina* Hepp

*Pertusaria consocians* Dibben

*Pertusaria globularis* (Ach.) Tuck.

*Pertusaria hymenia* (Ach.) Schaer.

*Pertusaria leioplaca* Müll. Arg.

*Pertusaria macounii* (Lamb) Dibben

*Pertusaria rubefacta* Erichsen

*Pertusaria sommerfeltii* (Flörke ex Sommerf.) Fr.

*Pertusaria* unknown

**Order Rhizocarpales****Family Rhizocarpaceae**

*Rhizocarpon disporum* (Nägeli ex Hepp) Müll.Arg.

*Rhizocarpon geminatum* Körb.

(?) *Rhizocarpon geographicum* (L.) DC.

*Rhizocarpon grande* (Flörke ex Flot.) Arnold

*Rhizocarpon lecanorinum* Anders

(?) *Rhizocarpon obscuratum* (Ach.) Massal.

*Rhizocarpon riparium* Rasanen

*Rhizocarpon* unknown sp

*Rhizocarpon* unknown sp 2

**Order Teloschistales****Family Teloschistaceae**

(?) *Athallia holocarpa* (Hoffm.) Arup, Frödén & Søchting

*Athallia pyracea* (Ach.) Arup Frödén & Søchting

*Caloplaca cerina* (Vain.) Zahlbr.

*Caloplaca fraudans* (Th.Fr.) H.Olivier

*Caloplaca microphyllina* (Tuck.) Hasse

*Caloplaca saxicola* (Hoffm.) Nordin

*Flavoplaca citrina* (Hoffm.) Arup, Frödén & Søchting

*Flavopunctelia flaventior* (Stirt.) Hale

*Flavopunctelia soledica* (Nyl.) Hale

*Gyalolechia flavorubescens* (Huds.) Søchting, Frödén & Arup

*Gyalolechia flavovirescens* (Wulfen) Søchting, Frödén & Arup

*Pachypeltis invadens* (Lyngé) Søchting et al.

*Polycauliona candelaria* (L.) Frödén, Arup & Søchting  
(?) *Polycauliona polycarpa* (Hoffm.) Frödén, Arup & Søchting  
*Rufoplaca arenaria* (Pers.) Arup, Søchting & Frödén  
*Rufoplaca oxfordensis* (Fink) Arup, Søchting & Frödén  
*Rusavskia elegans* (Link) S.Y. Kondr. & Kärnefelt  
*Xanthomendoza fallax* (Hepp) Søchting, Kärnefelt & S. Kondr.  
*Xanthomendoza hasseana* (Räsänen) Søchting, Kärnefelt & S. Kondr.

#### **Order Umbilicariales**

##### **Family Ophioparmaceae**

*Hypocenomyce scalaris* (Ach.) M.Choisy

##### **Family Umbilicariaceae**

*Lasallia papulosa* (Ach.) Llano  
*Umbilicaria americana* Poelt & Nash  
*Umbilicaria deusta* (L.) Baumg.  
*Umbilicaria hypoborea* var. *hypoborea* (Ach.) Hoffm.  
*Umbilicaria mammulata* (Ach.) Tuck.  
*Umbilicaria muehlenbergii* (Ach.) Tuck.  
*Umbilicaria torrefacta* (Lightf.) Schrad.  
*Umbilicaria vellea* (L.) Ach.  
*Umbilicaria virginis* Schaer.  
*Xylopsora friesii* (Ach.) Bendiksby & Timdal

#### **Class Lichinomycetes**

##### **Order Lichinales**

##### **Family Lichinaceae**

*Ephebe lanata* (L.) Vain.

## **KINGDOM ANIMALIA**

The animal kingdom includes a number of ‘basal’ groups that are entirely aquatic and mostly marine. Of these groups, only the sponges (Phylum Porifera, addressed by Kolomyjct 2021) and coelenterates (Phylum Cnidaria) are represented in the fresh waters of the Huron Mt. region. The large clade of the Bilateria – the bilaterally symmetrical animals – is further divided into the Protostomia and Deuterostomia. Protostomes include some very important groups – the Arthropoda and the Mollusca – that are well-represented in the Hurons. Other groups that are certainly present in some diversity, but are poorly documented include the various ‘worms’ (Platyhelminthes, Annelida, Nematoda), Tardigrada, and Rotifera. Other than the arthropods, and some other groups as noted, most of the species in these groups are documented by Yanoviak and McCafferty (1996); their listings are prefaced here by a “†”. Taxonomy is checked against ITIS.

### **Phylum PORIFERA**

#### **Class Demospongiae**

##### **Order Spongillida**

##### **Family Metaniidae**

*Corvomeyenia everetti* (Mills)

##### **Family Spongillidae**

*Anheteromeyenia argyrosperma* (Potts)  
*Ephydatia muelleri* (Lieberkühn)  
*Eunapius fragilis* (Leidy)  
*Heteromeyenia baileyi* (Bowerbank)  
*Racekiela ryderii* (Potts)  
†*Spongilla lacustris* (Linnaeus)

## Phylum CNIDARIA

### Class Hydrozoa

#### Order Hyroida

##### Family Hydridae

†*Hydra* sp.

## Phylum PLATYHELMINTHES

### Class Cestoda

#### Order Cyclophyllidae

##### Family Hymenolepis

#*Hymenolepis folkertsi* sp.nov.

### Class Turbellaria

#### Order Tricladida

##### Family Planariidae

†*Dugesia tigrina* Girard

†*Phagocata* sp.

## Phylum NEMATOMORPHA

### Class Gordioida

#### Order Gordea

##### Family Gordiidae

†*Gordius* sp.

## Phylum ANNELIDA

### Subphylum CLITELLATA

A few annelids were reported by Yanoviak and McCafferty (1999), but other records are from unpublished reports to the Foundation, including: Kopenski (1963) for leaches (Subclass Hirudinea), Lilleskov et al. (2005) and Wetzel (2013) for earthworms (terrestrial Oligochaeta), and Wetzel (2010-2014) for aquatic oligochaetes and earthworms. This phylum is certainly represented by many more species. Taxonomy is checked against ITIS and family and Order assignments have changed from Kopenski's listing, but only one binomial is updated: *Dina fervida* is reassigned to *Mooreobdella*.

### Class Clitellata

#### Subclass Hirudinea

#### Order Rhynchobdellida

##### Family Glossiphoniidae

*Glossiphonia complanata* (Linnaeus)

*Helobdella stagnalis* (Linnaeus)

*Placobdella hollensis* (Whitman)

#### Order Arhynchobdellida

**Family Haemopidae**

*Haemopsis grandis* Verrill  
*Haemopsis marmorata* (Say)

**Family Erpobdellidae**

†*Dina parva* Moore  
*Mooreobdella fervida* Verrill  
*Erpobdella punctata* (Leidy)  
*Nephelopsis obscura* Verrill

**Subclass Oligochaeta**

**Order Enchytraeida**

**Family Enchytraidae**

*Cognettia* sp.  
*Enchytraeus* sp.  
*Henlea* sp.  
*Marionina* sp.

**Order Lumbriculida**

**Family Lumbriculidae**

*Eclipidrilus lacustris* (Verrill)  
*Eclipidrilus* sp. (immature)  
†*Lumbriculus variegatus* (Müller)  
*Lumbriculus* sp. (immature)

**Order Opisthopora**

**Family Lumbricidae** (earthworms)

Most of the earthworms present in northeastern North America are non-native, accidentally introduced, primarily from Europe. Their spread through forest ecosystems is causing substantial changes in soil properties and potentially in biological communities. *Sparganophilus meansi* is native to North America, but known from only three localities; this is the first record for Michigan.

*Allolobophora chlorotica* (Savigny)  
*Aporrectodea caliginosa* Seigny  
*Aporrectodea rosea* (Savigny)  
*Aporrectodea longa* (Ude)  
*Aporrectodea trapezoides* (Dugès)  
*Aporrectodea tuberculata* (Eisen)  
*Dendrobaena octaedra* (Savigny)  
*Dendrodrilus rubidus* (Savigny)  
*Eiseniella tetraedra* (Savigny)  
*Lumbricus rubellus* Hoffmeister  
*Lumbricus terrestris* L.  
*Octolasion cyaneum* (Savigny)  
*Octolasion tyrtaeum* (Savigny)

**Family Sparganophilidae**

*Sparganophilus meansi* Reynolds

**Order Tubificida**

**Family Naididae**

**Subfamily Naidinae**

*Amphichaeta americana* Chen  
*Arcteonais lomondi* (Martin)  
*Chaetogaster diaphanus* (Gruithuisen)  
*Chaetogaster diastrophus* (Gruithuisen)  
*Dero digitata* (Müller)  
*Dero nivea* Aiyer  
*Nais behningi* Michaelsen  
*Nais communis* Piguet  
*Nais pardalis* Piguet  
*Nais pseudobtusa* Piguet

*Nais simplex* Piguet  
*Nais variabilis* Piguet  
*Ophidonais serpentine* (Müller)  
*Piguetiella michiganensis* Hiltunen  
*Ripistes parasita* (Schmidt)  
*Slavina appendiculata* (d'Udekem)  
*Specaria josinae* (Vejdovský)  
*Stylaria lacustris* (Linnaeus)  
*Uncinaiis uncinata* (Ørsted)  
*Vejdovskyella comata* (Vejdovský)

**Subfamily Pristininae**

*Pristina leidy* Smith  
*Pristina osborni* (Walton)  
*Pristina* sp.

**Subfamily Rhyacodrilinae**

*Rhyacodrilus cf. sodalis* (Eisen)  
*Rhyacodrilus cf. subterraneus* Hrabě

**Subfamily Tubificinae**

*Aulodrilus pigueti* Kowalewski  
*Ilyodrilus templetoni* (Southern)  
*Limnodrilus hoffmeisteri* Claparède  
*Spirosperma ferox* Eisen

**Phylum MOLLUSCA**

This list is drawn primarily from unpublished reports to the Huron Mt. Wildlife Foundation. Henry van der Schalie, of the University of Michigan, surveyed molluscs at the Huron Mt. Club in 1958; species recorded in that survey are denoted by a “[V]” following the name. I have been unable to find modern references to the following species from van der Schalie’s list: *Helisoma antrosum*, *Gyraulus hirsutum*, *Ferrissia simulans*, *Anodonta marginata*. These names may have been changed to or subsumed in names already on the list; for now they are not included in the following tally.

Additional species are from reports by J. B. Burch, also of the University of Michigan (1965, 1969), and Eric North (2007,2008). Burch records aquatic species by locality, and this information is coded in letters following species names as follows: H=Howe L., MP= Middle Pine L., I=Ives L., R=Rush L., L=Lily Pond, A=Ann L, Ca=Canyon L., M=Mountain L., Co=Connor L., CB=Cranberry Bog. A “T” following the name indicates a terrestrial species. Four additional stream species are from Yanoviak and McCafferty (1996), as indicated by “†”. This revision includes about 20 species added from the "Invert EBase" portal (<https://invertebase.org/portal/index.php>) of the Symbiota meta-database of museum and institutional collections; these are prefaced with a "#". The 'EBase' data resolves about 10 species of tiny clams in the genera *Pisidium* and *Euglesa*, previously listed simply as '*Pisidium* spp',

*Planorbella multivolvis* calls for special mention. The species was first described by Case in 1847 (then named *Planorbis multivolvis*) from “the northern part of Michigan,” but precise provenance was not given. Walker (1907, 1929) discounts other collections identified as *P. multivolvis*, except for collections from Howe Lake in 1906. Walker further argues that the original collections were probably from the same locale, and that the species may well be strictly endemic to Howe Lake. *P. multivolvis* has not been collected since; van der Schalie (1958) says “we also tried to find *Planorbis multivolvis* Case which has eluded Bryant Walker, Lloyd Smith, Dick Manville, Emile Abdel-Malek... Although I walked completely around the Howe Lake shore in my waders, there was not a sign of this species that was collected about 1847. ... Howe Lake evidently has changed in the last hundred years. The shell fauna evidently is no longer what it formerly was.” The taxon is classified as endangered by the Michigan Department of Natural Resources, and described in various references as ‘probably extinct’. There is some debate as to the taxonomic legitimacy of the species (it is sometimes considered a variant of *P. campanulata*), but, because of its special status at the Huron Mt. Club, I have listed it here.

The taxonomic level of 'Order' appears to no longer be used for the Gastropoda (snails and slugs). I have retained



former Order names for now, but these do not correspond simply to phylogenetic units.

The current listing includes about 80 taxa of molluscs. 23 are bivalves (mussels and clams), all aquatic. Of the gastropods, about half are terrestrial. Several taxonomic ambiguities remain; where uncertain identifications are likely to be distinct taxa, I have retained them.

## **Class Bivalvia**

### **Subclass Heterodonta**

#### **Order Veneroida**

##### **Family Sphaeridae**

- #*Euglesa casertana* (Poli, 1791)
- #*Euglesa compressa* (Prime, 1852)
- #*Euglesa fallax* (Sterki, 1896)
- #*Euglesa ferruginea* (Prime, 1852)
- #*Euglesa lilljeborgii* (Clessin, 1886)
- #*Euglesa nitida* (Jenyns, 1832)
- Musculium securis* (Prime) H,A,Ca
- Musculium* sp CB
- #*Pisidium insigne* Gabb
- #*Pisidium punctatum* Sterki
- †*Sphaerium nitidum* Westerlund
- Sphaerium rhomboideum* (Say) MP,Ca
- †*Sphaerium simile* (Say)
- #*Sphaerium striatinum* (Lamarck)
- Sphaerium* sp.,MP,R,M

### **Subclass Palaeoheterodonta**

#### **Order Unionida**

##### **Family Unionidae**

- Anodonta grandis* Say,MP,I,R,M
- #*Anodonta lacustris* I. Lea
- Anodontoides ferussacianus* (I. Lea) [V]
- Elliptio complanata* (Lightfoot) MP
- Lampsilis siliquoidea* (Barnes) MP
- Lasmigona compressa* (I. Lea) [V]
- #*Pyganodon grandis* (Say)
- Pyganodon lacustris* (Lea) I,H,R,Ca

## **Class Gastropoda**

#### **Order Allogastropoda**

##### **Family Valvatidae**

- #*Valvata lewisi* Currier
- #*Valvata tricarinata* (Say)

#### **Order Architaenioglossa**

##### **Family Viviparidae**

- Campeloma* cf *decisum* (Say) [V]
- #*Campeloma milesi* (I. Lea)
- Campeloma* sp MP

#### **Order Basommatophora**

##### **Family Ancyliidae**

- Ferrissia parallela* (Haldeman) H,R,L,Ca

†*Ferrissia rivularis* (Say)

*Ferrissia* sp CB

**Family Carychiidae**

*Carychium exile* Lea L

**Family Lymnaeidae**

*Fossaria galbana* (Say) R

*Fossaria humilis* (Say) [V]

*Fossaria parva* (I. Lea) [V]

#*Galba dalli* (F.C. Baker)

#*Galba humilis* (Say)

#*Ladislavella emarginata* (Say)

*Lymnaea stagnalis* (Linnaeus) MP

*Pseudosuccinea columella* (Say) A

*Stagnicola exilis* (I. Lea) MP

**Family Physidae**

#*Physella acuta* (Draparnaud)

*Physella ancillaria* (Say) [V]

*Physella* cf. *gyrina* (Say) MP

*Physella sayi* Tappan, Co, CB, H, R, L, A

*Physella* sp Ca, M

**Family Planorbidae**

#*Gyraulus albus* (O.F. Müller)

*Gyraulus* cf. *deflectus* Say, A

*Gyraulus circumstriatus* (Tryon) R

*Gyraulus deflectus* (Say) H

*Gyraulus parvus* (Say) Co, H, R, M

*Helisoma anceps* (Menke) Co, MP, H, R, A, Ca, M

†*Menetus* sp

*Planorbella campanulata* (Say) CB, MP, H, R, M

*Planorbella corpulenta* (Say) [V]

*Planorbella multivolvis* (Case) H

*Planorbella trivolvis* (Say) CB, H, R

*Promenetus exacuus* (Say) MP, H, R, A, Ca, M

**Order Neotaenioglossa**

**Family Hydrobiidae**

#*Amnicola integra* (Say)

*Amnicola limosus* (Say) Co, MP, R, A, M

#*Cincinnatia integra* (Say)

**Order Stylommatophora**

**Family Cochlicopidae**

*Cochlicopa lubrica* (Muller) [V] T

**Family Discidae**

*Anguispira alternata* (Say) [V] T

*Discus catskillensis* (Pilsbry) [V] T

**Family Helicarionidae**

*Euconulus fulvus* (Muller) T

*Helicodiscus parallelus* (Say) [V] T

**Family Limacidae**

*Deroceras laeve* (Muller) [V] T

*Deroceras reticulatum* (Muller) [V] T

**Family Philomycidae**

*Pallifera hemphilli* (A. Binney) T

**Family Polygyridae**

*Euchemotrema fraternum* (Say) [V] T

#*Neohelix albolabris* (Say)  
*Triodopsis albolabris* (Say) [V] T

**Family Punctidae**

*Punctum minutissimum* (Lea) T

**Family Pupillidae**

*Columella simplex* (Gould) T

*Gastrocopta pentodon* (Say) T

*Vertigo* sp T

**Family Strobilopsidae**

*Strobilops labyrinthicus* (Say) T

**Family Valloniidae**

*Zoogenetes harpa* (Say) T

**Family Zonitidae**

*Glyphalinia indentata* (Say) T

*Nesovitrea binneyana* (E.S. Morse) T

*Paravitrea multidentata* (A. Binney) T

*Striatura exigua* (Stimpson) T

*Striatura milium* (E. S. Morse) T

*Zonitoides arboreus* (Say) [V] T

**Phylum ARTHROPODA**

**Subphylum CRUSTACEA**

Crustacea listings are derived from miscellaneous reports including: Terrestrial Isopoda (suborder Oniscidia), or 'woodlice', the only crustaceans that have been truly successful in invading the land, recorded by Jennifer Stoyenoff (2002, unpublished report); a number of planktonic Cladocera and Copepoda from Ives Lake by Ashley Burtner (unpublished report 2016).

**Class Branchipoda**

**Order Cladocera**

**Family Bosminidae**

*Bosmina longirostris* (O. F. Müller)

*Diaphanosoma birgei* Korinek

**Family Daphniidae**

*Daphnia galeata mendotae* G.O. Sars

**Family Holopedidae**

*Holopedium gibberum* Zaddach

**Family Polyphemidae**

*Polyphemus pediculus* O. F. Müller

**Class Malacostraca**

**Superorder Eucarida**

**Order Decapoda**

**Family Cambaridae (crayfish)**

#*Faxonius propinquus* (Girard)

†*Orconectes propinquus* (Girard)

**Superorder Peracarida**

**Order Amphipoda**

**Family Gammaridae**

†*Gammarus pseudolimnaeus* Hynes and Harper

**Family Hyalellidae**

†*Hyalella azteca* Saussure

**Order Isopoda****Suborder Asellota****Family Asellidae**†*Caecidotea racovitzai* (Williams)†*Lirceus lineatus* (Say)**Suborder Oniscidea****Family Trichoniscidae***Trichoniscus pusillus* Brandt**Family Cylisticidae***Cylisticus convexus* (DeGeer)**Family Porcellionidae***Porcellio scaber* Latreille*Porcellio spinicornis* Say**Family Trachelipidae***Trachelipus rathkei* (Brandt)**Class Maxillopoda****Subclass Copepoda****Order Calanoida****Family Diaptomidae***Diaptomus ashlandi* Marsh*Diaptomus minutus* Westwood**Family Temoridae***Epischura lacustris* S. A. Forbes**Order Cyclopoida****Family Cyclopidae***Cyclops bicuspidatus thomasi* Claus*Tropocyclops prasinus mexicanus* Kiefer**Subphylum HEXAPODA****Class Insecta**

Insects, representing the bulk of multi-cellular biodiversity are, except for some particularly charismatic groups, both extremely under-represented in most inventories and relatively poorly understood taxonomically. At the Huron Mt. Club Orders Ephemeroptera (mayflies) and Odonata (dragonflies and damselflies) and Families Carabidae and Cerambycidae (long-horned beetles) in the Coleoptera are particularly well-documented (see references associated with those groups), and recent work has dramatically improved records for Lepidoptera (moths and butterflies). These groups are also relatively well-addressed taxonomically; consequently, the current lists are likely to remain fairly stable. Other groups are less well-treated, and a complete tally of insects for the Huron Mt. Club would certainly be many times longer than the current list. The only general list of insects is by Andrews from *The Book of Huron Mountain* (1929) (see Gosling 1983). Andrews' taxonomy required extensive updating, and about 20 names could not be found in current resources; these are not included in the current list. The Andrews list may include species not actually observed at the Huron Mt. Club, but only 'expected'; for example, *Sphex ichneumoneus* is listed by Andrews but is unlikely to occur in the study area as its host species is unknown in the area, and I have removed it from this list. Species listed by Andrews are denoted by an asterisk ("\*"). Yanoviak and McCafferty (1996) list of stream macroinvertebrates includes many insects of several orders. Ronald Priest has added several dozen species of leaf-mining insects of several orders (unpublished reports 2003-2014; Adamski et al. 2014, Priest et al. 2019). A number of species, primarily Coleoptera, Hymenoptera, and Diptera are documented as hosts in O'Connor's (1987) unpublished report on astigmatid mites. Mark O'Brien's collections, while focused on particular groups (as noted below), have also

added records broadly. Finally, around 110 species were added in this revision from collections data compiled at the 'SCAN' (Symbiota Collections of Arthropods Network) portal of the Symbiota data-bases; these additions are prefaced by a "#".

Significant additions for specific orders of insects are noted below.

Unless otherwise noted for particular groups, taxonomy was checked on entry against ITIS (Integrated Taxonomic Information System) ([www.itis.gov](http://www.itis.gov)), *Nomina Insecta Nearctica* ([www.nearctica.com/nomina/main.htm](http://www.nearctica.com/nomina/main.htm)), or the Global Biodiversity Information Facility ([www.gbif.org](http://www.gbif.org)). Occasional reference was made to other university- and researcher-sponsored web-pages for particular groups. Higher-level taxonomy of Class Insecta is taken from the same sources and Arnett (1993). Because of the size of the Class, I have chosen to recognize more 'intermediate' taxonomic levels than elsewhere (subclasses, superorders, etc.). The rank of these taxonomic groups should be recognized as somewhat unstable (e.g. suborders are sometimes elevated to order status or demoted to superfamilies; indeed, Class Insecta is sometimes elevated to Subphylum status). Nonetheless, they serve to clarify systematic and phylogenetic relationships.

## **Subclass Pterygota**

### **Superorder Paleoptera**

Apparently a paraphyletic group (Tudge 2000), this grouping of Orders Ephemeroptera and Odonata remains a useful group or 'grade', including the most 'primitive' winged insects.

### **Order Ephemeroptera**

The list of Ephemeroptera – the mayflies – for the Huron Mt. Club is drawn primarily from the work of W. P. McCafferty (McCafferty 1992, 1994; unpublished reports). Nomenclature has been updated, and higher taxonomy organized according to the "Mayflies of North America" website (<http://www.entm.purdue.edu/entomology/research/mayfly/contents.html>), also maintained by McCafferty. To date, 83 species are included.

### **Suborder Carapacea**

#### **Family Baetiscidae**

*#Baetisca laurentina* McDunnough

### **Suborder Furcatergalia**

#### **Family Ephemeridae**

*Ephemera simulans* Walker

*Hexagenia limbata* (Serville)

*Litobrancha recurvata* (Morgan)

#### **Family Caenidae**

*Brachycercus n. sp.*

*Caenis amica* Hagen

*Caenis diminuta diminuta* Walker

*Caenis latipennis* Banks

*Caenis punctata* McDunnough

*Caenis youngi* Roemhild

#### **Family Ephemerellidae**

*Attenella margarita* (Needham)

*Dannella simplex* (McDunnough)

*Drunella cornuta* (Morgan)

*Drunella cornutella* (McDunnough)

*Ephemerella aurivillii* (Bengtsson)

*Ephemerella dorothea* Needham

*Ephemerella excrucians* Walsh  
*Ephemerella invaria* (Walker)  
*Ephemerella needhami* McDunnough  
*Ephemerella subvaria* McDunnough  
*Eurylophella aestiva* (McDunnough)  
*Eurylophella bicolor* (Clemens)  
*Eurylophella funeralis* (McDunnough)  
*Eurylophella temporalis* (McDunnough)  
*Eurylophella versimilis* (McDunnough)  
*Serratella molita* (McDunnough)  
*Serratella deficiens* (Morgan)

**Family Leptophlebiidae**

*Choroterpes fusca* Spieth  
*Choroterpes basalis* (Banks)  
*Leptophlebia cupida* (Say)  
*Leptophlebia nebulosa* (Walker)  
*Paraleptophlebia adoptiva* (McDunnough)  
*Paraleptophlebia debilis* (Walker)  
*Paraleptophlebia guttata* (McDunnough)  
*Paraleptophlebia mollis* (Eaton)  
*Paraleptophlebia praepedita* (Eaton)  
*Paraleptophlebia volitans* (McDunnough)

**Family Leptohiphidae**

*Tricorythodes minutus* Traver

**Suborder Pisciforma**

**Family Ameletidae**

*Ameletus lineatus* Traver

**Family Baetidae**

*Acentrella parvula* (McDunnough)  
*Acentrella turbida* (McDunnough)  
*Acerpenna macdunnoughi* (Ide)  
*Acerpenna pygmaea* (Hagen)  
*Baetis brunneicolor* McDunnough  
*Baetis flavistriga* McDunnough  
*Baetis intercalaris* McDunnough  
*Baetis pluto* McDunnough  
*Baetis tricaudatus* Dodds  
*Callibaetis fluctuans* (Walsh)  
*Callibaetis pallidus* Banks  
*Centroptilum album* McDunnough  
*Centroptilum convexum* Ide  
*Centroptilum triangulifer* (McDunnough)  
#*Dipheter hageni* (Eaton)  
*Plauditus dubius* (Walsh)  
*Plauditus punctiventris* (McDunnough)  
*Procloeon bellum* (McDunnough)  
*Procloeon mendax* (Walsh)  
*Procloeon rubropictum* (McDunnough)  
*Procloeon simplex* (McDunnough)

**Family Metretopodidae**

*Siphloplecton basale* (Walker)  
*Siphloplecton interlineatum* (Walsh)

**Family Siphonuridae**

*Siphonurus alternatus* (Say)  
*Siphonurus quebecensis* (Provancher)  
*Siphonurus rapidus* McDunnough

## Suborder Setisura

### Family Isonychiidae

*Isonychia bicolor* (Walker)

*Isonychia rufa* McDunnough

### Family Arthropleidae

*Arthroplea bipunctata* (McDunnough)

### Family Heptageniidae

*Epeorus vitreus* (Walker)

*Heptagenia diabasia* Burks

*Heptagenia flavescens* (Walsh)

*Heptagenia pulla* (Clemens)

*Leucrocuta hebe* (McDunnough)

*Rhithrogena impersonata* (McDunnough)

*Rhithrogena manifesta* Eaton

*Rhithrogena undulata* (Banks)

*Stenacron interpunctata* (Say)

*Stenonema exiguum* Traver

*Stenonema femorata* (Say)

#*Stenonema fuscum* (Clemens)

*Stenonema luteum* (Clemens)

*Stenonema modestum* (Banks)

*Stenonema pulchellum* (Walsh)

#*Stenonema rubrum* (McDunnough)

*Stenonema terminatum terminatum* (Walsh)

#*Stenonema tripunctatum* (Banks)

*Stenonema vicarium* (Walker)

## Order Odonata

Species lists for the Odonata – the dragonflies and damselflies – are drawn from reports to the Huron Mt. Wildlife Foundation by Mark F. O'Brien and Ethan Bright (University of Michigan). Their compilation includes records from several other collectors. Taxonomy, including family sequence, was checked against *Nomina Nearctica Insecta* (<http://www.nearctica.com/nomina/nomina.htm>) and lists maintained by the Dragonfly Society of the Americas (e.g., "List of Odonata of the World", 2002, <http://www2.ups.edu/biology/museum/worldodonates.html>). O'Brien and Bright's genus *Hylogomphus* is assigned by most current lists to *Gomphus*; we have kept *Hylogomphus* here. *Hylogomphus* (*Gomphus*) *brevis* appears to be a synonym for *H. adelphus*, and we have listed only the latter. No other disagreements have been identified. English names, given in parentheses, are also derived from the Dragonfly Society's list of accepted names; while these names can't yet be described as 'common names', the efforts of the Society to promote them as such are recognized. Several species have been added through personal communications from Dr. William Manierre, and from collections data-bases. 81 species are included in the current list.

## Suborder Zygoptera

### Family Calopterygidae

*Calopteryx aquaebilis* Say (River Jewelwing)

*Calopteryx maculata* (Beauvois) (Ebony Jewelwing)

### Family Lestidae

*Lestes congener* Hagen (Emerald Spreadwing)

*Lestes disjunctus disjunctus* Selys (Common Spreadwing)

*Lestes dryas* Kirby (Emerald Spreadwing)

*Lestes eurinus* Say (Amber-winged Spreadwing)

*Lestes forcipatus* Rambur (Sweetflag Spreadwing)

*Lestes rectangularis* Say (Slender Spreadwing)

*Lestes unguiculatus* Hagen (Lyre-tipped Spreadwing)

**Family Coenagrionidae**

*Amphiagrion saucium* Hagen (Easter Red Damsel)  
*Argia fumipennis violacea* (Hagen) (Violet Dancer)  
*Argia moesta* (Hagen) (Powdered Dancer)  
*Chromagrion conditum* (Hagen) (Aurora Damsel)  
*Coenagrion resolutum* (Hagen) (Taiga Bluet)  
#*Enallagma annexum* (Hagen) (eastern red damsel)  
*Enallagma boreale* (Selys) (Boreal Bluet)  
*Enallagma carunculatum* Morse (Tule Bluet)  
*Enallagma cyathigerum* (Charp.) (Northern Bluet)  
*Enallagma cyathigerum vernale* (Gloyd) (Spring Bluet)  
*Enallagma ebrium* (Hagen) (Marsh Bluet)  
*Enallagma exsulans* Hagen (Stream Bluet)  
*Enallagma geminatum* Kellicott (Skimming Bluet)  
*Enallagma hageni* (Walsh) (Hagen's Bluet)  
*Enallagma vernale* (Gloyd) (Spring Bluet)  
*Enallagma vesperum* Calvert (Vesper Bluet)  
*Ischnura posita* (Hagen) (Fragile Forktail)  
*Ischnura verticalis* (Say) (Eastern Forktail)  
*Nehalennia irene* (Hagen) (Sedge Sprite)

**Suborder Anisoptera****Family Aeshnidae**

*Aeshna canadensis* Walker (Canada Darner)  
*Aeshna constricta* Say (Lance-tipped Darner)  
*Aeshna eremita* Scudder (Lake Darner)  
*Aeshna interrupta* Walker (Variable Darner)  
*Aeshna tuberculifera* Walker (Black-tipped Darner)  
*Aeshna umbrosa* Walker (Shadow Darner)  
*Anax junius* (Drury) Common (Green Darner)  
*Basiaeschna janata* (Say) (Springtime Darner)  
*Boyeria vinosa* (Say) (Fawn Darner)  
*Gomphaeschna furcillata* (Say) (Harlequin Darner)

**Family Gomphidae**

*Arigomphus cornutus* (Tough) (Horned Clubtail)  
#*Arigomphus furcifer* (Hagen in Selys) (Lilypad Clubtail)  
*Dromogomphus spinosus* Selys (Black-shouldered Spinyleg)  
*Phanogomphus exilis* (Selys) (Lancet Clubtail)  
*Phanogomphus graslinellus* (Walsh) (Pronghorn Clubtail)  
*Phanogomphus lividus* (Selys) (Ashy Clubtail)  
*Phanogomphus quadricolor* (Walsh) (Rapids Clubtail)  
*Phanogomphus spicatus* (Hagen) (Dusky Clubtail)  
*Hagenius brevistylus* (Selys) (Dragonhunter)  
*Hylogomphus (Gomphus) adelphus* Selys (Mustached Clubtail)  
*Ophiogomphus carolus* Tough (Rifle Snaketail)  
*Ophiogomphus colubrinus* Selys (Boreal Snaketail)  
*Ophiogomphus rupinsulensis* (Walsh) (Rusty Snaketail)  
*Phanogomphus exilis* (Selys) (Lancet Clubtail)  
*Phanogomphus graslinellus* (Walsh) (Pronghorn Clubtail)  
*Phanogomphus lividus* (Selys) (Ashy Clubtail)  
*Phanogomphus quadricolor* (Walsh) (Rapids Clubtail)  
*Phanogomphus spicatus* (Hagen) (Dusky Clubtail)  
*Stylogomphus ablistylus* (Hagen) (Least Clubtail)  
*Stylurus scudderi* (Selys) (Zebra Clubtail)

**Family Cordulegastridae**

*Cordulegaster maculata* (Selys) (Twin-Spotted Spiketail)



**Family Macromidae**

*Didymops transversa* (Say) (Stream Cruiser)  
*Macromia illinoensis* Walsh Illinois (River Cruiser)

**Family Corduliidae**

*Cordulia shurtleffi* Scudder (American Emerald)  
*Dorocordulia libera* (Selys) (Racket-tailed emerald)  
*Epitheca canis* (MacLachlan) (Beaverpond baskettail)  
*Epitheca cynosura* (Say) (Common Baskettail)  
*Epitheca spinigera* (Selys) (Spiny Baskettail)  
*Neurocordulia yamaskanensis* (Provancher) (Stygian Shadowdragon)  
*Somatochlora cingulata* (Selys) (Lake Emerald)  
*Somatochlora elongata* Scudder (Ski-tailed Emerald)  
*Somatochlora forcipata* Scudder (Forcipate Emerald)  
*Somatochlora franklini* (Selys) (Delicate Emerald)  
*Somatochlora kennedyi* Walker (Kennedy's Emerald)  
*Somatochlora minor* Calvert (Ocellated Emerald)  
*Somatochlora walshii* (Scudder) (Brush-tipped Emerald)  
*Somatochlora williamsoni* Walker (Williamson's Emerald)

**Family Libellulidae**

*Celithemis elisa* (Hagen) (Calico Pennant)  
*Ladona julia* Uhler (Chalk-fronted Corporal)  
*Leucorrhinia frigida* (Hagen) (Frosted Whiteface)  
*Leucorrhinia glacialis* Hagen (Crimson-ringed Whitface)  
*Leucorrhinia hudsonica* (Selys) (Hudsonian Whiteface)  
*Leucorrhinia intacta* (Hagen) (Dot-tailed Whiteface)  
*Leucorrhinia proxima* Calvert (Red-waisted Whiteface)  
*Libellula pulchella* Drury (Twelve-spotted Skimmer)  
*Libellula quadrimaculata* Linnaeus (Four-spotted Skimmer)  
*#Pachydiplax longipennis* (Burmeister) (Blue Dasher)  
*Plathemis lydia* (Drury) (Common Whitetail)  
*Sympetrum costiferum* (Hagen) (Saffron-winged Meadow-hawk)  
*Sympetrum danae* (Sulzer) (Black Meadowhawk)  
*Sympetrum internum* Montgomery (Cherry-faced Meadow-hawk)  
*Sympetrum obtusum* (Hagen) (White-faced Meadow-hawk)  
*Sympetrum rubicundulum* (Say) (Ruby Meadow-hawk)  
*Sympetrum vicinum* (Hagen) (Yellow-legged Meadow-hawk)  
*Tramea lacerata* (Hagen) (Black Saddlebags)

**Subclass Neoptera****Superorder Orthopteroidea****Order Plecoptera****Family Capniidae**

†*Paracapnia angulata* Hanson

**Family Chloroperlidae**

†*Alloperla* sp.  
 †*Haploperla brevis* (Banks)

**Family Leuctridae**

†*Leuctra tenella* Provancher  
 †*Leuctra tenuis* (Pictet)

**Family Nemouridae**

†*Amphinemura linda* (Ricker)  
 †*Prostoia completa* (Walker)

**Family Perlidae**

†*Acroneuria lycorias* (Newman)

†*Paragentina media* (Walker)

**Family Perlodidae**

†*Isoperla cotta* Ricker

#*Isoperla dicala* Frison

†*Isoperla frisoni* Illies

†*Isoperla lata* Frison

†*Isoperla richardsoni* Frison

†*Isoperla signata* (Banks)

#*Isoperla slossonae* (Banks)

†*Isoperla transmarina* (Newman)

†*Isogenoides doratus* (Frison)

†*Isogenoides frontalis* (Newman)

†*Isogenoides olivaceus* (Walker)

†*Isogenoides* sp.

**Family Pteronarcyidae**

†*Pteronarcys dorsata* (Say)

**Family Taeniopterygidae**

†*Taeniopteryx burksi* Ricker and Ross

**Order Orthoptera**

The traditional “orthopterans” have been split into several orders. Here, Orthoptera in the strict sense includes grasshoppers, crickets, and katydids. Cockroaches are either included with mantids in Order Dictyoptera, or split into a separate order, Blattaria. Species listed here are from a report by T.H. Hubbell (1921), and recent collections by M. O’Brien and D. Gosling (O’Brien, personal communication, 2004). Several of Hubbell’s listings are not found in ITIS, but are in *Nomina Insecta Nearctica*, and so are included here. Hubbell lists a *Melanoplus dodgei huroni* Blatchley, a subspecies not referenced elsewhere; I have chosen to list *M. dodgei*.

**Suborder Caelifera** (grasshoppers, short-horned grasshoppers, locusts)

**Family Acrididae**

*Booneacris glacialis canadensis* (E.M. Walker)

*Camnula pellucida* (Scudder)

*Chloealtis abdominalis* (Thomas)

*Chloealtis conspersa* Harris

*Chorthippus curtipennis* Fieber

\**Dissosteira carolina* (L.)

*Melanoplus bivittatus* (Say)

*Melanoplus borealis* (Fieber)

*Melanoplus bruneri* Scudder

*Melanoplus confusus* Scudder

*Melanoplus dawsoni* (Scudder)

*Melanoplus fasciatus* (Walker)

*Melanoplus femurrubrum* (DeGeer)

\**Melanoplus huroni* Blatchley

*Melanoplus islandicus* Blatchley

*Melanoplus keeleri luridus* (Dodge)

\**Melanoplus sanguinipes* (Fabr.)

\**Melanoplus stonei* Rehn.

#*Pardalophora apiculata* (Harris)

*Spharagemon collare* (Scudder)

\**Spharagemon marmorata* (Harris)

*Stethophyma gracile* (Scudder)

*Stethophyma lineatum* (Scudder)

\**Trimerotropis verruculata* (Kirby)

**Family Tetrigidae**

*Nomotettix cristatus* (Scudder)  
*Tettigidea lateralis* (Say)  
*Tetrix arenosa angusta* (Hancock)  
#*Tetrix ornata hancocki* (Morse)  
*Tetrix ornata ornata* (Say)  
\**Tetrix subulata* (L.)

**Suborder Ensifera** (katydids, mole crickets, camel crickets)

**Family Gryllidae**

\**Acheta domestica* (L.)  
*Allonemobius allardi* (Alexander & Thomas)  
*Allonemobius fasciatus* (DeGeer)  
*Gryllus pennsylvanicus* Burm.  
*Gryllus veletis* (Alexander & Bigelow)  
*Neonemobius palustris* (Blatchley)  
\**Oecanthus niveus* (De Geer)

**Family Rhaphidophoridae**

*Ceuthophilus maculatus* (Harris)  
*Ceuthophilus brevipes* Scudder

**Family Tettigoniidae**

*Atlanticus testaceus* (Scudder)  
*Conocephalus fasciatus* (DeGeer)  
*Orchelimum gladiator* Bruner  
*Scudderia pistillata* Brunner

**Order Dictyoptera (or Blattaria)** (cockroaches)

**Family Blattellidae**

*Blatella germanica* (L.)  
*Parcoblatta virginica* (Brunner)  
*Parcoblatta pennsylvanica* (DeGeer)  
\**Periplaneta americana* (Linnaeus)

**Order Phasmida** (stick insects)

**Family Phasmidae**

\**Diapheromera femorata* Say

**Order Psocoptera**

Gary Eertmoed, of Chicago State University, sampled Psocoptera (“bark-lice”) at the Huron Mt. Club in 1985. This list is taken from his unpublished report to the Huron Mt. Wildlife Foundation. Eertmoed’s report lists 24 species; I list 22 as I have been unable to find any current reference to or authority for two species (*Ptycta atrata* and *Trichadenotecnum unum*). A third, *Peripsocus quadrifasciatus*, is not listed in ITIS or *Nomina Nearctica*, but several other current sources concur on an authority.

**Suborder Trogiomorpha**

**Family Lepidopsocidae**

*Echmepteryx hageni* (Packard)

**Suborder Troctomorpha**

**Family Amphisocidae**

*Polypsocus corruptus* (Hagen)

**Family Caeciludae**

*Caecilius flavidus* Stephens  
*Caecilius pinicola* Banks

**Family Elipsocidae**

*Reuterella helvimacula* Enderlein

**Family Epipsocidae**

*Bertkauia crosbyanus* Chapman  
*Bertkauia lepicidinaria* Chapman

**Family Lachesillidae**

*Anomopsocus amabilis* (Walsh)  
*Lachesilla contraforcepeta* Chapman

**Family Liposcelidae**

*Embidopsocus needhami* (Enderlein)

**Family Mesopsocidae**

*Mesopsocus laticeps* (Kolbe)  
*Mesopsocus unipunctatus* (Muller)

**Family Peripsocidae**

*Peripsocus alboguttatus* (Dalman)  
*Peripsocus maculosus* Mockford  
*Peripsocus quadrifasciatus* (Harris)

**Family Psocidae**

*Blaste quieta* (Hagen)  
*Blastopsocus lithinus* (Chapman)  
*Hyalopsocus floridanus* (Banks)  
*Loensia moesta* (Hagen)  
*Metylophorus novaescotiae* (Walker)  
*Psocus leidyi* Aaron  
*Ptycta polluta* (Walsh)  
*Trichadenotecnum majus* (Kolbe)

**Superorder Hemipteroidea**

The traditional Order Homoptera may be polyphyletic, and many authorities now merge it into Order Hemiptera as a set of suborders, however this has been challenged by claims that Homoptera is, in fact, monophyletic. I have kept the two traditional orders here under super-order Hemipteroidea. Most of the Homoptera listed are leaf-hoppers, spittle-bugs, and relatives from survey reports by Bess (2014, 2015, 2019).

**Order Hemiptera****Family Hydrometridae**

\**Gerris remigis* Say

**Family Notonectidae**

\**Notonecta undulata* Say

**Family Pentatomidae**

\**Acrosternum hilaris* (Say)

**Family Reduviidae**

\**Reduvius personatus* (Linnaeus)

**Order Homoptera****Family Caliscelidae**

*Aphelonema histrionica* (Stål)  
*Bruchomorpha occulata* Newman

**Family Cercopidae**

*Aphrophora cribrata* (Walker)  
*Lepyronia coleoptrata* (Linnaeus)  
*Philaenarcys bilineata* (Say)  
*Philaenus spumarius* (Linnaeus)

**Family Cicadellidae**

*Aceratagallia sanguinolenta* (Provencher)  
*Aguriahana stellulata* (Kirschen-Blattzikadel)

*Athysanus argentarius* Metcalf  
*Balclutha confluens* (Rey)  
*Balclutha impicta* Van Duzee  
*Chlorotettix unicoloratus* (Fitch)  
*Cloanthanus cuprescens* (Osborn)  
*Cicadula melanogaster* (Provancher)  
*Cicadula smithi* (Van Duzee)  
*Cicadula straminea* (Sanders and DeLong)  
*Commellus sexvittatus* (Van Duzee)  
*Cosmotettix delector* (Sanders and DeLong)  
*Dikraneura* sp.  
*Diplocolenus abdominalis* (Fabricius)  
*Diplocolenus configuratus* (Uhler)  
*Doratura stylata* (Boheman)  
*Draeculacephala constricta* (?) Davidson and DeLong  
*Elymana inornata* (Van Duzee)  
*Endria inimical* (Say)  
*Erythroneura* sp.  
*Graphocephala coccinea* (Forster)  
*Gyponana* sp. (F)  
*Gyponana* sp (nymphs)  
*Laevicephalus acus* (Sanders and DeLong)  
*Laevicephalus melsheimerii* (Fitch)  
*Laevicephalus minimus* (Osborn and Ball)  
*Laevicephalus sylvestris* (Osborn and Ball)  
*Latulus missellus* (Ball)  
*Limotettix* sp. 1 -  
*Limotettix* sp. 2 -  
*Macrosteles quadrilineatus* (Forbes)  
*Nesosteles neglecta* (DeLong and Davidson)  
*Paraphlepsius fulvidorsum* (Fitch)  
*Polyamia herbida* DeLong  
*Scaphoideus* sp. 1  
*Scaphoideus* sp. 2  
*Scaphytopius frontalis* (Van Duzee)  
*Scleroracus instabilis* (Van Duzee)  
*Scleroracus luteolus* (Sleesman)  
*Scleroracus shastus* (Ball)  
*Scleroracus vaccinia* (Van Duzee)  
*Sorhoanus orientalis* DeLong and Davidson  
*Stirellus bicolor* (Van Duzee)  
*Xestocephalus pulicarius* Van Duzee

**Family Cixiidae**

*Cixus pini* Fitch

**Family Clastopteridae**

*Clastoptera saintcyri* Provancher

**Family Cicadidae**

*Okanagana rimosa* (Say)

*Tibicen canicularis* (L.)

\**Tibicen lyricen* De Geer

**Family Delphacidae**

*Megamelus davisi* Van Duzee

*Muirodelphax arvensis* (Fitch)

*Muellerianella laminalis* (Van Duzee)

*Stenocranus felti* Van Duzee

Unknown sp 1

Unknown sp 2

Unknown sp 3

**Family Derbidae**

*Cedusa* sp.

**Family Membracidae**

\**Archasia auriculata* (Fitch)

*Ophiderma salamandra* Fairmaire

**Superorder Holometabola**

**Order Coleoptera**

Notes on sources for this massive Order are included with appropriate suborders and families. In addition to taxon-specific studies mentioned below, over 20 species of beetles are listed as hosts in O'Connor's (1987) unpublished report on astigmatid mites. Gorring (2013-20) conducted surveys targeting Cerambycidae and Curculionidae, and added species in several other families.

**Suborder Adephaga**

**Family Carabidae**

Listings for Carabidae and Cicindelidae, except for a few species listed by Anderson, and some collections by Mark O'Brien, are from an unpublished 1987 report by G. A. Dunn.

*Acupalpus nanellus* Casey

*Acupalpus pauperculus* Dejean

\**Agonoderus pallipes* Fabricius

*Agonum aeroginosum* Dejean

*Agonum anchomenoides* Randall

\**Agonum cupripenne* (Say)

*Agonum decorum* (Say)

*Agonum errans* (Say)

*Agonum extensicolle* (Say)

*Agonum gratiosum* (Mannerheim)

*Agonum harrisi* LeConte

*Agonum lutulentum* (LeConte)

*Agonum melanarium* Dejean

*Agonum metallescens* (LeConte)

*Agonum moerens* Dejean

*Agonum palustre* Goulet

*Agonum picicornoides* Lindroth

*Agonum placidum* (Say)

*Agonum propinquum* (Gemminger&Harold)

*Agonum puncticeps* (Casey)

\**Agonum sinuatus* (Dejean)

*Agonum tenue* (LeConte)

*Agonum thoyeri* Dejean

*Agonum trigeminum* Lindroth

*Amara convexa* LeConte

*Amara latior* (Kirby)

\**Amara obesa* (Say)

\**Anisodactylus baltimorensis* Say

*Anisodactylus discoideus* Dejean

*Anisodactylus nigerrimus* (Dejean)

*Anisodactylus nigrita* Dejean

*Anisodactylus sanctaecrucis* (Fabricius)

*Apristus latens* (LeConte)

*Badister neopulchellus* Lindroth  
*Bembidion affine* Say  
*Bembidion americanum* Dejean  
*Bembidion bimaculatum* (Kirby)  
*Bembidion carnicula* Chaudoir  
*Bembidion castor* Lindroth  
*Bembidion chalceum* Dejean  
*Bembidion colandi* Fall  
*Bembidion concolor* (Kirby)  
*Bembidion concretum* Casey  
*Bembidion confusum* Hayward  
*Bembidion frontale* (LeConte)  
*Bembidion impotens* Hayward  
*Bembidion inaequale* Say  
*Bembidion intermedium* (Kirby)  
*Bembidion levettei* Casey  
*Bembidion muscicola* Hayward  
*Bembidion nigriceps* (Kirby)  
*Bembidion nigrum* (Say)  
*Bembidion nitidum* (Kirby)  
*Bembidion oberthueri* Hayward  
*Bembidion obscurellum* (Motschulsky)  
*Bembidion occultator* Notman  
*Bembidion patrule* Dejean  
*Bembidion planum* (Haldeman)  
*Bembidion postremum* Say  
*Bembidion quadrimaculatum* (L.)  
*Bembidion rapidum* (LeConte)  
*Bembidion rusticum* Casey  
*Bembidion salebratum* (LeConte)  
*Bembidion scopulinum* Kirby  
*Bembidion transparens* (Gebler)  
*Bembidion transversale* Dejean  
*Bembidion versicolor* (LeConte)  
*Bembidion versutum* LeConte  
*Blethisa quadricollis* Haldeman  
*Brachinus* sp.  
*Bradycellus lecontei* Csiki  
\**Calathus gregarius* (Say)  
*Calathus ingratus* Dejean  
\**Calleida punctata* Leconte  
\**Calosoma calidum* (Fabricius)  
\**Calosoma frigidum* Kirby  
\**Calosoma scrutator* (Fabricius)  
\**Carabus maender* Fischer  
*Carabus nemoralis* Muller  
\**Carabus serratus* Say  
*Chlaenius lithophilus* Say  
*Chlaenius pennsylvanicus* Say  
\**Chlaenius sericeus* (Forster)  
*Chlaenius tricolor* Dejean  
*Clivina fossor* (L.)  
\**Clivina impressifrons* Leconte  
*Cymindis borealis* LeConte  
*Cymindis cribricollis* Dejean  
*Cymindis neglecta* Haldeman

*Diplocheila impressicollis* (Dejean)  
\**Diplocheila laticollis* Leconte  
*Elaphropus anceps* (LeConte)  
*Elaphropus incurvus* (Say)  
*Elaphrus clairvillei* Kirby  
*Elaphrus olivacens* LeConte  
\**Elaphrus riparius* Linnaeus  
\**Galerita bicolor* Drury  
*Galerita janus* (Fabricius)  
*Harpalus affinis* (Schrank)  
\**Harpalus caliginosus* (Fabricius)  
*Harpalus fulvilabris* Mannerheim  
*Harpalus herbivagus* Say  
*Harpalus lewisi* LeConte  
*Harpalus opacipennis* (LeConte)  
*Harpalus pennsylvanicus* (DeGeer)  
*Harpalus pleuriticus* Kirby  
*Harpalus viduus* LeConte  
*Lebia atriventris* Say  
*Lebia fuscata* Dejean  
\**Lebia scapularis* (Fourcroy)  
*Lebia solea* Hentz  
\**Lebia viridis* Say  
*Loricera pilicornis* (Fabricius)  
*Metabletus americanus* Dejean  
*Microlestes linearis* (LeConte)  
*Miscodera arctica* (Peykull)  
*Myas cyanescens* Dejean  
*Nomius pygmaeus* (Dejean)  
*Notiobia terminata* ((Say))  
*Notiophilus semistriatus* Say  
\**Omophron americanum* Dejean  
*Omophron tessellatum* Say  
\**Patrobus longicornis* (Say)  
*Patrobus septentrionis* Dejean  
*Platynus decentis* (Say)  
*Platynus mannerheimi* (Dejean)  
*Pseudamphasia sericea* (Harris)  
*Pterostichus adstrictus* Eschscholtz  
\**Pterostichus coracinus* (Newman)  
*Pterostichus corvinus* (Dejean)  
*Pterostichus femoralis* (Kirby)  
*Pterostichus leconteianus* Lutschnik  
*Pterostichus luctuosus* (Dejean)  
*Pterostichus lucublandus* Say  
*Pterostichus melanarius* (Illiger)  
*Pterostichus novus* Straneo  
*Pterostichus patruelis* (Dejean)  
*Pterostichus pennsylvanicus* LeConte  
*Pterostichus tristis* (Dejean)  
*Schizogenius sulcifrons* Putzeys  
*Selenophorus gagatinus* Dejean  
*Sphaerodericus lecontei* Dejean  
*Stenolophus comma* (Fabricius)  
*Stenolophus conjunctus* (Say)  
*Stenolophus fuliginosus* Dejean



*Stenolophus lineola* (Fabricius)  
*Stenolophus ochropezus* (Say)  
*Synuchus impunctatus* (Say)  
*Tachyta nana* Gyllenhal  
*Trechus apicalis* Motschulsky  
*Trechus quadristriatus* (Erichson)

**Family Cicindelidae**

*Cicindela duodecimguttata* Dejean  
\**Cicindela hirticollis* Say  
*Cicindela limbalis* Klug  
\**Cicindela longilabris* Say  
\**Cicindela patruela* Dejean  
\**Cicindela purpurea limbalis* Olivier  
\**Cicindela repanda* Dejean  
*Cicindela sexguttata* Fabricius  
\**Cicindela tranquebarica* Herbst

**Family Dytiscidae**

\**Acilius semisulcatus* (Aube)  
\**Colymbetes sculptilis* Harris  
\**Dytiscus harrisii* Kirby

**Family Gyrinidae**

\**Dineutus assimilis* Kirby  
#*Gyrinus maculiventris* LeConte  
\**Gyrinus picipes* Aube

**Suborder Polyphaga**

**Superfamily Bostrichoidea**

**Family Dermestidae**

*Dermestes lardarius* L.

**Family Ptinidae**

*Hadrobregmus notatus* (Say)  
*Ptilinus ruficornis* Say  
*Ptinus fur* (L.)

**Superfamily Buprestoidea**

**Family Buprestidae**

Buprestid beetles not recorded by Andrews were collected by D.C.L. Gosling and documented in unpublished reports 1981-1983 and by O'Connor in an unpublished 1987 report.

*Agrilus anxius* Gory  
*Agrilus arcuatus* (Say)  
*Agrilus aurichalceus* var. *rubicola* (Abeille)  
*Agrilus granulatus* var. *liragus* Barter&Brown  
*Agrilus masculinus* Horn.  
*Agrilus planipennis* Fairmaire  
*Agrilus politus* (Say)  
*Agrilus vittaticollis* (Randall)  
*Anthaxia expansa* LeConte  
*Brachys aerosus* Melsheimer  
*Brachys aeruginosus* Gory  
*Brachys ovata* Web.  
*Buprestis consularis* Gory  
\**Bupestris fasciata* Fabricius  
\**Bupestris maculiventris* Say  
\**Bupestris nuttalli* Kirby  
*Buprestis striata* Fabricius

\**Chalcophora liberta* (Germar)  
\**Chalcophora virginiensis* (Drury)  
*Chrysobothris cribaria* Mannerheim  
\**Chrysobothris dentipes* (Germar)  
*Chrysobothris femorata* (Olivier)  
*Chrysobothris harrisi* (Hentz)  
*Chrysobothris misella* LeConte  
*Chrysobothris neopusilla* Fischer  
*Chrysobothris rugosiceps* Melsheimer  
*Chrysobothris scabripennis* Castenlau&Gory  
*Chrysobothris sexsignata* (Say)  
*Chrysobothris trinervia* (Kirby)  
*Chrysobothris verdigripennis* Frost  
*Dicerca caudata* LeConte  
*Dicerca divaricata* (Say)  
\**Dicerca prolongata* Leconte  
*Dicerca tenebrica* (Kirby)  
*Dicerca tenebrosa* (Kirby)  
*Melanophila acuminata* (DeGeer)  
*Melanophila drummondi* var. *nicolayi* Obenberger  
\**Melanophila fulvoguttata* (Harris)  
#*Phaenops fulvoguttata* (Harris)

#### **Superfamily Byrrhoidea**

##### **Family Byrrhidae**

\**Byrrhus americanus* LeConte

#### **Superfamily Cantharoidea**

##### **Family Lampyridae**

*Ellychnia corrusca* (Linnaeus)  
*Lucidota atra* (Olivier)  
\**Photinus carolinus* Green  
\**Photuris pennsylvanica* (DeGeer)

#### **Superfamily Chrysomeloidea**

##### **Family Cerambycidae**

This listing of Cerambycidae – the longhorned beetles – is taken from Andrews (1929) and Gosling (1986) with additions, updates, and revisions by Gorring (unpublished reports, 2013, 2014)..

##### **Subfamily Parandrinae**

\**Neandra brunnea* (Fabricius)

##### **Subfamily Prioninae**

*Orthosoma brunneum* (Forster)  
*Tragosoma harrisii* LeConte

##### **Subfamily Spondylidinae**

*Arhopalus foveicollis* (Haldeman)  
*Arhopalus rusticus obsoletus* (Randall)  
*Asemum striatum* (L.)  
*Neospondylis upiformis* (Mannerheim)  
*Tetropium cinnamopterum cinnamopterum* Kirby  
*Tetropium c. parvulum* Casey  
*Tetropium schwarzianum* Casey

##### **Subfamily Lepturinae**

*Acmaeops p. proteus* (Kirby)  
*Acmaeopsoides rufula* (Haldeman)  
*Anastrangalia sanguinea* (LeConte)  
*Anoplodera pubera* (Say)  
*Anthophylax attenuatus* (Haldeman)

*Anthophylax cyaneus* (Haldeman)  
*Bellamira scalaris* (Say)  
*Brachyleptura champlaini* Casey  
*Brachyleptura rubrica* (Say)  
*Centrodera decolorata* (Harris)  
*Charisalia americana* (Haldeman)  
\**Cosmosalia chrysocoma* (Kirby)  
*Desmocerus palliatus* (Forster)  
*Encyclops caerulea* (Say)  
#*Etorofus plebejus* (Randall)  
*Evodinus m. monticola* (Randall)  
*Gaurotes cyanipennis* (Say)  
*Grammoptera subargentata* (Kirby)  
*Idiopidonia pedalis* (LeConte)  
*Judolia m. montivagans* (Couper)  
*Leptura plebeja* Randall  
*Leptura subhamata* Randall  
*Lepturoopsis biforis* (Newman)  
*Nealosterna capitata* (Newman)  
*Pidonia ruficollis* (Say)  
\**Pygoleptura n. nigrella* (Say)  
\**Rhagium i. inquisitor* (L.)  
*Sachalinobia rugipennis* (Newman)  
*Stenocorus vittiger* (Randall)  
\**Stictoleptura c. canadensis* (Olivier)  
*Strangalepta abbreviata* (Germar)  
*Trachysida aspera brevifrons* (Howden)  
*Trachysida mutabilis* (Newman)  
*Trigonarthris minnesotana* (Casey)  
\**Trigonarthris proxima* (Say)  
*Typocerus sparsus* LeConte  
*Typocerus v. velutinus* (Olivier)  
\**Xestoleptura tibialis* (LeConte)

#### **Subfamily Cerambycinae**

*Anelaphus parallelus* (Newman)  
*Anelaphus villosus* (Fabricius)  
*Callidium schotti* Schaeffer  
*Callimoxys sanguinicollis* (Olivier)  
*Calloides n. nobilis* (Harris)  
\**Clytus ruricola* (Olivier)  
*Cyrtophorus verrucosus* (Olivier)  
*Glycobius speciosus* (Say)  
*Hesperophanes pubescens* (Haldeman)  
*Microclytus compressicollis* (Laporte and Gory)  
*Molorchus b. bimaclatus* Say  
*Neoclytus a. acuminatus* (Fabricius)  
*Neoclytus l. leucozonus* Laporte & Gory  
#*Parelaphidion aspersum* (Haldeman)  
*Phymatodes aereus* (Newman)  
*Phymatodes dimidiatus* (Kirby)  
*Phymatodes testaceus* (L.)  
\**Physocnemum brevilineum* (Say)  
*Pronocera c. collaris* (Kirby)  
*Psyrassa unicolor* (Randall)  
*Purpuricenus humeralis* (Fabricius)  
*Ropalopus sanguinicollis* (Horn)

*Sarosesthes fulminans* (Fabricius)  
*Semanotus ligneus* (Fabricius)  
*Tylonotus bimaculatus* Haldeman  
*Xylotrechus a. annosus* (Say)  
*Xylotrechus colonus* (Fabricius)  
*Xylotrechus quadrimaculatus* (Haldeman)  
*Xylotrechus s. sagittatus* (Germar)  
*Xylotrechus undulatus* (Say)

**Subfamily Lamiinae**

*Acanthocinus pusillus* Kirby  
*Aegomorphus modestus* (Gyllenhal)  
*Astyleiopus variegatus* (Haldeman)  
*Astylopsis macula* (Say)  
*Astylopsis sexguttata* (Say)  
*Eupogonius subarmatus* (LeConte)  
*Eutrichillus biguttatus* (LeConte)  
*Graphisurus fasciatus* (Degeer)  
*Hyperplatys aspersa* (Say)  
*Hyperplatys maculata* Haldeman  
*Lepturges symmetricus* (Haldeman)  
*Microgoes oculatus* (LeConte)  
#*Monochamus maculosus* Anderson  
*Monochamus marmorator* Kirby  
*Monochamus mutator* LeConte  
*Monochamus notatus* (Drury)  
*Monochamus s. scutellatus* (Say)  
*Oberea tripunctata* (Swederus)  
*Oplosia nubila* (LeConte)  
*Pogonocherus mixtus* Haldeman  
*Pogonocherus parvulus* LeConte  
*Pogonocherus penicillatus* LeConte  
*Saperda calcarata* Say  
*Saperda candida* Fabricius  
*Saperda inornata* Say  
*Saperda lateralis* Fabricius  
*Saperda obliqua* Say  
*Saperda tridentata* Olivier  
*Saperda vestita* Say  
*Sternidius alpha* (Say)  
*Urgleptes querci* (Fitch)  
*Urgleptes signatus* (LeConte)

**Family Chrysomelidae**

*Bassareus mammifer* (Newman)  
\**Calligrapha amelia* Knab  
\**Calligrapha scalaris* (Lyconta)  
\**Calligrapha spiraea* (Say)  
\**Charidiotella purpurata* (Boheman)  
\**Chelymorpha argus* Licht.  
\**Chrysocus auratus* (Fabricius)  
*Dibolia borealis* Chevrolat in Guérin-Ménéville  
\**Disonycha quinquevittata* (Say)  
\**Donacia piscatrix* Lacordaire  
\**Donacia proxima* Kirby  
*Galerucella nymphaeae* (Linnaeus)  
\**Labidomera clivicollis* Kirby  
\**Leptinotarsa decemlineata* (Say)

*Plagioderia versicolora* (Laicharting)  
*Sumitrosis inaequalis* (Weber)

**Superfamily Cleroidea**

**Family Cleridae**

*Enoclerus muttkowskii* (Wolcott)  
\**Necrobia violacea* (Linnaeus)  
\**Thanasimus dubius* (Fabricius)  
\**Trichodes nuttalli* (Kirby)

**Family Trogossitidae**

*Grynocharis quadrilineata* (Melsheimer)  
*Thymalus marginicollis* (Say)

**Superfamily Cucujoidea**

**Family Coccinellidae**

#*Adalia bipunctata* (L)  
\**Anatis labiculata* (Say)  
#*Coccinella novemnotata* Herbst  
#*Coccinella septempunctata* (Linnaeus)  
#*Coccinella transversoguttata* Faldermann  
\**Hippodamia sinuata* Mulsant

**Family Cucujidae**

\**Cucujus clavipes* Fabricius

**Family Erotylidae**

*Triplax dissimulator* (Crotch)  
*Triplax thoracica* (Say)

**Family Nitidulidae**

\**Phenolia grossa* (Fabricius)

**Family Silvanidae**

*Silvanus muticus* Sharp

**Superfamily Curculionoidea**

Initial listings for the weevil superfamily are from Goring (unpublished report, 2015, 2016).

**Family Anthribidae**

*Allandrus* sp  
*Gonotropis dorsalis* (Gyllenhal)

**Family Curculionidae**

*Acoptus suturalis* LeConte  
*Allandrus bifasciatus* LeConte  
*Anisandrus sayi* Hopkins  
*Anthonomus quadrigibbus* Say  
*Arrhenodes minutus* (Drury)  
*Barypeithes pellucidus* (Boheman)  
*Conophthorus coniperida* (Schwarz)  
*Conotrachelus nenuphar* (Herbst)  
*Crypturgus borealis* Swaine  
*Curculio strictus* (Casey)  
*Dendroctonus rufipennis* (Kirby)  
*Dendroctonus valens* LeConte  
*Dirabius rectirostris* (LeConte)  
*Dryophthorus americanus* Bedel  
*Gnathotrichus materiarius* (Fitch)  
*Himatium errans* LeConte  
*Hylastes porculus* Erichson  
*Hylobius congener* Torre, Schenkling & Marshall  
*Hylobius pales* (Herbst)  
*Hylurgops rugipennis* (Mannerheim)

\**Hypera punctata* (Fabricius)  
*Ips grandicollis* (Eichhoff)  
#*Ips perroti* Swaine  
*Ips pini* (Say)  
\**Listronotus squamiger* (Say)  
*Magdalis austera* Fall  
*Orthotomicus caelatus* (Eichhoff)  
\**Otiorhynchus ovatus* (Linnaeus)  
*Otiorhynchus rugosostriatus* (Goeze)  
\**Pandeletejus hilaris* (Herbst)  
*Perapion curtirostre* Germar  
*Phyllobius oblongus* (Linnaeus)  
*Pissodes affinis* Randall  
*Pissodes rotundatus* LeConte  
*Pissodes* sp.  
*Pityogenes hopkinsi* Swaine  
*Pityokteines sparsus* (LeConte)  
*Pityophthorus consimilis* LeConte  
*Pityophthorus puberulus* (LeConte)  
*Polydrusus formosus* (Mayer)  
*Polygraphus rufipennis* (Kirby)  
*Rhyncolus brunneus* Mannerheim  
*Sciaphilus asperatus* (Bonsdorff)  
*Scolytus rugulosus* Müller  
\**Spenophorus aequalis* Gyllenhal  
\**Spenophorus costipennis* Horn  
\**Spenophorus melanocephalus* (Fabricius)  
\**Spenophorus pertinax* (Olivier)  
\**Spenophorus zae* Walsh  
*Strophosoma melanogrammum* Forster  
*Trypodendron lineatum* (Olivier)  
#*Trypodendron rufitarsus* (Kirby)

#### **Superfamily Dascilloidea**

##### **Family Geotrupidae**

*Geotrupes balyi* Jekel  
\**Geotrupes egeriei* Germar  
*Geotrupes horni* Blanchard

##### **Superfamily Dryopoidea**

##### **Family Dryopidae**

#*Helichus lithophilus* (German)

##### **Family Elmidae**

#*Dubiraphia minima* Hilsenhoff  
#*Macronychus glabratus* Say  
#*Optioservus fastiditus* (Leconte)  
#*Optioservus triviatus* (Brown)  
#*Optioservus* sp.  
#*Stenelmis crenata* (Say)

##### **Family Psephenidae**

#*Ectopria nervosa* (Melsheimer)

#### **Superfamily Elateroidea**

##### **Family Elateridae**

*Agriotus fucosus* LeConte  
*Alaus myops* (Fabricius)  
\**Alaus oculatus* (Linnaeus)  
*Ampedus nigricollis* Herbst  
\**Ampedus rubricus* (Say)

*Clytus ruricola* Olivier  
\**Ctenicera aeripennis* (Kirby)  
\**Ctenicera hieroglyphicus* (Say)  
\**Melanotus communis* (Gyllenhal)  
*Pityobius anguinus* LeConte

**Family Eucnimidae**

*Isorhipis obliqua* (Say)

**Family Lycidae**

*Plateros lictor* (Newman)

**Superfamily Histeroidea**

**Family Histeridae**

\**Margarinotus immunitus* (Erichson)

**Superfamily Hydrophiloidea**

**Family Hydrophilidae**

#*Hydrobius fuscipes* (Linnaeus)

\**Hydrochara obtusatus* (Say)

**Superfamily Scarabaeoidea**

**Family Lucanidae**

\**Ceruchus piceus* (Weber)

*Platycerus depressus* LeConte

\**Pseudolucanus placidus* (Say)

**Family Scarabaeidae**

\**Aphodius hamatus* Say

\**Cotalpa lanigera* (Linnaeus)

\**Dichelonyx albicollis* Burmeister

\**Hoplia trifasciata* Say

\**Macrodactylus subspinosus* (Fabricius)

\**Onthophagus hecate* (Panzer)

*Osmoderma eremicola* (Knoch)

\**Osmoderma scabra* (Beauvois)

\**Phyllophaga crenulata* (Froelich)

\**Strigoderma arboricola* (Fabricius)

*Trichiotinus assimilis* (Kirby)

\**Trichiotinus piger* (Fabricius)

**Superfamily Staphylinoidea**

**Family Silphidae**

*Necrodes surinamensis* (Fabricius)

*Nicrophorus defodiens* Mannerheim

\**Nicrophorus marginatus* Fabricius

*Nicrophorus pustulatus* Herschel

*Nicrophorus orbicollis* Say

*Nicrophorus sayi* Laporte

*Nicrophorus tomentosus* Weber

*Oiceoptoma noveboracense* (Forster)

\**Thanatophilus lapponica* (Herbst)

**Family Staphylinidae**

#*Carphacis intrusus* (Horn)

*Ontholestes cingulatus* (Gravenhorst)

\**Oxyporus femoralis* Gravenhorst

*Philonthus* sp.

\**Staphylinus maculosus* Gravenhorst

\**Xenodusa cava* Leconte

**Superfamily Tenebrionoidea**

**Family Boridae**

*Boros unicolor* Say

**Family Melandryidae**

\**Dircaea liturata* LeConte

**Family Meloidae**

*Epicauta vittata* (Fabricius)

**Family Mycetophagidae**

*Mycetophagus punctatus* Say

**Family Pyrochroidae**

\**Dendroides canadensis* LeConte

#*Pedilus lugubris* (Say)

**Family Pythidae**

*Pytho americanus* Kirby

**Family Tenebrionidae**

*Alobates pensylvanica* (DeGeer)

*Bolitotherus cornutus* (Panzer)

*Capnochroa fuliginosa* (Melsheimer)

*Diaperis maculata* Olivier

\**Iphthiminus opacus* (LeConte)

\**Meracantha contracta* (Beauvois)

*Platydema americanum* Laporte & Brullé

\**Upis ceramboides* (Linnaeus)

**Family Tetratomidae**

*Penthe obliquata* (Fabricius)

\**Penthe pimelia* (Fabricius)

**Order Neuroptera**

**Family Chrysopidae**

\**Chrysopa oculata* Say

**Family Mantispidae**

\**Climaciella brunnea* (Say)

**Order Hymenoptera**

**Suborder Symphyta** (sawflies, horntails)

**Family Siricidae**

\**Tremex columba* (Linnaeus)

\**Urocerus albicornis* (Fabricius)

#*Urocerus cressoni* Norton

#*Urocerus gigas flavicornis* (Fabricius)

**Family Pamphiliidae**

#*Acantholyda tessellata* Klug

**Family Tenthredinidae**

*Caulocampus acercaulis* MacG.

\**Cimbex americana* Leach

*Eutomostethus luteiventris* (Klug)

*Fenella nigrita* Westwood

*Fenusa pusilla* (LePeletier)

*Heterarthrus nemoratus* (Fallen)

*Metallus capitalis* (Norton)

*Metallus rohweri* MacGillivray

*Nefusa ambigua* Norton

*Profenusa alumna* (MacGillivray)

*Profenusa thomsoni* (Konow)

**Suborder Apocrita**

**Infraorder Parasitica**

**Family Aulacidae**



*Pristaulacus strangaliae* Rohwer

**Family Braconidae**

#*Aleiodes flavitarsus* Marsh & Shaw

*Atanycolus ulmicola* (Viereck)

*Chorebus* sp

*Opius* sp

**Family Gasteruptiidae**

#*Gasteruption assectator* (Linnaeus)

#*Gasteruption barnstoni* (Westwood)

#*Gasteruption kirbii* (Westwood)

**Family Ibalidae**

#*Ibalia maculipennis* Haldeman

**Family Ichneumonidae**

All ichneumonids listed here, unless indicated by asterisk as being from Andrews (1929), are from unpublished reports by H. Townes (1959-1960) and O'Connor (1987); in the latter case, they are listed as hosts of astigmatid mites. Subfamily assignment and sequence is taken from Arnett (1993). Townes' list includes specimens from both the Huron Mountain Club and from the Yellow Dog Plains; 31 taxa recorded only from the latter location are excluded here. Taxonomy was verified from standard sources for insects (above); the following species, listed by Townes, were not found in any searches, and are not included in the official list: *Cubocephalus schmuckii* D.T.; *Polyblastus expletus* Townes; *Polyblastus galaphilus* Townes; *Polyblastus strobilator* Thbg.; *Pycnocryptus inquisitorius* var. *pectoralis* Muller; *Triclistus pallipes* Hgn.. 146 taxa are added from Townes' list; two are distinct only at varietal level; eight are listed as either "sp." or "n. sp.", designations retained here (current taxonomic status of these collections is unknown).

**Subfamily Acaenitinae**

*Arotes amoenus* Cresson

*Arotes decorus* (Say)

*Arotes melleus* (Say)

*Coleocentrus flavipes* (Provancher)

*Coleocentrus pettiti* Cresson

*Coleocentrus rufocoxatus* Pratt

*Coleocentrus rufus* Provancher

*Spilopteron formosum* var. *formosum* (Cresson)

*Spilopteron franclemonti* Townes

*Spilopteron vicinum* var. *vicinum* (Cresson)

**Subfamily Anomaloniinae**

\**Therion morio* (Fabricius)

**Subfamily Campopleginae**

*Rhimphoctona macrocephala* (Provancher)

**Subfamily Cryptinae**

*Acroricnus stylator* var. *aequatus* (Thunberg)

*Agrothereutes mandator* var. *americanus* (Linnaeus)

*Cubocephalus alacris* var. *alacris* (Cresson)

*Cubocephalus alacris* var. *erythropygus* (Cresson)

*Cubocephalus annectus* Townes

*Cubocephalus atriclunis* Townes

*Cubocephalus brevicornis* (Taschenberg)

*Cubocephalus denticulatus* var. *denticulatus* Townes

*Cubocephalus dreisbachi* Townes

*Cubocephalus euryops* Townes

*Cubocephalus inhabilis* var. *inhabilis* (Provancher)

*Cubocephalus maurus* (Cresson)

*Cubocephalus micans* Townes

*Cubocephalus nitidus* var. *nitidus* (Provancher)

*Cubocephalus pallidus* var. *spissicornis* (Cresson)  
*Cubocephalus prolixus* var. *prolixus* Townes and Gupta  
*Echthrus abdominalis* var. *abdominalis* Cresson  
*Echthrus niger* var. *emaculatus* Cresson  
*Gambrus polyphemi* Townes  
*Hidryta frater* (Cresson)  
*Idiolispa analis* var. *limata* (Gravenhorst)  
*Idiolispa analis* var. *analis* (Gravenhorst)  
*Ischnus cinctipes* (Walsh)  
*Ischnus inquisitorius* var. *atricollaris* (Muller)  
*Ischnus latus* var. *latus* Townes  
*Ischnus minor* Townes  
*Listrognathus femorata* Townes  
*Megaplectes monticola* var. *blakei* (Cresson)  
*Mesostenus thoracicus* Cresson  
*Oresbius albicoxus* var. *albicoxus* (Provancher)  
*Oresbius tegularis* (Provancher)  
*Oresbius vultuosus* (Townes)  
*Parmortha circumcincta* var. *circumcincta* (Provancher)  
*Pleolophus indistinctus* (Provancher)  
*Polytribax contiguus* (Cresson)  
*Polytribax crotchii* var. *crotchii* (Cresson)  
*Pycnocryptus director* Thunberg  
*Rhembobius parvus* Townes  
*Schenkia graminicola* var. *recta* (Provancher)  
*Trychosis anagnus* Townes  
*Trychosis cyperia* Townes  
*Trychosis kathrynae* Townes  
*Trychosis montivaga* var. *montivaga* Provancher  
*Trychosis semirubra* var. *semirubra* Townes

#### **Subfamily Ichneumoninae**

*Coelichneumon navus* (Say)  
*Cratichneumon* sp.  
*Hoplismenus morulus* (Say)  
\**Ichneumon devinctor* (Say)  
*Ichneumon ultimus* Cresson  
*Stenichneumon militarius* (Thunberg)

#### **Subfamily Metopiinae**

*Carria dreisbachi* var. *dreisbachi* Townes  
*Chorinaeus emorsus* Townes  
*Exochus albifrons* Cresson  
*Exochus decoratus* var. *scitulus* Holmgren  
*Exochus nigripalpis* var. *tectulum* Thomson  
*Exochus peroniae* Townes  
*Exochus pictus* var. *xanthopsis* Holmgren  
*Exochus postfurcalis* Townes  
*Exochus washingtonensis* (Davis)  
*Metopius edwardsii* Cresson  
*Metopius pollinctorius* var. *pollinctorius* Say  
*Synosis clepsydra* Townes  
*Triclistus emarginalus* (Say)  
*Triece costatus* Davis  
*Triece sapineus* var. *sapineus* Townes

#### **Subfamily Pimplinae**

*Acrodactyla degener* (Haliday)  
*Acrodactyla ocellata* Townes

*Acropimpla alboricta* (Cresson)  
*Apechthis picticornis* (Cresson)  
*Clistopyga canadensis* Provancher  
*Delomerista novita* (Cresson)  
*Delomerista* sp.  
*Dolichomitus imperator* (Kriechbaumer)  
*Dolichomitus irritator* (Fabricius)  
*Dolichomitus* n. sp.  
*Dolichomitus pygmaeus* (Walsh)  
*Dreisbachia slossonae* (Davis)  
*Exeristes comstockii* (Cresson)  
*Iseropus stercorator* (Fabricius)  
*Itopectis conquisitor* Say  
*Itopectis curticauda* var. *brevacus* Townes  
\**Megarhyssa atrata* var. *lineata* Porter.  
*Megarhyssa greenei* var. *greenei* Viereck  
*Megarhyssa macrurus* var. *lunator* Fabricius  
*Oxyrrhexis carbonator* var. *texana* (Cresson)  
*Perithous mediator* var. *pleuralis* (Cresson)  
*Pimpla aquilonia* var. *aquilonius* Cresson  
*Pimpla macra* (Cresson)  
*Pimpla pedalis* Cresson  
*Pimpla tenuicornis* Cresson  
*Poemenia albipes* (Cresson)  
*Polysphincta burgessii* Cresson  
*Rhyssa crevieri* (Provancher)  
*Rhyssa lineolata* (Kirby)  
*Rhyssa persuasoria* (Linnaeus)  
*Rhyssella nitida* (Cresson)  
*Scambus canadensis* Walley  
*Scambus granulatus* Walley  
*Scambus hispae* (Harris)  
*Scambus productus* Walley  
*Scambus tecumseh* Viereck  
*Scambus vesicarius* var. *euurae* (Ashmead)  
*Schizopyga frigida* Cresson  
*Sinarachna anomala* (Holmgren)  
*Sinarachna pallipes* (Holmgren)  
*Theronia hilaris* (Say)  
*Tromatobia ovivora* var. *ovivora* Boheman  
*Zaglyptus varipes* var. *incompletus* (Cresson)  
*Zatypota exilis* Townes  
*Zatypota nigriceps* (Walsh)

**Subfamily Poemeniinae**

*Neoxorides pilulus* Townes

**Subfamily Tryphoninae**

*Atopotrophos* n. sp.  
*Cosmoconus* sp.  
*Cteniscus* n. sp.  
*Cteniscus* n. sp.  
*Ctenochira picta* Townes  
*Eclytus* sp.  
*Errormenus marginatus* Provancher  
*Exyston variatus* Provancher  
*Monoblastus dionnei* Prov.  
*Monoblastus macer* Townes

*Neliopisthus densatus* Say  
*Netelia barberi* (Cushman)  
*Netelia chloris* (Olivier)  
*Netelia deceptor* (Morley)  
*Netelia latungulus* (Thomson)  
*Netelia rogersi* Townes  
*Netelia sayi* (Cushman)  
*Netelia tarsata* (Brischke)  
*Phytodietus* sp.  
*Polyblastus peckae* Townes  
*Polyblastus pedalis* (Cresson)  
*Polyblastus tibialis* (Cresson)  
*Polyblastus wahlbergi* Holmgren  
*Thymaris negligere* (Davis)  
*Tryphon americanus* Cresson  
*Tryphon communis* var. *communis* Cresson  
*Tryphon humeralis* Townes  
*Tryphon viator* Townes

**Subfamily Xoridinae**

*Odontocolon atripes* (Rohwer)  
*Odontocolon canadense* (Provancher)  
*Odontocolon dreisbachi* Townes  
*Odontocolon ochropus* Townes  
*Odontocolon strangaliae* (Rohwer)  
*Odontocolon vicinum* (Cresson)  
*Xorides stigmapterus* var. *stigmapterus* (Say)

**Family Pelecinidae**

\**Pelecinus polyturator* Drury

**Infraorder Proctotrupomorpha**

**Family Cynipidae**

#*Amphibolis* sp  
#*Diplolepis rosae* (Linnaeus)

**Family Figitidae**

#*Banacuniculus strykeri* Buffington

**Family Pteromalidae**

#*Homoporus* sp

**Infraorder Aculeata**

The Aculeate Hymenoptera include bees, ants, and the ‘true’ wasps. Listings here are from O’Brien (1986, 1988, 1989) and unpublished identifications by M.F. O’Brien from collections by D.C.L. Gosling and M.F. O’Brien (O’Brien 2004).

**Family Andrenidae** (bees)

#*Andrena dunningi* Cockerell  
#*Andrena nivalis* Smith  
#*Andrena vicina* Smith  
#*Calliopsis andreniformis* Smith

**Family Anthophoridae** (cuckoo bees, digger bees, carpenter bees)

*Anthophora furcata terminalis* Cresson  
*Anthophora bomboides* Kirby  
*Ceratina* spp.  
*Melissodes illata* Lovell & Cockerell  
*Nomada* spp.

**Family Apidae** (bees)

\**Agapostemon radiatus* (Say)  
#*Anthophora terminalis* Cresson  
\**Apis mellifera* Linnaeus  
#*Bombus affinis* Cresson  
#*Bombus ashtoni* (Cresson)  
#*Bombus perplexus* Cresson  
#*Bombus rufocinctus* Cresson  
#*Bombus sandersoni* Franklin  
\**Bombus ternarius* (Say)  
#*Bombus terricola* Kirby  
*Bombus vagans* Smith  
*Bombus* spp.

**Family Chrysididae**

*Caenochrysis doriae* (Gribodo)  
*Ceratochrysis declinis* Bohart  
*Chrysis cessata* Buysson  
*Chrysis derivata* Buysson  
*Chrysis nitidula* Fabr.  
*Chrysis provancheri* Schulz  
*Chrysura pacifica* (Say)  
*Cleptes speciosus* Aaron  
*Elampus marginatus* (Patton)  
*Elampus viridicyaneus* Norton  
*Hedychridium dimidiatum* (Say)  
*Holopyga ventralis* (Say)  
*Omalus aeneus* (F.)  
*Omalus plicatus* (AAron)  
*Omalus tridescens* (Norton)  
*Omalus janus* (Hald.)  
*Omalus purpuratus* (Prov.)

**Family Colletidae** (plasterer bees)

*Colletes* spp.  
#*Hylaeus affinis* (Smith)  
#*Hylaeus annulatus* (Linnaeus)  
*Hylaeus basalis* Smith  
*Hylaeus ellipticus* (Kirby)  
*Hylaeus mesillae cressoni* (Cockerell)  
*Hylaeus modestus* Say  
#*Hylaeus rudbeckiae* (Cockerell & Casad)  
#*Hylaeus saniculae* (Robertson)  
#*Hylaeus verticalis* (Cresson)

**Family Formicidae** (ants)

#*Camponotus americanus* (Buckley)  
\**Camponotus herculeanus pennsylvanicus* (Linnaeus)  
\**Formica fusca subserica* Linnaeus  
\**Formica sanguinea* Latreille  
#*Formica subsericea* Say

**Family Halictidae** (sweat bees)

*Agapostemon* spp.  
#*Augochlora pura* (Say)  
#*Augochlorella aurata* (Smith)  
*Augochlorella* spp.  
*Evyllaes* spp.  
*Dialictus* spp.  
#*Lasioglossum coriaceum* (Smith)  
#*Lasioglossum cressonii* (Robertson)

#*Lasioglossum forbesii* (Robertson)  
#*Lasioglossum inconditum* (Cockerell)  
#*Lasioglossum leucozonium* (Schrank)  
#*Lasioglossum leucozonium* (Schrank)  
#*Lasioglossum nigroviride* (Graenicher)  
#*Lasioglossum pilosum* (Smith)  
#*Lasioglossum quebecense* (Crawford)  
#*Lasioglossum versans* (Lovell)  
#*Lasioglossum zonulum* (Smith)  
*Sphecodes confertus* Say  
#*Sphecodes pecosensis* Cockerell

**Family Megachilidae** (leafcutting bees, mason bees)

*Coelioxys funerarius* Smith  
*Coelioxys moestus* Cresson  
*Coelioxys porterae* Cockerell  
*Coelioxys sodalis* Cresson  
*Chalicodoma campanulae* (Robertson)  
*Heriades carinata* Cresson  
*Heriades leavitti* Crawford  
*Hoplitis albifrons* (Kirby)  
*Hoplitis cylindrica* (Cresson)  
*Hoplitis producta* (Cresson)  
#*Hoplitis spoliata* (Provancher)  
#*Megachile brevis* Say  
#*Megachile campanulae* (Robertson)  
*Megachile frigida* Smith  
*Megachile gemula* Cresson  
*Megachile inermis* Provancher  
*Megachile melanophaea* Smith  
*Megachile pugnata* Say  
*Megachile relativa* Cresson  
*Osmia albiventris* (Cresson)  
*Osmia bucephala* Cresson  
*Osmia lignaria* Say  
*Osmia proxima* Cresson  
*Osmia tersula* Cockerell

**Family Mutillidae** (velvet ants)

*Pseudomethoca frigida* (Smith)

**Family Pompilidae** (spider wasps)

*Agenoideus humilis* (Cresson)  
*Anoplius matginatus* (Say)  
*Anoplius relativus* (Fox)  
*Anoplius* spp.  
*Aporinellus completus* Banks  
*Aporinellus* sp.  
*Auplopus mellipes variitarsatus* (Dalla-Torre)  
*Calicurgis hyalinatus alienatus* (Smith)  
*Calicurgis* sp.  
*Dipogon sayi* Banks  
*Episyron biguttatus* (F.)  
*Episyron quinquenotatus* (Say)  
*Episyron snowi* (Viereck)  
*Evagetes hyacinthinus* (Cr.)  
*Evagetes parvus* (Cr.)  
*Evagetes* spp.  
*Phanagenia bombycina* (Cr.)

*Pompilus scelestus* Cresson  
*Pompilus* spp.  
*Priocnemis germana* (Cr.)  
*Priocnemis minorata* Banks  
*Priocnemis nebulosus* (Dahlbom)

**Family Sapygidae** (wasps)

*Sapyga* sp.

**Family Sphecidae** (digger wasps)

**Subfamily Ampulicinae**

*Ampulex canaliculata* Say

**Subfamily Astatinae**

*Astata leuthstromi* Ashmead

*Astata unicolor* Say

*Diploplectron peglowi* Krombein

**Subfamily Crabroninae**

*Anacrabro ocellatus* Packard

*Crabro advena* Smith

*Crabro argusinus* Bohart

*Crabro latipes* Smith

*Crabro tenuis* Fox

*Crabro monticola* (Packard)

*Crabro* spp.

*Crossocerus* spp.

*Ectemnius decemmaculatus* (Say)

*Ectemnius dives* (L. & B.)

*Ectemnius lapidarius* (Panzer)

*Ectemnius maculosus* (Gmelin)

*Ectemnius ruficornis* (Zetterstedt)

*Lestica* spp.

*Lindenius* spp.

*Oxybelus bipunctatus* Oliv.

*Oxybelus niger* Robt.

*Oxybelus subulatus* Robt.

*Oxybelus uniglumis* (Linn.)

*Oxybelus* spp.

*Rhopalum clavipes* (Linn.)

*Rhopalum coarctatum* (Scopoli)

*Rhopalum occidentale* (Fox)

*Rhopalum* spp.

**Subfamily Larrinae**

*Lyroda subita* (Say)

*Miscophus americanus* Fox

*Nitela virginensis* Rohwer

*Plenoculus davisii* Fox

*Solierella plenoculoides* (Fox)

*Tachysphex aethiops* Cresson

*Tachysphex pompiliformis* (Panzer)

*Tachysphex semirufus* (Cresson)

*Tachysphex tarsatus* (Say)

*Tachysphex similis* Rohwer

*Tachysphex terminatus* (Smith)

*Trypoxylon frigidum* Smith

*Trypoxylon pennsylvanicum* Saussure

**Subfamily Nyssoninae**

*Alysson conicus* Provancher

*Alysson guidnardi* Provancher

*Alysson oppositus* Say  
*Bembex americana spinolae* Lepeletier  
*Bicyrtes quadrifasciata* (Say)  
*Bicyrtes ventralis* (Say)  
*Gorytes* spp.  
*Mellinus bimaculatus* Packard  
*Nysson* spp.  
*Stictiella emarginata* (Cresson)

**Subfamily Pemphredoniae**

*Diodontus adamsi* Titus  
*Diodontus minutus* (Fabr.)  
*Diodontus* spp.  
*Mimesa* spp.  
*Passaloecus areolatus* (Vincent)  
*Passaloecus borealis* Dahlbom  
*Passaloecus cuspidatus* Smith  
*Passaloecus lineatus* Vincent  
*Pemphredon foxii* Rohwer  
*Pemphredon inornata* Say  
*Pemphredon lethifer* (Shuckard)  
*Pemphredon lugubris* (Fabr.)  
*Pemphredon menkei* Bohart  
*Pemphredon montana* Dahlb.  
*Pemphredon pulawskii* Dolfuss  
*Psenulus* sp.  
*Stigmus* spp.

**Subfamily Philanthinae**

*Aphilanthops frigidus* (Smith)  
*Cerceris* sp.  
*Philanthus bilunata* Cr.  
*Philanthus lepidus* Cresson  
*Philanthus politus* Say  
*Philanthus solivagus* Say

**Subfamily Sphecinae**

*Chalybion californicum* (Saussure)  
*Sceliphron caementarium* (Drury)  
*Podalonia luctuosa* (Smith)  
*Podalonia violaceipennis* (Lepeletier)  
*Ammophila azteca* Cameron  
*Ammophila evansi* Menke  
*Ammophila kennedyi* (Murray)  
*Ammophila mediata* Cresson  
*Ammophila urnaria* Dahlbom

**Family Tiphidae**

*Myrmosa unicolor* Say  
*Tiphia micropunctata* Allen  
*Tiphia* spp.

**Family Vespidae (true wasps)**

*Ancistrocerus antilope* (Panzer)  
*Ancistrocerus* spp.  
*Dolichovespula arctica* (Rohwer)  
*Dolichovespula arenaria* (Fabricius)  
*Dolichovespula maculata* (Linnaeus)  
*Dolichovespula norvegicoides* (L.)  
\**Eumenes fraterna* Say  
*Eumenes* spp.



*Euodynerus* spp.  
*Parancistrocerus pedestris* (Saussure)  
*Parancistrocerus pennsylvanicus* (Saussure)  
*Polistes fuscatus* (Fabr.)  
*Vespula acadica* (Sladen)  
*Vespula austriaca* (Panzer)  
*Vespula consobrina* (Saussure)  
*Vespula flavopilosa* Jacobson  
*Vespula vulgaris* (Linn.)  
*Symmorphus cristatus* (Saussure)

**Order Mecoptera** (scorpionflies)

**Family Meropeidae**

*Merope tuber* Newman

**Family Panorpidae**

\**Panorpa rufescens* Rambur

**Order Siphonaptera**

**Family Ceratophyllidae**

#*Opisodasys pseudarctomys* (Baker)  
#*Orchopeas caedens* (Jordan)  
#*Orchopeas leucopus* (Baker)

**Order Diptera**

**Family Acroceridae**

*Turbopsebius sulphuripes* (Loew)

**Family Agromyzidae**

*Agromyza aristata* Malloch  
*Agromyza canadensis* Malloch  
*Agromyza isolata* Malloch  
*Agromyza potentillae* (Kaltenbach)  
*Agromyza sulfuriceps* Strobl  
*Amauromyza flavifrons* (Meigen)  
*Aulagromyza cornigera* (Griffiths)  
*Aulagromyza* sp.  
*Cerodontha* sp.  
*Liriomyza brassicae* (Riley)  
*Liriomyza eupatorii* (Kaltenbach)  
*Liriomyza fricki* Spencer  
*Liriomyza lathyri* Sengal  
*Liriomyza robiniae* Valley  
*Nemorimyza posticata* (Meigen)  
*Phytomyza asterophaga* Spencer  
*Phytomyza loewii* Hendel  
*Phytomyza plantaginis* Robineau-desvoidy  
*Phytomyza solidaginophaga* Sehgal

**Family Anthomyiidae**

*Chirosia spinosissima* (Malloch)  
*Pegomya rumicifoliae* Hockett

**Family Asilidae**

Species not noted by Andrews are from collections by Mark O'Brien, University of Michigan (personal communication) and report by O'Connor (1987).

\**Asilus sericeus* Say

*Hologon* sp.  
*Laphria flavicollis* Say  
*Laphria janus* McAtee  
*Laphria posticata* Say  
*Laphria royalensis* (Bromley)  
*Laphria sacrator* Walker  
*Laphria flavicollis* Say  
*Laphria franciscana* Bigot  
*Laphria index* McAtee  
*Laphria insignis* Banks  
*Laphria sadales* Walker  
*Laphria scorpio* McAtee  
*Machimus sadyates* (Walker)  
*Machimus snowii* (Hine)  
*Machimus virginicus* (Banks)  
*Machinus* spp.  
*Neoitamus flavofemoratus* (Hine)  
\**Proctocanthus philadelphicus* Macquart

**Family Athericidae**

#*Atherix veriegata* Walker

**Family Bombyliidae**

\**Anthrax lateralis* Marston  
#*Bombylius major* Linnaeus  
\**Exoprosopa capucina* (Fabricius)

**Family Blephariceridae**

#*Blepharicera tenuipes* (Walker)

**Family Calliphoridae**

\**Lucilia caesar* (Linnaeus)  
\**Lucilia sericata* (Meigen)

**Family Cecidomyiidae**

*Dasineura* sp.

**Family Ceratopogonidae**

†*Probezzia* sp.  
†*Serromya* sp.

**Family Chironomidae**

**Subfamily Chironominae**

†*Cryptochironomus* sp.  
†*Demicryptochironomus* sp.  
†*Micropsectra* sp.  
†*Microtendipes pedullus* (DeGeer)  
†*Nilothauma* sp.  
†*Polypedilum aviceps* Townes  
†*Polypedilum convictum* (Walker)  
†*Polypedilum laetum* (Meigen)  
†*Rheotanytarsus* spp.  
†*Robackia demeijerei* (Kruseman)  
†*Stempellina* sp.

**Subfamily Diamesinae**

†*Diamesa* sp.  
†*Pothastia longimana* (Kieffer)

**Subfamily Orthocladiinae**

†*Chaetocladius* sp.  
†*Corynoneura* sp.  
†*Cricotopus trifascia* Edwards  
†*Cricotopus vierriensis* Goetghebuer  
†*Cricotopus/Orthocladius* sp.

†*Eukiefferiella claripennis* Lundbeck  
†*Eukiefferiella coerulescens* Kieffer  
†*Eukiefferiella devonica* (Edwards)  
†*Eukiefferiella discoloripes* (Kieffer)  
†*Eukiefferiella gracei* (Edwards)  
†*Georthocladius* sp.  
†*Lopescladius hyporheicus* Coffman and Roback  
†*Nanocladius rectinervis* (Kieffer)  
†*Orthocladius carlatus* (Roback)  
†*Rheocricotopus atripes* (Kieffer)  
†*Smittia* sp.  
†*Synorthocladius* sp.  
†*Thienemanniella* sp.  
†*Tvetenia paucunca* (Saether)

#### **Subfamily Tanypodinae**

†*Conchapelopia americana* Fittkau  
†*Conchapelopia* sp.  
†*Helopelopia* sp.  
†*Nilotanypus* sp.  
†*Rheopelopia* sp.  
†*Thienemannimyia* grp.

#### **Family Drosophilidae**

Unpublished reports of T. Werner (2018-2022) provide most records for Drosophilids.

*Amiota communis* Chen & Steyskal  
*Amiota imperator* sp.nov.  
*Amiota minor* (Malloch)  
*Amiota tessae* sp.nov.  
*Chymomyza amoena* (Loew)  
*Drosophila affinis* Sturtevant  
*Drosophila algonquin* Sturtevant and Dobzhansky  
*Drosophila athabasca* Sturtevant and Dobzhansky  
*Drosophila busckii* Coquillett  
*Drosophila colorata* Walker  
*Drosophila falleni* Wheeler  
*Drosophila immigrans* Sturtevant  
*Drosophila macrospina* Stalker & Spencer  
*Drosophila melanogaster* Meigen [non-indigenous]  
*Drosophila neotestacea* Grimaldi, James & Jaenike  
*Drosophila paramelanica* Griffin  
*Drosophila putrida* Sturtevant  
*Drosophila recens* Wheeler  
*Drosophila robusta* Sturtevant  
*Drosophila sukuzii* Matsumura [non-indigenous]  
*Drosophila tripunctata* Sturtevant  
*Hirtodrosophila duncani* (Sturtevant)  
*Mycodrosophila claytonae* Wheeler and Takada  
*Scaptomyza pallida* Zetterstedt

#### **Family Empididae**

†*Chelifera* sp.  
†*Hemerodromia* sp.

#### **Family Lonchaeidae**

*Lonchaea* sp.

#### **Family Muscidae**

\**Musca domestica* Linnaeus  
\**Stomoxys calcitrans* Linnaeus

#### **Family Oestridae**

#*Cuterebra fontinella* Clark

**Family Ptychopteridae**

#*Bittacomorpha clavipes* (Fabricius)

**Family Rhagionidae**

\**Chrysopilus ornatus* (Say)

**Family Sarcophagidae**

*Metopia* sp.

\**Sarcophaga sarraceniae* Riley

**Family Simuliidae**

†*Prosimulium fuscum* Syme and Davies

†*Simulium tuberosum* (Lundstrom)

†*Simulium venustum* Say

†*Simulium vittatum* Vitterstedt

**Family Stratiomyidae**

\**Stratiomys badia* Walker

\**Stratiomys discalis* Loew

**Family Syrphidae**

Syrphid flies not recorded by Andrews are from unpublished reports by Waldbauer (1983) and O'Connor (1987).

*Blera* sp.

*Brachypalpus oarus* (Walker)

*Chalcosyrphus vecors* (Osten Sacken)

*Chrysotoxum* spp.

*Doros aequalis* Loew

#*Epistrophe grossulariae* (Meigen)

*Eristalis bastardii* Maeq.

*Eristalis dimidiatus* Wied.

*Eristalis* sp.

\**Eristalis tenax* (L.)

*Eristalis transversus* Wied.

*Helophilus borralis* Staeger

\**Helophilus fasciatus* Walk.

*Leucozona lucorum* (L.)

*Mallota bautias* (Walker)

*Mallota posticata* (Fab.)

*Microdon* spp.

*Sericomyia bifasciata* Willison

*Sericomyia chrysotoxoides* Macquart

*Sericomyia lata* (Coquillett)

\**Sericomyia militaris* Walk.

\**Somula decora* Macquart

*Sphecomyia vittata* (Widemann)

*Spilomyia fusca* Loew

*Syrphus* sp.

*Temnostoma alternans* Loew

*Temnostoma balyras* (Walker)

*Temnostoma barberi* Shannon

*Temnostoma venustum* Willison

*Temnostoma vespiforme* (L.)

\**Volucella evecta* Walker

**Family Tabanidae**

Tabanids not listed by Andrews are from an unpublished 1984 list by Pechuman and from collections by Mark O'Brien.

*Atylotus duplex* (Walker)  
*Atylotus sphagnicolus* Teskey  
\**Chrysops excitans* Walker  
*Chrysops aberrans* Philip  
*Chrysops ater* Macq.  
*Chrysops calvus* Pechuman & Teskey  
*Chrysops carbonarius* Walker  
*Chrysops cincticornis* walker  
#*Chrysops cuclux* Whitney  
*Chrysops dawsoni* Philip  
*Chrysops excitans* Walker  
*Chrysops frigidus* Osten Sacken  
*Chrysops indus* Osten Sacken  
*Chrysops mitis* Osten Sacken  
*Chrysops montanus* Osten Sacken  
*Chrysops sackeni* Hine  
*Chrysops sordidus* Osten Sackem  
*Chrysops shermani* Hine  
*Chrysops univittatus* Macq.  
*Chrysops venus* Philip  
*Chrysops vittatus* Wied.  
*Chrysops zinzalus* Philip  
*Hybomitra affinis* (Kirby)  
*Hybomitra arpasi* (Szil.)  
*Hybomitra criddlei* (Brooks)  
*Hybomitra epistates* (Osten Sacken)  
*Hybomitra frosti* Pechuman  
*Hybomitra microcephalus* Osten Sacken  
*Hybomitra hinei* (John.)  
*Hybomitra illota* (Osten Sacken)  
*Hybomitra lasiophthalma* (Macq.)  
*Hybomitra lurida* (Fallen)  
*Hybomitra microcephala* (Osten Sacken)  
*Hybomitra nitidifrons nuda* (McD.)  
*Hybomitra pechumani* Teskey & Thomas  
*Hybomitra sodalis* (Williston)  
*Hybomitra trepida* (McD.)  
\**Hybomitra trispilus* (Wiedemann)  
*Hybomitra zonalis* (Kirby)  
*Stonemyia tranquilla* Osten Sacken  
\**Tabanus atratus* Fabricius  
*Tabanus catenatus* Walker  
*Tabanus marginalis* Fabr.  
*Tabanus novaescotiae* Macquart  
*Tabanus sagax* Sacken

**Family Tachinidae**

\**Archytas analis* (Fabricius)

**Family Therevidae**

#*Spiriverpa albiceps* (Loew)

#*Spiriverpa senex* (Walker)

**Family Tipulidae**

†*Antocha* sp.

†*Dicranota* sp.

†*Hexatoma* sp. A

†*Hexatoma* sp. B

†*Hexatoma* sp. C  
†*Hexatoma* sp. D  
†*Ormosia* sp.  
†*Pseudolimmophila* sp.  
†*Tipula abdominalis* Say  
†*Tipula caloptera* Loew

## Order Megaloptera

### Family Corydalidae

†*Corydalis cornutus* (Linnaeus)

## Order Trichoptera

Listings for Trichoptera – the caddisflies – were updated, with over 100 species added, by Houghton (unpublished reports, 2015,2019)

### Family Brachycentridae

†*Brachycentrus americanus* (Banks)  
†*Brachycentrus numerosus* (Say)  
*Micrasema charonis* Banks  
*Micrasema wataga* Ross

### Family Dipseudopsidae

*Phylocentropus placidus* (Banks)

### Family Glossomatidae

*Glossosoma intermedium* (Klapalek)  
†*Glossosoma nigrior* Banks  
†*Protoptila tenebrosa* (Walker)

### Family Goeridae

*Goera stylata* Ross

### Family Helicopsyichidae

*Helicopsyche borealis* (Hagen)

### Family Hydropsyichidae

†*Arctopsyche ladogensis* (Kolenati)  
*Cheumatopsyche campyla* Ross  
*Cheumatopsyche gracilis* (Banks)  
*Cheumatopsyche oxa* Ross  
*Cheumatopsyche pettiti* (Banks)  
*Cheumatopsyche sordida* (Hagen)  
*Hydropsyche alhedra* (Ross)  
*Hydropsyche betteni* Ross  
*Hydropsyche morosa* (Hagen)  
*Hydropsyche vexa* Ross  
*Hydropsyche slossonae* (Banks)  
*Hydropsyche sparna* (Ross)  
*Hydropsyche walkeri* (Betten and Mosely)  
*Macrostemum zebratum* (Hagen)  
*Parapsyche apicalis* (Banks)  
*Potamyia flava* (Hagen)

### Family Hydroptilidae

*Agraylea multipunctata* Curtis  
*Hydroptila amoena* Ross  
*Hydroptila ampoda* Ross  
*Hydroptila consimilis* Morton  
*Hydroptila hamata* Morton  
*Hydroptila jackmanni* Blicke  
*Hydroptila salmo* Ross

*Hydroptila tortosa* Ross  
*Hydroptila valhalla* Denning  
*Hydroptila waubesiana* Betten  
*Hydroptila xera* Ross  
*Ithytrichia clavata* Morton  
†*Leucotrichia pictipes* (Banks)  
*Mayatrichia ayama* Mosely  
*Neotrichia halia* Denning  
*Ochrotrichia tarsalis* (Hagen)  
*Orthotrichia baldufi* Kingsolver & Ross  
*Orthotrichia cristata* Morton  
*Orthotrichia curta* Kingsolver & Ross  
*Oxyethira aeola* Ross  
*Oxyethira araya* Ross  
*Oxyethira coerscens* Morton  
*Oxyethira forcipata* Mosely  
*Oxyethira michiganensis* Mosely  
*Oxyethira obtatus* Denning  
*Oxyethira rivicola* Blickle and Morse  
*Oxyethira verna* Ross

**Family Lepidostomatidae**

*Lepidostoma bryanti* (Banks)  
*Lepidostoma griseum* (Banks)  
*Lepidostoma sackeni* (Banks)  
*Lepidostoma togatum* (Hagen)  
*Lepidostoma unicolor* (Banks)  
*Lepidostoma vernale* (Banks)

**Family Leptoceridae**

*Ceraclea alagma* (Ross)  
*Ceraclea ancylus* (Vorhies)  
*Ceraclea arielles* (Denning)  
*Ceraclea cancellata* (Betten)  
†*Ceraclea diluta* (Hagen)  
*Ceraclea flava* (Banks)  
*Ceraclea maculata* (Banks)  
†*Ceraclea punctata* (Banks)  
*Ceraclea resurgens* (Walker)  
*Ceraclea tarsipunctata* (Vorhies)  
*Ceraclea transversa* (Hagen)  
*Leptocerus americanus* (Banks)  
*Mystacides interjecta* (Banks)  
*Mystacides sepulchralis* (Walker)  
*Nectopsyche exquisita* (Walker)  
*Nectopsyche pavidata* (Hagen)  
*Nectopsyche albida* (Walker)  
*Oecetis avara* (Banks)  
*Oecetis cinerascens* (Hagen)  
*Oecetis disjuncta* (Banks)  
*Oecetis immobilis* (Hagen 1  
†*Oecetis inconspicua* (Walker)  
*Oecetis osteni* Milne  
*Oecetis persimilis* (Banks)  
*Setodes incertus* (Walker)  
*Triaenodes abus* Milne  
*Triaenodes baris* Ross  
*Triaenodes dipsius* Ross

*Triaenodes ignitus* (Walker)  
*Triaenodes injustus* (Hagen)  
*Triaenodes marginatus* Sibley  
#*Triaenodes nox* Ross  
*Triaenodes perna* Ross  
*Triaenodes tardus* Milne

**Family Limnephilidae**

*Anabolia bimaculata* (Walker)  
*Anabolia consocia* (Walker)  
#*Anabolia sordida* Hagen  
*Asynarchus montanus* (Banks)  
*Asynarchus rossi* (Leonard & Leonard)  
*Hesperophylax designatus* (Walker)  
*Hydatophylax argus* (Harris)  
*Ironoquia lyrata* (Ross)  
*Lenarchus crassus* Banks  
#*Limnephilus bimaculatus* Walker  
*Limnephilus indivisus* Walker  
*Limnephilus infernalis* (Banks)  
*Limnephilus moestus* Banks  
*Limnephilus ornatus* Banks  
*Limnephilus parvulus* (Banks)  
*Limnephilus rhombicus* (Linnaeus)  
*Limnephilus sericeus* (Say)  
*Limnephilus submonilifer* Walker  
*Limnephilus thorus* Ross  
*Nemotaulius hostilis* (Hagen)  
*Onocosmoecus unicolor* (Banks)  
*Platycentropus radiatus* (Say)  
*Pseudostenophylax sparsus* (Banks)  
*Pycnopsyche aglona* Ross  
*Pycnopsyche antica* (Walker)  
*Pycnopsyche circularis* (Provancher)  
*Pycnopsyche guttifera* (Walker)  
*Pycnopsyche lepida* (Hagen)  
*Pycnopsyche limbata* (MacLachlan)  
*Pycnopsyche subfasciata* (Say)

**Family Molannidae**

*Molanna blenda* Sibley  
*Molanna flavicornis* Banks  
*Molanna tryphena* Betten  
*Molanna uniophila* Vorhies

**Family Odontoceridae**

*Psilotreta indecisa* (Walker)

**Family Philopotamidae**

†*Chimarra atterima* Hagen  
†*Chimarra obscura* (Walker)  
*Chimarra feria* Ross  
†*Dolophilodes distinctus* (Walker)  
*Wormaldia moesta* (Banks)

**Family Phryganeidae**

*Agrypnia improba* (Hagen)  
*Agrypnia vestita* (Walker)  
*Banksiola crotchi* (Banks)  
*Banksiola dossuaria* (Banks)  
*Beothukus complicatus* (Banks)



*Fabria inornata* (Banks)  
*Hagenella canadensis* (Banks)  
*Phryganea cinerea* Walker  
*Ptilostomis ocellifera* (Walker)  
*Ptilostomis semifasciata* (Say)

**Family Polycentropodidae**

*Cernotina pallida*\* (Banks)  
*Neureclipsis crepuscularis* (Walker)  
*Nyctiophylax affinis* (Banks)  
*Nyctiophylax moestus* Banks  
*Plectrocnemia aureola* Banks  
*Plectrocnemia cinerea* (Hagen)  
*Plectrocnemia icula* Ross  
*Polycentropus albipunctus* (Banks)  
*Polycentropus aureolus* (Banks)  
*Polycentropus centralis* Banks  
#*Polycentropus cinereus* Hagen  
*Polycentropus clinei* (Milne)  
*Polycentropus confusus* Hagen  
*Polycentropus flavus* (Banks)  
*Polycentropus iculus* Ross  
*Polycentropus interruptus* (Banks)  
*Polycentropus pentus* Ross  
*Polycentropus remotus* Banks  
*Polycentropus sabulosus* Leonard and Leonard  
*Polycentropus timesis* (Denning)  
*Polycentropus weedi* Blickle & Morse

**Family Psychomyiidae**

*Lype diversa* (Banks)  
*Psychomyia flavida* Hagen

**Family Rhyacophilidae**

†*Rhyacophila fuscula* (Walker)

**Family Sericostomatidae**

*Agarodes distinctus* (Ulmer)

**Family Uenoidae**

*Neophylax concinnus* MacLachlan  
#*Neophylax nacatus* Denning  
*Neophylax oligius* Ross

**Order Lepidoptera**

Priest's studies of leaf-mining insects are the primary source for listings of microlepidopterans. Several species were documented by North (unpublished report 2011). Surveys J. Bess and T. Werner (unpublished reports 2014,2015-2022) have added over 500 species of moths and several butterflies

**Suborder Heterocera**

**Family Arctiidae**

**Family Argyretsidae**

*Argyresthia thuiella* (Packard)

**Family Bucculatricidae**

*Bucculatrix ainliella* Murtdeldt  
*Bucculatrix canadensisella* Chambers  
*Bucculatrix packardella* Chambers

**Family Coleophorida**

*Coleophora pruniella* Clemens

**Family Cossidae**

*Acossus centerensis* (Lintner)  
*Prionoxystus robiniae* (Peck)

#### **Family Crambidae**

*Agriphila vulvivagella* (Clemens)  
*Anania funebris* (Ström)  
*Elophila icciusalis* (Walker)  
*Evergestis pallidata* (Hufnagel)  
*Anania tertialis* (Guenée)  
*Catoptria latiradiellus* (Walker)  
*Chrysoteuchia topiarius* (Zeller)  
*Crambus agitatellus* Clemens  
*Crambus bidens* Zeller  
*Crambus leachellus* (Zincken)  
*Crambus pascuella* (Linnaeus)  
*Crambus perlella* (Scopoli)  
*Crambus praefectellus* (Zincken)  
*Diathrausta reconditalis* (Walker)  
*Donacaula melinellus* (Clemens)  
*Fumibotys fumalis* (Guenée)  
*Herpetogramma abdominalis* (Zeller)  
*Herpetogramma aeglealis* (Walker)  
*Herpetogramma pertextalis* (Lederer)  
*Loxocrambus awemensis* McDunnough  
*Loxostege cerealis* (Zeller)  
*Lygropia rivulalis* Hampson  
*Metrea ostreonalis* Grote  
*Microcrambus elegans* (Clemens)  
*Nomophila nearctica* Munroe  
*Palpita magniferalis* (Walker)  
*Parapoynx allionealis* (Walker)  
*Parapoynx badiusalis* (Walker)  
*Parapoynx maculalis* (Clemens)  
*Paraponyx obscuralis* (Grote)  
*Pediasia dorsipunctellus* (Kearfott)  
*Pediasia trisecta* (Walker)  
*Sitochroa chortalis* (Grote)  
*Sitochroa palealis* (Denis & Schiffermüller)  
*#Udea rubigalis* (Guenée)

#### **Family Drepanidae**

*Drepana arcuata* Walker  
*Drepana bilineata* (Packard)  
*Habrosyne gloriosa* (Guenée)  
*Habrosyne scripta* (Gosse)  
*Oreta rosea* (Walker)  
*Pseudothyatira cymatophorides* (Gosse)

#### **Family Elachistidae**

*Elachista* sp nov

#### **Family Erebidae**

Following significant taxonomic reorganization, Erebidae now includes a number of genera previously assigned to Noctuidae, and all of the former Arctiidae and Lymantriidae, and probably some others.

*Arctia caja* Schrank  
*Bleptina caradrinalis* Guenée  
*Caenurgina crassiuscula* (Hayworth)  
*Calyptra canadensis* (Bethune)

*Catocala blandula* Hulst  
\**Catocala briseis* Edwards (underwing)  
*Catocala coelebs* Grote  
*Catocala cerogama* Guenée  
*Catocala concumbens* Walker  
*Catocala crataegi* Saunders  
*Catocala ilia* Cramer  
*Catocala parta* Guenée  
*Catocala relict*a Walker  
*Catocala semirelict*a Grote  
*Catocala sordida* Grote  
*Catocala ultronia* (Hübner)  
\* *Catocala unijuga* Walker (underwing)  
*Chytolita morbidalis* (Guenée)  
*Chytolita petrealis* (Guenée)  
*Cisseps fulvicollis* (Hübner)  
*Clemensia albata* Packard  
*Crambidia costa* (Packard)  
*Crambidia pallida* Packard  
*Ctenucha virginica* (Esper)  
*Cyenia oregonensis* (Stretch)  
*Dasychira pinicola* (Dyar)  
*Dasychira plagiata* Walker  
*Dasychira vagans* (Barnes & McDunnough)  
*Eilema bicolor* (Grote)  
*Grammia parthenice intermedia* Kirby  
*Grammia virgo* (Linnaeus)  
*Halysidota tessellaris* Smith  
*Haploa confusa* (Lyman)  
*Haploa contigua* (Walker)  
*Haploa lecontei* Guérin-Ménéville  
*Hypena abalienalis* Walker  
*Hypena baltimoralis* (Guenée)  
*Hypena bijugalis* (Walker)  
*Hypena deceptalis* Walker  
*Hypena edictalis* Walker  
*Hypena eductalis* Walker  
*Hypena humuli* Harris  
*Hypena palparia* Walker  
*Hypenodes caducus* (Dyar)  
*Hypenodes fractilinea* (Smith)  
*Hyphantria cunea* Drury  
*Hypoprepia fucosa* Hübner  
*Hypoprepia miniata* Kirby  
*Idia aemula* Hübner  
*Idia americalis* Guenée  
*Idia denticulalis* (Harvey)  
*Idia laurentii* (Smith)  
*Idia lubricalis* (Geyer)  
*Idia rotundalis* Walker  
*Idia scobialis* (Grote)  
*Idia terrebralis* Barnes & McDunnough  
*Lophocampa maculata* Harris  
*Lymantria dispar* (Linnaeus) (gypsy moth) [*non-indigenus*]  
*Macrochilo absorptalis* (Walker)  
*Macrochilo orciferalis* (Walker)

*Manulea bicolor* (Grote)  
*Metelectra quadrisignata* (Walker)  
*Orgyia definita* (Packard)  
*Orgyia leucostigma* (J.E. Smith)  
*Palthis angulalis* (Hübner)  
*Pangrapta decoralis* Hübner  
*Parallelia bistriaris* Hübner  
*Phalaenophana pyramusalis* (Walker)  
*Phalaenostola eumelusalis* (Walker)  
*Phalaenostola larentioides* Grote  
*Phalaenostola metonalis* (Walker)  
*Phragmatobia assimilans* Walker  
*Phragmatobia fuliginosa* (Linnaeus)  
*Platarctia parthenos* (Harris)  
*Pyrrharctia isabella* (J.E. Smith)  
*Renia flavipunctalis* Geyer  
*Scoliopteryx libatrix* (Linnaeus)  
*Spargaloma sexpunctata* Grote  
*Spilosoma congrua* Walker  
*Spilosoma dubia* (Walker)  
*Spilosoma virginica* (Fabricius)  
*Tathorhynchus exsiccata* (Lederer)  
*Virbia aurantiaca* (Hübner)  
*Virbia ferruginosa* (Walker)  
*Virbia laeta* (Guérin-Méneville)  
*Zale aeruginosa* (Guenée)  
*Zale duplicata* (Bethune)  
*Zale helata* (Smith)  
*Zale intenta* (Walker)  
*Zale horrida* (Hübner)  
*Zale lunata* (Drury)  
*Zale minerea* (Guenée)  
*Zale squamularis* (Drury)  
*Zale submediana* Strand  
*Zanclognatha cruralis* (Guenée)  
*Zanclognatha jacchusalis* (Grote)  
*Zanclognatha laevigata* (Grote)  
*Zanclognatha marcidilinea* (Walker)  
*Zanclognatha martha* Barnes  
*Zanclognatha pedipalis* (Guenée)  
*Zanclognatha protumnusalis* (Walker)  
*Zanclognatha theralis* (Walker)  
*Zanglognatha* sp.nov.

**Family Eriocraniidae**

*Eriocrania semipurpurella* (Stephens)

**Family Gelechiidae**

*Metzneria lappella* (L.)

*Monochroa* sp

*Scrobipalpula manierreorum* Priest

*Scrobipalpula sacculicola* (Walker)

**Family Geometridae**

*Aethalura intertexta* (Walker)

*Biston betularia cognataria* (Guenée)

*Cabera erythemera* Guenée

*Cabera variolaria* Guenée

*Campaea perlata* Guenée

*Caripeta angustiorata* Walker  
*Caripeta divisata* Walker  
*Caripeta piniata* (Packard)  
*Cepphis armataria* (Herrich-Schäffer)  
*Chlorochlamys chloroleucaria* (Guenée)  
*Cladara atroliturata* (Walker)  
*Costaconvexa centrostrigaria* (Wollaston)  
*Cyclophora pendulinaria* (Guenée)  
*Digrammia continuata* (Walker)  
*Digrammia neptaria* (Guenée)  
*Dysstroma hersiliata* (Guenée)  
*Dysstroma truncate* (Hufnagel)  
*Ectropis crepuscularia* (Denis & Schiffermüller)  
*Ennomos magnaria* Guenée  
*Ennomos subsignaria* Hübner  
*Entephria separata* Troubridge  
*Epirrhoe alternata* (Müller)  
*#Erannis tiliaria* (Harris)  
*Eubaphe mendica* (Walker)  
*Euchlaena madusaria* (Walker)  
*Euchlaena madusaria* (Walker)  
*Euchlaena muzaria* (Walker)  
*Euchlaena irraria* (Barnes & McDunnough)  
*Euchlaena johnsonaria* (Fitch)  
*Euchlaena obtusaria* (Hübner)  
*Euchlaena serrata* (Drury)  
*Euchlaena tigrinaria* (Guenée)  
*Eufidonia convergaria* (Walker)  
*Eufidonia discospilata* (Walker)  
*Eufidonia notataria* (Walker)  
*Eulithis explanata* (Walker)  
*Eulithis flavibrunneata* (McDunnough)  
*Eulithis gracilineata* (Guenée)  
*Eulithis testata* (Linnaeus)  
*Eulithis xylene* (Hulst)  
*Euphyia intermediata* (Guenée)  
*Eupithecia miserulata* Grote  
*Eutrapela clemataria* (J.E. Smith)  
*Haematopis grataria* (Fabricius)  
*Homochlodes disconventa* (Walker)  
*Homochlodes fritillaria* (Guenée)  
*Homochlodes lactispargaria* Dyar  
*Horisme intestinata* (Guenée)  
*Hydrelia inornata* (Hulst)  
*Hydrelia lucata* (Guenée)  
*Hydriomena divisaria* (Walker)  
*Hydriomena perfracta* Swett  
*Hydriomena renunciata* (Walker)  
*Hydriomena transfigurata* Swett  
*Hypagyrtis piniata* (Packard)  
*Hypagyrtis unipunctata* (Haworth)  
*Idaea dimidiata* Hufnagel  
*Iridopsis ephyraria* (Walker)  
*Iridopsis larvaria* (Guenée)  
*Lambdina fiscellaria* (Guenée)  
*Lobophora nivigerata* Walker

*Lomographa glomeraria* (Grote)  
*Lomographa vestaliata* (Guenée)  
*Macaria anataria* Swett  
*Macaria bisignata* Walker  
*Macaria fissinotata* (Walker)  
*Macaria masquerata* Ferguson  
*Macaria minorata* Packard  
*Macaria oweni* (Swett)  
*Macaria pinistrobata* Guenée  
*Macaria signaria* (Hübner)  
*Macaria transitaria* (Walker)  
*Melanolophia canadaria* (Guenée)  
*Melanolophia signataria* (Walker)  
*Metanema determinata* Walker  
*Metanema inatomaria* Guenée  
*Metarranthis amyrisaria* (Guenée)  
*Metarranthis duaria* (Guenée)  
*Metarranthis refractaria* (Guenée)  
*Metarranthis indeclinata* (Walker)  
*Nematocampa resistaria* Herrich-Schäffer  
*Nemoria mimosaria* (Guenée)  
*Nemoria rubrifrontaria* (Packard)  
*Nepytia canosaria* Walker  
*Nepytia pellucidaria* (Packard)  
*Orthonama obstipata* (Fabricius)  
*Pasiphila rectangulata* (Linnaeus)  
*Perizoma basaliata* (Walker)  
*Pero ancetaria* (Hübner)  
*Pero morrisonaria* (Henry Edwards)  
*Petrophora subaequaria* (Walker)  
*Plagodis alcoolaria* (Guenée)  
*Plagodis kuetzingi* (Grote)  
*Plagodis phlogosaria* (Guenée)  
*Plagodis pulveraria* (Linnaeus)  
*Plagodis serinaria* Herrich-Schäffer  
*Plemyria georgii* Hulst  
*Pleuroprucha insulsaria* (Guenée)  
*Probole alienaria* Herrich-Schäffer  
*Probole amicaria* (Herrich-Schäffer)  
*Probole* sp. nov.  
*Prochoerodes lineola* (Goeze)  
*Prochoerodes transversata* (Drury)  
*Protoarmia porcelaria* (Guenée)  
*Rheumaptera hastata* (Linnaeus)  
*Rheumaptera prunivorata* Ferguson  
*Scopula cacuminaria* (Morrison)  
*Scopula frigidaria* (Möschler)  
*Scopula junctaria* (Walker)  
*Scopula limboundata* (Haworth)  
*Selenia kentaria* (Grote & Robinson)  
*Semiothisa bisignata* Hübner  
*Sicya macularia* (Harris)  
*Spargania magnoliata* Guenée  
*Speranza andersoni* (Swett)  
*Speranza argillacearia* (Packard)  
*Speranza brunneata* (Thunberg)

*Speranza evagaria* (Hulst)  
*Speranza loricaria* (Eversman)  
*Speranza occiduaria* (Packard)  
*Speranza pustularia* (Guenée)  
*Speranza subcessaria* (Walker)  
*Speranza sulphurea* (Packard)  
*Synchlora aerata albolineata* Packard  
*Tacparia atropunctata* (Packard)  
*Tacparia detersata* (Guenée)  
*Tetracis cachexiata* Guenée  
*Tetracis crocallata* Guenée  
*Thera contractata* (Packard)  
*Trichodezia albovittata* (Guenée)  
*Triphosa haesitata* (Guenée)  
*Xanthorhoe decoloraria* (Esper)  
*Xanthorhoe ferrugata* Clerck  
*Xanthorhoe labrodorensis* (Packard)  
*Xanthorhoe lacustrata* (Packard)  
*Xanthorhoe iduata* (Guenée)  
*Xanthorhoe packardata* McDunnough  
*Xanthotype sospeta* (Drury)  
*Xanthotype urticaria* Swett

**Family Gracillariidae**

*Acrocercops astericola* (Frey and Boll)  
*Caloptilia alnivorella* (Chambers)  
*Caloptilia syringella* (Fab.)  
*Caloptilia serotinella* Ely  
*Cameraria* sp.  
*Cameraria aceriella* (Clemens)  
*Cameraria bethunella* (Chambers)  
*Cameraria betulivora* (Walsingham)  
*Cameraria corylisella* (Chambers)  
*Cameraria fletcherella* (Braun)  
*Cameraria lentella* (Braun)  
*Cameraria ostryarella* (Chambers)  
*Gracillaria syringella* (Fabricius)  
*Leucanthiza dircella* Braun  
*Marmara fasciella* (Chambers)  
*Micurapteryx occulta*  
*Parectopa* sp.  
*Parectopa occulta* Braun  
*Parectopa robiniella* Clemens  
*Parornix conspicuella* (Dietz)  
*Phyllocnistis populiella* Chambers  
*Phyllonorycter alnicolella* (Walsingham)  
*Phyllonorycter apparella* (Herrich-Schäffer)  
*Phyllonorycter auronitens* (Frey & Boll)  
*Phyllonorycter basistrigella* (Clemens)  
*Phyllonorycter clemensella* (Chambers)  
*Phyllonorycter ledella* (Walsingham)  
*Phyllonorycter lucidicostella* (Clemens)  
*Phyllonorycter lucetiella* (Clemens)  
*Phyllonorycter martiella* (Braun)  
*Phyllonorycter nipigon* (Freeman)  
*Phyllonorycter ostryaefolia* (Clemens)  
*Phyllonorycter robiniella* (Clemens)

*Phyllonorycter tilliacella* (Chambers)  
*Povolnya quercinigrella* (Ely)  
*Protolithocolletis lathyri* Braun

**Family Hepialidae**

*Korscheltellus gracillis* (Grote)  
*Sthenopsis argenteonaculatus* (Harris)

**Family Lasiocampidae**

*Malacosoma americana* (Fabricius)  
*Malacosoma disstria* Hübner  
*Phylloidesma americana* (Harris)  
*Tolype laricis* (Fitch)  
*Tolype vellea* (Stoll)

**Family Limacodidae**

*Lithacodes fasciola* (Herrich-Schäffer)  
*Tortricidia flexuosa* Grote  
*Tortricidia testacea* Packard

**Family Nepticulidae**

*Glaucolepis saccharella* Braun  
*Stigmella macrocarpae* (Freeman)  
*Stigmella quercipulchella* (Chambers)

**Family Noctuidae**

The traditional Noctuidae -- the largest family of moths with over 35,000 species known -- is certainly paraphyletic. Reorganization of the family is under way, but there does not yet seem to be clear agreement on how the family should be restructured. Some genera here are likely to be reassigned to Erebidae, and some sub-families will be elevated to family status; I have not fully integrated current thinking on Noctuidae, but have incorporated generic reassignments as encountered in updates.

*Abagrotis alternata* (Grote)  
*Abagrotis brunneipennis* Grote  
*Abogrotis cupida* Grote  
*Abagrotis cryptica* LaFontaine  
*Abagrotis orbis* (Grote)  
*Achatia distincta* Hübner  
*Acronicta americana* (Harris)  
*Acronicta betulae* (Riley)  
*Acronicta dactylina* Grote  
*Acronicta fragilis* (Guenée)  
*Acronicta funeralis* Grote & Robinson  
*Acronicta grisea* Walker  
*Acronicta hasta* (Guenée)  
*Acronicta impressa* Walker  
*Acronicta increta* Morrison  
*Acronicta innotata* Guenée  
*Acronicta interrupta* Guenée  
*Acronicta lobeliae* Guenée  
*Acronicta modica* Walker  
*Acronicta morula* Grote & Robinson  
*Acronicta retardata* (Walker)  
*Acronicta sperata* Grote  
*Acronicta tritona* (Hübner)  
*Acronicta vulpina* (Grote)  
*Actebia fennica* (Tauscher)  
*Agnorisma bugrai* (Kocak)  
*Agrochola bicolorago* Guenée  
*Agrotis ipsilon* Hufnagel



*Agrotis venerabilis* Walker  
*Agrotis vetusta* (Walker)  
*Agrotis volubilis* Harvey  
*Amphipoea americana* (Speyer)  
*Amphipyra glabella* (Morrison)  
*Amphipyra pyramidoides* Guenée  
*Amphipyra tragopoginis* (Clerck)  
*Anagrapha falcifera* (Kirby)  
*Anaplectoides pressus* (Grote)  
*Anarta obesula* (Smith)  
*Anathix ralla* (Grote & Robinson)  
*Anhimella contrahens* (Walker)  
*Anicla forbesi* (Franclemont)  
*Anicla illapsa* (Walker)  
*Apamea alia* (Guenée)  
*Apamea amputatrix* (Fitch)  
*Apamea apamiformis* (Guenée)  
*Apamea cogitate* (Smith)  
*Apamea devastator* Brace  
*Apamea dubitans* (Walker)  
*Apamea indocilis* (Walker)  
*Apamea inficita* (Walker)  
*Apamea lignicolora* (Guenée)  
*Apamea ophiogramma* Esper  
*Apamea plutonia* (Grote)  
*Apamea scoparia* Mikkola, Mustelin & Lafontaine  
*Apamea sordens finitima* Hufnagel  
*Apamea unanimitis* (Hübner)  
*Aplectoides condita* (Guenée)  
*Aplectoides prasina* (Denis & Schiffermüller)  
*Athetis tarda* (Guenée)  
*Autographa ampla* (Walker)  
*Autographa bimaculata* (Stephens)  
*Autographa flagellum* (Walker)  
*#Autographa precatationis* (Guenée)  
*Baileya doubledayi* (Guenée)  
*Baileya ophthalmica* (Guenée)  
*Bellura obliqua* (Walker)  
*Bellura vulnifica* Grote  
*Balsa labecula* (Grote)  
*Callopietria cordata* (Ljungh)  
*Callopietria mollissima* (Guenée)  
*Calophasia lunula* (Hufnagel)  
*Calyptra canadensis* Bethune  
*Capsula subflava* (Grote)  
*Celaena reniformis* (Grote)  
*Cerma cora* Hübner  
*Charadra deridens* (Guenée)  
*Chrysanympa formosa* (Grote)  
*Chrysodeixis includes* (Walker)  
*Chytonix palliatricula* (Guenée)  
*Chytonix sensilis* Grote  
*Coenophila opacifrons* (Grote)  
*Conservula anodonta* (Guenée)  
*Cosmia calami* (Harvey)  
*Crocigrapha normani* (Grote)

*Cryptocala acadensis* (Bethune)  
*Cucullia convexipennis* Grote & Robinson  
#*Cucullia postera* Guenee  
*Dargida diffusa* (Walker)  
*Deltote bellicular* (Hübner)  
*Diachrysia aereoides* Grote  
*Diachrysia balluca* Geyer  
*Diarsia jucunda* (Walker)  
*Diarsia rosaria freemani* (Grote)  
*Diarsia rubifera* (Grote)  
*Dypterygia rozmani* Berio  
*Ecliptoptera silaceata* (Denis & Schiffermüller)  
*Elaphria alapallida* Pogue & Sullivan  
*Elaphria georgei* (Moore and Rawson)  
*Elaphria versicolor* (Grote)  
*Enargia fausta* Schmidt  
*Eosphropteryx thyatyroides* Dyar  
*Epiglaea apiata* (Grote)  
*Eremobina leucoscelis* (Grote)  
*Eueretagrotis attenta* (Grote)  
*Eueretagrotis perattentus* (Grote)  
*Eueretagrotis sigmoides* (Guenée)  
*Eupsilia morrisoni* (Grote)  
*Eupsilia tristigmata* (Grote)  
*Eurois astricta* Morrison  
*Eurois occulta* (Linnaeus)  
*Euxoa adumbrata thanatologia* (Dyar)  
*Euxoa campestris* (Grote)  
*Euxoa declarata* (Walker)  
*Euxoa detersa* (Walker)  
*Euxoa divergens* (Walker)  
*Euxoa messoria* (Harris)  
*Euxoa ochrogaster* (Guenée)  
*Euxoa perpolita* (Morrison)  
*Euxoa redimicula* (Morrison)  
*Euxoa scandens* (Riley)  
*Euxoa sinelinea* Hardwick  
*Euxoa tessellata* (Harris)  
*Feltia geniculata* (Grote & Robinson)  
*Feltia jaculifera* (Guenée)  
*Feltia herilis* (Grote)  
*Feltia mollis* (Walker)  
*Feltia subterranea* (Fabricius)  
*Feltia subgothica* (Haworth)  
*Feralia comstocki* (Grote)  
*Feralia jocosa* (Guenée)  
*Feralia major* (J. B. Smith)  
*Galgula partita* Guenée  
*Globia subflava* (Grote)  
*Graphiphora augur* Ochseneimer  
*Harrisimemna trisignata* (Walker)  
*Helicoverpa zea* (Boddie)  
*Helotropha reniformis* (Grote)  
*Hormothodes furfurata* (Grote)  
*Hydraecia immanis* Guenée  
*Hydraecia stramentosa* Guenée

*Hypocoena inquinata* (Guenée)  
*Hyppa xylinoides* (Guenée)  
*Ipimorpha pleonectusa* Grote  
*Lacanobia grandis* (Guenée)  
*Lacanobia nevadae* (Grote)  
*Lacanobia radix* (Walker)  
*Lacanobia subjuncta* (Grote & Robinson)  
*Lacinipolia anguina* (Grote)  
*Lacinipolia lorea* (Guenée)  
*Lacinipolia lustralis* (Grote)  
*Lacinipolia olivacea* (Morrison)  
*Lacinipolia renigera* (Stephens)  
*Lacinipolia vicina* (Grote)  
*Lateroligia ophiogramma* (Esper)  
*Leucania commoides* Guenée  
*Leucania insueta* Guenée  
*Leucania linda* Franclemont  
*Leucania multilinea* Walker  
*Leucania pseudargyria* Guenée  
*Leuconycta diptheroides* (Guenée)  
*Lithacodia muscosula* (Guenée)  
*Lithomoia solidaginis* (Morrison)  
*Lithophane baileyi* (Grote)  
#*Lithophane grotei* (Riley)  
*Lithophane hemina* Grote  
*Lithophane innominata* (Smith)  
*Lithophane patefacta* (Walker)  
*Lithophane semiusta* Grote  
*Lithophane tepida* Grote  
*Loscopia velata* (Walker)  
*Lycophotia phyllophora* (Grote)  
*Magus divaricate* (Grote)  
*Maliattha concinnimacula* (Guenée)  
*Maliattha synochitis* (Grote & Robinson)  
*Megalographa biloba* (Stephens)  
*Melanchra adjunct* (Guenée)  
*Melanchra assimilis* (Morrison)  
*Melanchra pulverulenta* (Smith)  
*Meropleon diversicolor* (Morrison)  
*Mesapamea fractilinea* (Grote)  
*Morrisonia confusa* (Hübner)  
*Morrisonia evicta* (Grote)  
*Morrisonia latex* (Guenée)  
*Mythimna oxygala* (Grote)  
*Mythimna unipuncta* (Hawthorn)  
*Nedra ramosula* (Guenée)  
*Neoligia exhausta* (Smith)  
*Neoligia subjuncta* (Smith)  
*Nephelodes minians* Guenée  
*Noctua pronuba* (Linnaeus)  
*Ochropleura implecta* Lafontaine  
*Ochropleura plecta* Linnaeus  
*Ogdoconta cinereola* (Guenée)  
*Oligia bridghamii* (Grote & Robinson)  
*Oligia minuscula* (Morrison)  
*Oligia modica* (Guenée)

*Oligia chlorostigma* (Harvey)  
*Orthodes crenulata* Butler  
*Orthodes cynica* Guenée  
*Orthodes detracta* (Walker)  
*Orthodes goodelli* (Grote)  
*Orthosia hibisci* (Guenée)  
*Orthosia revicta* (Morrison)  
*Pangrapta decoralis* Hübner  
*Panthea furcilla* (Packard)  
*Panthea acronyctoides* (Walker)  
*Papaipema appassionata* (Harvey)  
*Papaipema pterisii* Bird  
*Papaipema unimoda frigida* Smith  
*Papestra biren* (Goeze)  
*Papestra quadrata* (Smith)  
*Peridroma saucia* (Hübner)  
*Phalaenostola hanhami* (Smith)  
*Phalaenostola metonalis* (Walker)  
*Phlogophora periculosa* Guenée  
*Phosphila turbulenta* Hübner  
*Photodes includens* (Walker)  
*Photodes panatela* (Smith)  
*Platyperigea multifera* (Walker)  
*Platypolia mactata* (Guenée)  
*Plusia contexta* Grote  
*Plusia venusta* Walker  
*Polia imbrifera* (Guenée)  
*Polia nimbosa* (Guenée)  
*Polia purpurissata* (Grote)  
*Protodeltote albidula* (Guenée)  
*Protodeltote muscosula* (Guenée)  
*Protolampra rufipectus* (Morrison)  
*Protorthodes oviduca* (Guenée)  
*Proxenus miranda* (Grote)  
*Pseudeustrotia carneola* (Guenée)  
*Pseudeva purpurigera* Walker  
*Pseudohermonassa bicarnea* (Guenée)  
*Pseudohermonassa tenuicula* (Morrison)  
*Pyreferra hesperidago* (Guenée)  
*Pyrrhia exprimens* (Walker)  
*Raphia frater* Grote  
*Renia flavipunctalis* Geyer  
*Rivula propinqualis* Guenée  
*Schinia arcigera* (Guenée)  
*Schinia florida* Guenée  
*Scoliopteryx libatrix* (Linnaeus)  
*Sideridis maryx* (Guenée)  
*Sideridis rosea* (Harvey)  
*Spaelotis clandestina* (Harris)  
*Spiramater lutra* (Guenée)  
*Spodoptera frugiperda* (J.E. Smith)  
*Striacosta albicosta* (Smith)  
*Sympistis chionanthi* (J.E. Smith)  
*Sympistis dentata* (Grote)  
*Syngrapha abstrusa* Eichlin & Cunningham  
*Syngrapha altera* (Ottolengui)

*Syngrapha epigaea* (Grote)  
*Syngrapha octoscripta* (Grote)  
*Syngrapha cryptica* Eichlin & Cunningham  
*Syngrapha rectangula* (Kirby)  
*Syngrapha selecta* (Walker)  
*Syngrapha viridisigma* (Grote)  
*Tricholita signata* (Walker)  
*Trichordestra legitima* (Grote)  
*Trichordestra tacoma* (Strecker)  
*Trichosilia mollis* (Walker)  
#*Ufeus satyricus* Grote  
*Ulolonche modesta* (Morrison)  
#*Xanthia togata* (Esper)  
*Xestia badicollis* Grote  
*Xestia c-nigrum* (Linnaeus)  
*Xestia dilucida* Morrison  
*Xestia dolosa* Franclemont  
*Xestia homogena* (McDunnough)  
*Xestia normanianus* (Grote)  
*Xestia oblata* (Morrison)  
*Xestia praevia* Lafontaine  
*Xestia smithii* (Snellen)  
*Xylena cineritia* (Grote)  
*Xylena curvimacula* (Morrison)  
*Xylomoia chagnoni* Barnes & Benjamin  
*Xylotype arcadia* Barnes & Benjamin  
#*Xylotype capax* (Grote and Robinson)

#### **Family Nolidae**

*Nycteola cinereana* Neumoegen & Dyar  
*Nycteola metaspilella* (Walker)

#### **Family Notodontidae**

*Clostera albosigma* Fitch  
*Datana ministra* (Drury)  
*Furcula cinerea* (Walker)  
*Furcula occidentalis* (Lintner)  
*Gluphisia avimacula* Hudson  
*Gluphisia lintneri* (Grote)  
*Gluphisia septentrionis* Walker  
#*Heterocampa biundata* Walker  
*Heterocampa guttivitta* (Walker)  
#*Heterocampa obliqua* Packard  
*Heterocampa umbrata* Walker  
*Lochmaeus manteo* Doubleday  
*Nadata gibbosa* (J.E. Smith)  
*Odontosia elegans* (Strecker)  
*Oligocentria lignicolor* (Walker)  
*Oligocentria semirufescens* (Walker)  
*Paraeschra georgica* (Herrich-Schäffer)  
*Peridea angulosa* (J.E. Smith)  
*Peridea basitriens* (Walker)  
*Peridea ferruginea* (Packard)  
*Pheosia rimosa* Packard  
*Schizura leptinoides* (Grote)  
*Schizura unicornis* (J.E. Smith)  
*Symmerista canicosta* Franclemont

#### **Family Psychidae**

*Psyche casta* (Pallas)  
*Taleporia walshiella* (Clemens)

**Family Pyralidae**

*Acrobasis rubrifasciella* Packard  
*Dioryctria* sp  
*Etiella zinckinella* Treitschke  
*Herculia infimbrialis* (Guenée)  
*Hypsopygia costalis* (Fabricius)  
*Meroptera pravella* (Grote)  
*Ostrinia nubilalis* (Hübner)  
*Peoria approximella* (Walker)  
*Pococera robustella* (Zeller)  
*Pococera* nr. *asperatella* (Clemens)  
*Sciota vetustella* (Dyar)

**Family Pterophoridae**

sp.1  
sp.2  
sp.3

**Family Saturniidae**

*Actias luna* (Linnaeus)  
\**Antheraea polyphemus* (Cramer) (polyphemus)  
\**Automeris io* (Fabricius) (io)  
*Dryocampa rubicunda* (Fabricius)  
*Hyalophora cecropia* (Linnaeus)

**Family Sessiidae**

*Pennisetia marginatum* (Harris)  
*Synanthedon acerni* (Clemens)  
#*Synanthedon proxima* (Edwards)

**Family Sphingidae**

*Amorpha juglandis* (J.E. Smith)  
*Ceratomia amyntor* (Geyer)  
*Ceratomia undulosa* (Walker)  
*Darapsa choerilus* (Cramer)  
*Deidamia inscripta* Harris  
\**Hemaris diffinis* (Boisduval) (snowberry clearwing hawk-moth)  
\**Hemaris thysbe* (Fabricius) (hummingbird clearwing hawk-moth)  
*Hyles gallii* (Rottemburg)  
*Hyles lineata* (Fabricius)  
*Lapara bombycoides* Walker  
*Pachysphinx modesta* (Harris)  
*Paonias excaecata* (J.E. Smith)  
*Paonias myops* (J.E. Smith)  
*Smerinthus jamaicensis* (Drury)  
*Sphinx canadensis* (Boisduval)  
*Sphinx chersis* Hübner  
*Sphinx drupiferarum* J.E. Smith  
*Sphinx kalmiae* J.E. Smith  
*Sphinx poecila* Stephens

**Family Tischeriidae**

*Coptotriche citrinipennella* (Clemens)  
*Tischeria solidaginifoliella* (Clemens)

**Family Tortricidae**

*Acleris chalybeana* (Fernald)  
*Archips purpurana* (Clemens)  
*Archips* spp.  
*Ancylis burgessiana* (Zeller)

*Argyrotaenia alisellana* (Robinson)  
*Cenopsis pettitana* (Robinson)  
*Choristoneura conflictana* (Walker)  
*Choristoneura fumiferana* (Clemens)  
*Choristoneura pinus* Freeman  
*Choristoneura rosaceana* (Harris)  
*Clepsia persicana* (Fitch)  
*Epiblema benignatum* (?) McDunnough  
*Hedya ochroleucana* (Frölich)  
*Olethreutes* spp.  
*Orthotaenia undulana* (Denis & Schiffermüller)  
*Pandemis limitata* (Robinson)  
*Phtheochroa baracana* (?) (Busck)  
*Sparganothis tristriata* Kearfott

**Family Uraniidae**

*Callizzia amorata* Packard

**Family Yponomeutidae**

*Yponomeuta cagnagella* (Hubner)

**Suborder Rhopalocera**

**Family Hesperidae**

**Subfamily Hesperinae**

*Amblyscirtes hegon* (Scudder) (pepper-and-salt skipper)  
*Ancyloxypha numitor* (Fabricius) (least skipper)  
*Carterocephalus palaemon* (Pallas) (arctic skipper)  
*Erynnis icelus* (Scudder and Burgess) (dreamy duskwing)  
*Euphyes vestris* (Boisduval) (dun skipper)  
*Hesperia sassacus* Harris (Indian skipper)  
\**Poanes hobomok* (Harris) (Hobomok skipper)  
*Polites mystic* (W.H.Edwards) (long dash)  
\**Polites peckius* (Kirby) (skipper)  
*Polites themistocles* (LaTreille) (tawny-edge skipper)  
*Thymelicus lineola* (Ochsenheimer) (European skipper) [*non-indigenous*]

**Family Lycaenidae**

**Subfamily Miletinae**

*Feniseca tarquinius* Fabricius (harvester)

**Subfamily Polyommatae**

\**Celastrina ladon* (Cramer) (common blue) [*in seasonally variable forms*]  
*Celastrina lucia* (Kirby) (northern azure)  
*Celastrina neglecta* (W.H.Edwards)  
#*Cupido comyntas* (Godart) (eastern tailed blue)  
#*Glaucopsyche lygdamus* couperi Grote (silvery blue)

**Subfamily Theclinae**

*Callophrys augustinus* (Kirby) (brown elfin)  
*Callophrys eryphon* Boisduval (western pine elfin) [segregated from *Callophrys*]  
*Callophrys niphon* (Hübner) (eastern pine elfin) [segregated from *Callophrys*]  
\**Lycaena phlaeas* (Linnaeus) (American copper)  
*Satyrium calanus falacer* (Godart) (banded hairstreak)  
\**Satyrium edwardsii* (Grote and Robinson) (Edwards' hairstreak)

**Family Nymphalidae**

**Subfamily Danainae**

\**Danaus plexippus* (Linnaeus) (monarch)

**Subfamily Heliconiinae**

\**Boloria bellona* (Fabricius) (meadow fritillary)  
\**Boloria selene antrocostalis* (Denis & Schiffermüller) (silver-bordered fritillary)  
*Euptoieta claudia* (Cramer) (variegated fritillary)

- \**Speyeria aphrodite* (Fabricius) (venus silver-spot)
- \**Speyeria atlantis* (Edwards) (mountain silver-spot)
- \**Speyeria cybele* (Fabricius) (great spangled fritillary)

**Subfamily Limetidinae**

- \**Limenitis archippus* (Cramer) (viceroy)
- \**Limenitis arthemis* (Drury) (white admiral)

**Subfamily Nymphalinae**

- \**Aglais milberti* (Godart) (nettle butterfly) [formerly *Nymphalis*]
- Chlosyne nycteis* (Doubleday) (silvery checkerspot)
- Euphydryas phaeton* (Drury) (Baltimore checkerspot)
- \**Junonia caenia* Hübner (buckeye)
- \**Nymphalis antiopa* (Linnaeus) (mourning cloak)
- Nymphalis j-album* (Boisduval and LeConte) (Compton tortoiseshell)
- Phyciodes cocyta* (Cramer) (northern crescent)
- Phyciodes tharos* (Drury) (pearl crescent)
- Polygonia comma* (Harris) (eastern comma)
- Polygonia faunus* (W.H.Edwards) (green comma)
- \**Polygonia interrogationis* (Fabricius) (question mark)
- Polygonia progne* (Cramer) (gray comma)
- \**Vanessa atalanta* (Linnaeus) (red admiral)
- \**Vanessa cardui* (Linnaeus) (hunter's butterfly)
- Vanessa virginiensis* (Drury) (American lady)

**Subfamily Satyrinae**

- \**Cercyonis pegala* (Fabricius) (wood-nymph)
- Coenonympha inornata* W.H.Edwards (common ringlet)
- Enodia anthedon* A.H. Clark (northern pearly-eye)
- Megisto cymela* (Cramer) (little wood satyr)
- Satyrodes eurydice* (Linnaeus) (eyed brown)

**Family Papilionidae**

**Subfamily Papilioninae**

- Papilio canadensis* Rothschild & Jordan (Canadian tiger swallowtail)

**Family Pieridae**

**Subfamily Coliadinae**

- Colias eurytheme* Boisduval (orange sulphur)
- \**Colias interior* (Scudder) (pink-edged sulphur)
- \**Colias philodice* Godart (clouded sulphur)

**Subfamily Pierinae**

- \**Pieris oleracea* Harris (mustard white)
- Pieris rapae* (Linnaeus) (cabbage white) [*non-indigenus*]

**Subphylum CHELICERATA**

In proportion to importance, perhaps the least well documented major group of metazoans in this region. The Chelicerata include the very diverse spiders and mites as well as a variety of smaller groups.

**Class Arachnida**

**Subclass Acarina**

Mites are a very large and ill-studied group. Their taxonomic arrangement does not seem to be standardized. They are referred to Subclass Acarina by ITIS, with several orders of mites, but other sources place all mites in Order Acari (Tudge 2000) with the orders listed here demoted to suborder status. Arrangement of orders and families will vary from source to source. Aquatic mites in Order Trombidiformes are from Yanoviak and McCafferty (1996). Listings from Order Acariformes (including two new genera named from specimens collected at the Huron Mountains – *Superiorus* and *Huronopus*) are from O'Connor (1989,1991), whose family assignments are used here.



## **Order Acariformes**

### **Family Acaridae**

*Boletoglyphus ornatus* Fain & Ide  
*Calvoliella cyclopis* Woodring  
*Calvoliella* sp A.  
*Calvoliella* sp B.  
*Calvoliella* sp C.  
*Calvoliella* sp D.  
*Calvoliella* sp E.  
*Histiogaster arborsignis* Woodring  
*Lackerbaueria krombeini* Baker  
*Naiadacarus arboricola* Fashing  
*Naiadacarus fashingi* O'Connor  
*Rhizoglyphus* sp B.  
*Rhizoglyphus* sp A.  
*Sancassania* sp A.  
*Schweibea* sp A.  
*Schweibea* sp B.  
*Schweibea* sp C  
*Schweibea* sp D.  
*Schweibea* sp E.  
*Schweibea* sp F.  
*Schweibea* sp G  
*Schweibea* sp H.  
*Schweibea* sp I.  
*Schweibea* sp J.  
*Schweibea* sp K.  
*Thyreophagus* sp A.  
N. Gen. sp A.

### **Family Chaetodactylidae**

*Chaetodactylus* sp A.

### **Family Digamasellidae**

*Dendrolaelaps* sp A.  
*Dendrolaelaps* sp B.

### **Family Glycyphagidae**

*Glycyphagus* sp A.

### **Family Hemisarcoptidae**

*Congovidia* sp A.  
*Congovidia* sp B.  
*Congovidia* sp C  
*Congovidia* sp D.  
*Congovidia* sp E.  
*Congovidia* sp F.  
*Divilia* sp A.  
*Divilia* sp B.  
*Divilia* sp C  
*Huronopus michiganensis* O' Connor & Houck  
*Nanacarus* sp A.  
*Nanacarus* sp B.  
*Nanacarus* sp C  
*Nanacarus* sp D.  
*Nanacarus* sp E.  
*Superiorus huronmontanus* O' Connor & Houck

### **Family Histiostomatidae**

*Bonomoia* sp A.

*Bonomoia* sp B.  
*Bonomoia* sp C  
*Histiostoma* sp A.  
*Histiostoma* sp B.  
*Spinanoetus* sp A.

**Family Parasitidae**

*Parasitus* sp A.

**Family Pyroglyphidae**

*Sturnophagoides bakeri* (Fain)

**Family Rosensteinidae**

*Coprogllyphus pennsylvanicus* (Fain, Lukoschus, & Whitaker)

**Family Winterschmidtidae**

*Crabrovidia ectemni* Fain

N. Gen. 1 sp A.

N. Gen. 1 sp B.

*Saprogllyphus* sp A.

*Saprogllyphus* sp B.

*Saprogllyphus* sp C

*Vespacarus* sp A.

*Vidia* sp A.

*Vidia* sp B.

**Order Trombidiformes**

**Family Aturidae**

†*Aturus estellae* Habeeb

**Family Hydryphantidae**

†*Protzia* sp

**Family Hygrobatidae**

†*Atractides* sp

†*Hygrobates* sp

**Family Lebertiidae**

†*Letertia* sp

**Family Sperchonidae**

†*Sperchon* sp

**Family Terrenticolidae**

†*Torrenticola* sp

**Phylum CHORDATA**

**Subphylum VERTEBRATA**

While vertebrates – relatively large and charismatic – are particularly well-studied, new species continue to be noted (especially among the fishes). In addition, it is difficult to define “occurrence” meaningfully and unambiguously for some groups. Birds and mammals have wide ranges and many are highly mobile. Some fish whose primary habitat is the deep waters of Lake Superior may wander into near-shore waters and stream-mouths. I have chosen to list all species for which individuals have been documented within the boundaries of the Club. Some of these individuals have certainly been wanderers or vagrants and do not represent a locally established population. While they are part of the potentially observable diversity of the Club, they are not a meaningful part of the ecological function of the local landscape. The base list for vertebrates is from Manville (1948) with additions as noted. On-line sources (NatureServe-Explorer, ITIS) were used extensively to verify names. Organization of taxa is primarily according to Tudge (2000).

Currently, the list includes four species of jawless fishes, 55 of bony fishes, 15 amphibians, 11 reptiles, 234 birds, and (depending on accounting) about 55 mammals, for a total of 375 vertebrate species.

## **Class Cephalaspidomorphi (Cyclostomata)**

This list of fish species (Classes Cephalaspidomorphi and Actinopterygii) is based Manville (1948), but subsequent researchers (Braem 1959, Huckins 2000-2002) have added several species, and these are indicated by asterisks. Many of Manville's species assignments have been changed. Higher-level taxonomy of the jawless fishes is debated: the old Class Cyclostomata is now widely regarded as polyphyletic, resulting in the separation of the lampreys into Class Cephalaspidomorphi.

### **Order Petromyzontiformes**

#### **Family Petromyzontidae**

*Ichthyomyzon fossor* Reighard and Cummins (northern brook lamprey)

\**Ichthyomyzon unicuspis* Hubbs and Trautman (silvery lamprey)

\**Lampetra appendix* (De Kay) (American brook lamprey)

\**Petromyzon marinus* Linnaeus (sea lamprey)[non-indigenous]

## **Class Actinopterygii**

The bony fishes were traditionally placed in Class Osteichthyes. However, Osteichthyes includes two sister groups or clades: the 'ray-finned fishes', or Actinopterygii, which include the vast majority of fish species (indeed, probably a majority of vertebrate species); and the Sarcopterygii, including such creatures as coelocanth and the extinct lobe-finned fishes. Since the lobe-finned fishes include the ancestors of the tetrapods (including all terrestrial vertebrates), strict adherence to cladistic standards of monophyly would require placing all of the remaining vertebrates in Osteichthyes. Regarding this as undesirable, most taxonomists now regard Osteichthyes as an informal taxon, or 'grade', and elevate Actinopterygii to Class. As for the previous class, the base list of bony fish is drawn from Manville, and changes are similarly noted. Some of the species listed here spend most of their life-cycle in the open waters of Lake Superior, but all find their way, for breeding or as occasional wanderers into the streams or inland lakes of the Huron Mt. Club. Additional species may occur in the offshore waters of Lake Superior.

The native whitefish or ciscos (Family Salmonidae, Subfamily Coregoninae) deserve particular comment. This group has diversified dramatically in the Great Lakes basin. Many populations have been isolated, presumably since early post-glacial times, in smaller lakes throughout the region, and have diverged genetically and in morphology. While such populations are recognizably distinct, their proper taxonomic status is ambiguous. Manville recognizes two sub-species of *Coregonus (Leucichthys) artedi* endemic to Lake Ann and Rush Lake (vars. *annensis* and *huronicus*). I have been unable to find any modern taxonomic source recognizing these varieties, and do not include them here. The endemic Ives Lake cisco, *Coregonus (Leucichthys) hubbsi*, is lacking from most general taxonomic sources on North American fish, but is included in others (and is listed by the State of Michigan as a species of special concern). I have retained it as a species. It is well to recognize, however, that many isolated populations of fish, while genetically and morphologically distinctive, prove not to be reproductively isolated when brought into renewed contact with sister groups.

A distinctive form of lake trout in Rush Lake appears similar to distinctive small, deep-water forms in several much larger lakes (including Lake Superior). Sympatry of this form with the 'normal' form suggests that it is a distinct population, but its taxonomic status has not been formally studied (although Manville lists it as "Rush Lake trout", *Salvelinus (Critivomer) namaycush huronicus*).

As for the jawless fishes, this list is primarily based on Manville (1948), with additions (Braem 1959) denoted by asterisks. 55 species are listed thus far.

### **Order Acipenseriformes**

#### **Family Acipenseridae**

*Acipenser fulvescens* Rafinesque (lake sturgeon)

### **Order Clupeiformes**

#### **Family Clupeidae**

\**Alosa pseudoharengus* (Wilson) (alewife) [non-indigenous]

### **Order Osmeriformes**

#### **Family Osmeridae**

*Osmerus mordax* (Mitchill) (rainbow smelt)

## Order Salmoniformes

### Family Salmonidae

*Coregonus artedii* Lesueur (lake herring)  
*Coregonus clupeaformis* (Mitchill) (great lakes whitefish)  
*Coregonus hoyi* (Gill) (great lakes bloater)  
*Coregonus hubbsi* (Koelz) (Ives Lake cisco)  
*Coregonus nipigon* (Koelz) (Nipigon cisco)  
\**Oncorhynchus kisutch* (Walbaum) (coho salmon) [non-indigenous]  
\**Oncorhynchus mykiss irideus* (Gibbons) (rainbow trout) [non-indigenous?]  
\**Oncorhynchus tshawytscha* (Walbaum) (chinook salmon) [non-indigenous]  
*Prosopium cylindraceum* (Pallas) (round whitefish)  
*Salmo trutta* Linnaeus (brown trout) [non-indigenous]  
*Salvelinus fontinalis* (Mitchill) (brook trout)  
*Salvelinus namaycush* (Walbaum) (lake trout, lake charr)

## Order Esociformes

### Family Esocidae

*Esox lucius* Linnaeus (northern pike)  
\**Esox masquinongy* Mitchill (muskellunge)

### Family Umbridae

\**Umbra limi* (Kirtland) (central mudminnow)

## Order Cypriniformes

### Family Catostomidae

*Catostomus catostomus* (Forster) (long-nose sucker)  
*Catostomus commersonii* (Lacepede) (white sucker)

### Family Cyprinidae

*Couesius plumbeus* (Agassiz) (lake chub)  
\**Cyprinus carpio* Linnaeus (common carp)  
*Luxilus cornutus* (Mitchill) (common shiner)  
\**Margariscus margarita* (Cope) (pearl dace)  
*Notemigonus crysoleucas* (Mitchill) (western golden shiner)  
\**Notropis atherinoides* Rafinesque (emerald shiner)  
*Notropis heterodon* (Cope) (blackchin shiner)  
*Notropis heterolepis* Eigenmann and Eigenmann (blacknose shiner)  
*Notropis hudsonius* (Clinton) (spottail shiner)  
*Notropis volucellus* (Cope) (mimic shiner)  
*Phoxinus eos* (Cope) (northern redbelly dace)  
*Phoxinus neogaeus* Cope (finescale dace)  
*Pimephales notatus* (Rafinesque) (bluntnose minnow)  
*Pimephales promelas* Rafinesque (fathead minnow)  
\**Rhinichthys atratulus* (Hermann) (blacknose dace)  
*Rhinichthys cataractae* (Valenciennes) (longnose dace)  
\**Semotilus atromaculatus* (Mitchill) (northern creek chub)

## Order Siluriformes

### Family Ictaluridae

\**Ameiurus melas* (Rafinesque) (black bullhead)  
\**Ameiurus nebulosus* (Lesueur) (northern brown bullhead)

## Order Gadiformes

### Family Lotidae

*Lota lota* (Linnaeus) (burbot)

## Order Perciformes

### Family Centrarchidae

- Ambloplites rupestris* (Rafinesque) (rock bass)
- \**Lepomis gibbosus* (Linnaeus) (pumpkinseed)
- Lepomis macrochirus* Rafinesque (common bluegill)
- Micropterus dolomieu* Lacepede (smallmouth bass)
- Micropterus salmoides* (Lacepede) (largemouth bass)

### Family Percidae

- Etheostoma exile* (Girard) (Iowa darter)
- Etheostoma nigrum* Rafinesque (Johnny darter)
- Perca flavescens* (Mitchill) (yellow perch)
- Percina caprodes* (Rafinesque) (logperch)
- Stizostedion vitreum vitreum* (Mitchill) (walleye)

## Order Percopsiformes

### Family Percopsidae

- Percopsis omiscomaycus* (Walbaum) (trout-perch)

## Order Scorpaeniformes

### Family Cottidae

- Cottus bairdii* Girard (mottled sculpin)
- Cottus cognatus* Richardson (slimy sculpin)

## Order Gasterosteiformes

### Family Gasterosteidae

- Culaea inconstans* (Kirtland) (brook stickleback)
- Pungitius pungitius* (Linnaeus) (ninespine stickleback)

## Class Amphibia

Although the (at least partly) terrestrial vertebrate ectotherms -- Classes Amphibia and Reptilia -- are conventionally grouped as “herps”, they are not a meaningful phylogenetic group. This listing is, for both groups, derived primarily from Manville (1948) with a few additions from subsequent personal observations and communications (Liebgold and Ransom 2008). Nomenclature has been revised according to ITIS.

## Order Caudata (Urodela)

### Family Salamandridae

- Notophthalmus viridescens* (Rafinesque) (newt, red eft)

### Family Ambystomatidae

- Ambystoma jeffersonianum* (Green) (Jefferson’s salamander)
- Ambystoma laterale* (Hallowell) (blue-spotted salamander)
- Ambystoma maculatum* (Shaw) (spotted salamander)

### Family Plethodontidae

- Hemidactylum scutatum* (Temminck and Schlegel 1838) (four-toed salamander)
- Plethodon cinereus* (Green) (red-backed salamander)

## Order Anura

### Family Bufonidae

- Anaxyrus americanus* (Holbrook) (American toad)

### Family Hylidae

- Dryophytes versicolor* (LeConte) (common tree-toad, gray tree-frog)
- Pseudacris crucifer* (Wied-Neuwied) (spring peeper)

### Family Ranidae

- Lithobates catesbeiana* (Shaw) (bullfrog)
- Lithobates clamitans* (Latreille) (green frog)
- Lithobates palustris* (LeConte) (pickerel frog)

*Lithobates pipiens* (Schreber) (leopard frog)  
*Lithobates septentrionalis* (Baird) (mink frog)  
*Lithobates sylvaticus* (LeConte) (wood frog)

## **Class Reptilia**

The reptiles are, notoriously, an ‘ill-behaved’ – i.e., not monophyletic – taxonomic group. The closest common ancestor of the groups traditionally called reptiles is also an ancestor of the birds, making the living Reptilia clearly paraphyletic. Rigorous cladistic taxonomy would require, among the groups listed here, that the turtles and tortoises, at least, be placed in a separate class (“Testudines”) that would then be sister to the combined lineages of (among living creatures) birds-crocodiles and the tuatara-snake-lizard clan (see Tudge 2000). This seems too violent towards traditional taxonomic notions for now, so I have chosen (along with ITIS) to retain the informal ‘grade’ Reptilia as a Class.

### **Order Testudines**

#### **Family Chelydridae**

*Chelydra serpentina* (Linnaeus) (snapping turtle)

#### **Family Emydidae**

*Chrysemys picta bellii* (Gray) (painted turtle)

*Emydoidea blandingii* (Holbrook) (Blanding’s turtle)

*Terrapene carolina carolina* (Linnaeus) (eastern box turtle)

### **Order Squamata**

#### **Suborder Autarchoglossa**

##### **Family Scincidae**

*Eumeces fasciatus* Linnaeus (five-lined skink)

#### **Suborder Serpentes**

##### **Family Colubridae**

*Diadophis punctatus* Blanchard (northern ringneck snake)

*Elaphe vulpina* (Baird and Girard) (pine snake)

*Lampropeltis triangulum* Holbrook (eastern milk snake)

*Liochlorophis vernalis* (Harlan) (green snake)

*Storeria occipitomaculata* (Storer) (red-bellied snake)

*Thamnophis sirtalis sirtalis* (Linnaeus) (garter snake)

## **Class Aves**

This listing of the bird fauna is based largely on the compilation of Negri et al. (1995), supplemented with information from Kielb et al. (unpublished report) and from the personal observations of several individuals. While the ornithological community frequently uses common names first in bird-lists, we have maintained the format used throughout this document and given the scientific name first, followed by the common name in parentheses. Assignments to higher taxa and sequence of taxa follows the 2016 version of “Birds of North and Middle America Checklist” from the American Ornithological Union (checklist.aou.org), and includes a number of reassignments of families to orders. Various published sources suggest other arrangements are more closely aligned with true monophyletic structure, but the AOU order is retained here because it is taken, nearly universally, as the taxonomic standard among ornithologists (a more authoritarian group, taxonomically speaking, than most).

To each species’ name, I append an occurrence code drawn primarily from Negri et al. (1995), as follows: S = summer, M = spring and fall migrants, W = winter, P = permanent resident, and V = vagrant. Some of these might be changed with further observation. An “N” following the occurrence code indicates evidence of nesting on Club lands, as recorded by Kielb et al. (2001). This is unlikely to be a complete listing of nesting species, and it may be assumed that other regular summer residents sometimes nest on the Club.

At least three species on this list were formerly native at the Huron Mt. Club and have been extirpated. Of these, two – trumpeter swan and peregrine falcon – have been reintroduced in the Upper Peninsula and

subsequently have been observed at the Club (trumpeter swans first in 2001). The third extirpated species, (passenger pigeon) is globally extinct. Three of the listed species are not American natives: *Columba livia* (rock dove, or feral pigeon), *Sturnus vulgaris* (European starling), and *Passer domesticus* (house sparrow).

While the 235 species listed here may be taken as one of the most complete listings for a higher level taxon, species will continue to be added as a consequence of occasional vagrant sightings (this version of the ATBI adds the shiny cowbird from unpublished report of Buron and Jones 2021, and about 50 species have been sighted in the Upper Peninsula, but not at the Huron Mt. Club: Negri et al. 1995), with the establishment of further exotics (feral pigeons have only been observed at the Club within the last 20 years), and as ranges change in response to climatic warming.

## **Order Anseriformes**

### **Family Anatidae**

*Chen caerulescens* (Snow Goose) M  
*Branta canadensis* (Canada Goose) S,N  
*Cygnus buccinator* (Trumpeter Swan) V  
*Aix sponsa* (Wood Duck) S,N  
*Anas strepera* (Gadwall) M  
*Anas americana* (American Wigeon) M  
*Anas rubripes* (American Black Duck) S  
*Anas platyrhynchos* (Mallard) S,N  
*Anas discors* (Blue-winged Teal) S,N  
*Anas clypeata* (Northern Shoveler) M  
*Anas crecca* (Green-winged Teal) S  
*Aythya valisineria* (Canvasback) M  
*Aythya americana* (Redhead) M  
*Aythya collaris* (Ring-necked Duck) S  
*Aythya affinis* (Lesser Scaup) M  
*Clangula hyemalis* (Oldsquaw) M  
*Bucephala albeola* (Bufflehead) M  
*Bucephala clangula* (Common Goldeneye) S  
*Lophodytes cucullatus* (Hooded Merganser) S,N  
*Mergus merganser* (Common Merganser) S,N  
*Mergus serrator* (Red-breasted Merganser) S  
*Oxyura jamaicensis* (Ruddy Duck) M

## **Order Galliformes**

### **Family Phasianidae**

*Bonasa umbellus* (Ruffed Grouse) P,N  
*Falcapennis canadensis* (Spruce Grouse) P  
*Tympanuchus phasianellus* (Sharp-tailed Grouse) P

## **Order Podicipediformes**

### **Family Podicipedidae**

*Podilymbus podiceps* (Pied-billed Grebe) S  
*Podiceps auritus* (Horned Grebe) M  
*Podiceps grisigena* (Red-necked Grebe)

## **Order Columbiformes**

### **Family Columbidae**

*Columba livia* (Rock Dove) S  
*Ectopistes migratorius* (Passenger Pigeon) Extinct  
*Zenaida macroura* (Mourning Dove) S

## **Order Cuculiformes**

### **Family Cuculidae**

*Coccyzus erythrophthalmus* (Black-billed Cuckoo) S

*Coccyzus americanus* (Yellow-billed Cuckoo) S

**Order Caprimulgiformes**

**Family Caprimulgidae**

*Chordeiles minor* (Common Nighthawk) S,N

*Caprimulgus carolinensis* (Chuck-will's-widow) V

*Caprimulgus vociferus* (Whip-poor-will) S,N

**Order Apodiformes**

**Family Apodidae**

*Chaetura pelagica* (Chimney Swift) S,N

**Family Trochilidae**

*Archilochus colubris* (Ruby-throated Hummingbird) S,N

**Order Gruiformes**

**Family Rallidae**

*Coturnicops noveboracensis* (Yellow Rail) S

*Rallus limicola* (Virginia Rail) S

*Porzana carolina* (Sora) S

*Fulica americana* (American Coot) S

**Family Gruidae**

*Grus canadensis* (Sandhill Crane) S,N

**Order Charadriiformes**

**Family Charadriidae**

*Pluvialis squatarola* (Black-bellied Plover) M

*Pluvialis dominica* (American Golden Plover) M

*Charadrius vociferus* (Killdeer) S,N

**Family Scolopacidae**

*Tringa melanoleuca* (Greater Yellowlegs) M

*Tringa flavipes* (Lesser Yellowlegs) M

*Tringa solitaria* (Solitary Sandpiper) M,N

*Catoptrophorus semipalmatus* (Willet) V

*Actitis macularia* (Spotted Sandpiper) S,N

*Bartramia longicauda* (Upland sandpiper) S

*Arenaria interpres* (Ruddy Turnstone) M

*Calidris alba* (Sanderling) M

*Calidris pusilla* (Semipalmated Sandpiper) M

*Calidris mauri* (Western Sandpiper) V

*Calidris minutilla* (Least Sandpiper) M

*Calidris melanotos* (Pectoral Sandpiper) M

*Calidris alpina* (Dunlin) M

*Calidris himantopus* (Stilt Sandpiper) M

*Gallinago gallinago* (Common Snipe) S

*Scolopax minor* (American Woodcock) S,N

*Phalaropus tricolor* (Wilson's Phalarope) M

**Family Laridae**

*Larus philadelphia* (Bonaparte's Gull) M

*Larus delawarensis* (Ring-billed Gull) S

*Larus argentatus* (Herring Gull) P

*Sterna caspia* (Caspian Tern) S

*Sterna hirundo* (Common Tern) S

*Chlidonias niger* (Black Tern) S

**Order Gaviiformes**

**Family Gaviidae**



*Gavia immer* (Common Loon) S,N

**Order Suliformes**

**Family Phalacrocoracidae**

*Phalacrocorax auritus* (Double-crested Cormorant) S

**Order Pelecaniformes**

**Family Pelecanidae**

*Pelecanus erythrorhynchos* (American White Pelican) M

**Family Ardeidae**

*Botaurus lentiginosus* (American Bittern) S,N

*Ixobrychus exilis* (Least Bittern) S

*Ardea herodias* (Great Blue Heron) S

*Butorides striatus* (Green Heron) S

*Nycticorax nycticorax* (Black-crowned Night Heron) S

**Order Cathartiformes**

**Family Cathartidae**

*Cathartes aura* (Turkey Vulture) S

**Order Accipritiformes**

**Family Accipitridae**

*Pandion haliaetus* (Osprey) S

*Haliaeetus leucocephalus* (Bald Eagle) S,N

*Circus cyaneus* (Northern Harrier) S

*Accipiter striatus* (Sharp-shinned Hawk) S,N

*Accipiter cooperii* (Cooper's Hawk) S

*Accipiter gentilis* (Northern Goshawk) P

*Buteo lineatus* (Red-shouldered Hawk) S

*Buteo platypterus* (Broad-winged Hawk) S,N

*Buteo jamaicensis* (Red-tailed Hawk) S

*Buteo lagopus* (Rough-legged Hawk) M

*Aquila chrysaetos* (Golden Eagle) M

**Order Strigiformes**

**Family Strigidae**

*Bubo virginianus* (Great Horned Owl) P

*Nyctea scandiaca* (Snowy Owl) W

*Strix varia* (Barred Owl) P,N

*Strix nebulosa* (Great Gray Owl) W

*Asio otus* (Long-eared Owl) S

*Asio flammeus* (Short-eared Owl) M

*Aegolius funereus* (Boreal Owl) W

*Aegolius acadicus* (Northern Saw-whet Owl) S

**Order Coraciiformes**

**Family Alcedinidae**

*Ceryle alcyon* (Belted Kingfisher) S,N

**Order Piciformes**

**Family Picidae**

*Melanerpes erythrocephalus* (Red-headed Woodpecker) S

*Melanerpes carolinus* (Red-bellied Woodpecker) V

*Sphyrapicus varius* (Yellow-bellied Sapsucker) S,N

*Picoides arcticus* (Black-backed Woodpecker) P,N

*Picoides pubescens* (Downy Woodpecker) P,N

*Picoides villosus* (Hairy Woodpecker) P,N  
*Picoides tridactylus* (Three-toed Woodpecker) W  
*Colaptes auratus* (Northern Flicker) S,N  
*Dryocopus pileatus* (Pileated Woodpecker) P,N

## Order Falconiformes

### Family Falconidae

*Falco sparverius* (American Kestrel) S,N  
*Falco columbarius* (Merlin) S,N  
*Falco peregrinus* (Peregrine Falcon) N

## Order Passeriformes

### Family Tyrannidae

*Contopus cooperi* (Olive-sided Flycatcher) S,N  
*Contopus virens* (Eastern Wood Pewee) S,Nd  
*Empidonax flaviventris* (Yellow-bellied Flycatcher) S,N  
*Empidonax alnorum* (Alder Flycatcher) S,N  
*Empidonax minimus* (Least Flycatcher) S,N  
*Sayornis phoebe* (Eastern Phoebe) S,N  
*Myiarchus crinitus* (Great Crested Flycatcher) S,N  
*Tyrannus verticalis* (Western Kingbird) V  
*Tyrannus tyrannus* (Eastern Kingbird) S,N

### Family Laniidae

*Lanius excubitor* (Northern Shrike) W

### Family Vireonidae

*Vireo flavifrons* (Yellow-throated Vireo) S  
*Vireo solitarius* (blue-headed Vireo) S,N  
*Vireo gilvus* (Warbling Vireo) S  
*Vireo philadelphicus* (Philadelphia Vireo) S  
*Vireo olivaceus* (Red-eyed Vireo) S,N

### Family Corvidae

*Perisoreus canadensis* (Gray Jay) P,N  
*Cyanocitta cristata* (Blue Jay) P,N  
*Corvus brachyrhynchos* (American Crow) P,N  
*Corvus corax* (Common Raven) P,N

### Family Alaudidae

*Eremophila alpestris* (Horned Lark) S

### Family Hirundinidae

*Progne subis* (Purple Martin) S  
*Tachycineta bicolor* (Tree Swallow) S,N  
*Stelgidopteryx serripennis* (Northern Rough-winged Swallow) S  
*Riparia riparia* (Bank Swallow) S  
*Petrochelidon pyrrhonota* (Cliff Swallow) S,N  
*Hirundo rustica* (Barn Swallow) S,N

### Family Paridae

*Poecile atricapilla* (Black-capped Chickadee) P,N  
*Poecile hudsonica* (Boreal Chickadee) P  
*Baeolophus bicolor* (Tufted Titmouse) P

### Family Sittidae

*Sitta canadensis* (Red-breasted Nuthatch) P,N  
*Sitta carolinensis* (White-breasted Nuthatch) P,N

### Family Certhiidae

*Certhia americana* (Brown Creeper) S,N

### Family Troglodytidae

*Thryothorus ludovicianus* (Carolina Wren) V  
*Troglodytes aedon* (House Wren) S,N

*Troglodytes troglodytes* (Winter Wren) S,N  
*Cistothorus platensis* (Sedge Wren) S,N  
*Cistothorus palustris* (Marsh Wren) S

**Family Regulidae**

*Regulus satrapa* (Golden-crowned Kinglet) S,N  
*Regulus calendula* (Ruby-crowned Kinglet) M

**Family Turdidae**

*Sialia sialis* (Eastern Bluebird) S,N  
*Catharus fuscescens* (Veery) S,N  
*Catharus ustulatus* (Swainson's Thrush) S,N  
*Catharus minimus* (Gray-cheeked Thrush) M  
*Catharus guttatus* (Hermit Thrush) S,N  
*Hylocichla mustelina* (Wood Thrush) S,N  
*Turdus migratorius* (American Robin) S,N

**Family Mimidae**

*Dumetella carolinensis* (Gray Catbird) S,N  
*Mimus polyglottos* (Northern Mockingbird) M  
*Toxostoma rufum* (Brown Thrasher) S,N

**Family Sturnidae**

*Sturnus vulgaris* (European Starling) P,N (I

**Family Bombycillidae**

*Bombycilla cedrorum* (Cedar Waxwing) S,N

**Family Motacillidae**

*Anthus rubescens* (American Pipit) M

**Family Fringillidae**

*Pinicola enucleator* (Pine Grosbeak) W  
*Carpodacus purpureus* (Purple Finch) S,N  
*Loxia curvirostra* (Red Crossbill) P,N  
*Loxia leucoptera* (White-winged Crossbill) P,N  
*Carduelis flammea* (Common Redpoll) W  
*Carduelis pinus* (Pine Siskin) S,N  
*Carduelis tristis* (American Goldfinch) S,N  
*Coccothraustes vespertinus* (Evening Grosbeak) P,N

**Family Parulidae**

*Vermivora chrysoptera* (Golden-winged Warbler) S  
*Vermivora peregrina* (Tennessee Warbler) S  
*Vermivora ruficapilla* (Nashville Warbler) S,N  
*Parula americana* (Northern Parula) S,N  
*Dendroica petechia* (Yellow Warbler) S,N  
*Dendroica pensylvanica* (Chestnut-sided Warbler) S,N  
*Dendroica magnolia* (Magnolia Warbler) S,N  
*Dendroica tigrina* (Cape May Warbler) S  
*Dendroica caerulescens* (Black-throated Blue Warbler) S,N  
*Dendroica coronata* (Yellow-rumped Warbler) S,N  
*Dendroica virens* (Black-throated Green Warbler) S,N  
*Dendroica fusca* (Blackburnian Warbler) S,N  
*Dendroica pinus* (Pine Warbler) S,N  
*Dendroica palmarum* (Palm Warbler) S  
*Dendroica castanea* (Bay-breasted Warbler) S,N  
*Dendroica striata* (Blackpoll Warbler) M  
*Dendroica cerulea* (Cerulean Warbler) S  
*Mniotilta varia* (Black-and-white Warbler) S,N  
*Setophaga ruticilla* (American Redstart) S,N  
*Seiurus aurocapillus* (Ovenbird) S,N  
*Seiurus noveboracensis* (Northern Waterthrush) S,N  
*Oporornis agilis* (Connecticut Warbler) S

*Oporornis philadelphia* (Mourning Warbler) S,N  
*Geothlypis trichas* (Common Yellowthroat) S,N  
*Wilsonia pusilla* (Wilson's Warbler) S  
*Wilsonia canadensis* (Canada Warbler) S,N

**Family Thraupidae**

*Piranga rubra* (Summer Tanager) V  
*Piranga olivacea* (Scarlet Tanager) S,N

**Family Emberizidae**

*Pipilo erythrophthalmus* (Rufous-sided Towhee) S  
*Spizella arborea* (Tree Sparrow) S  
*Spizella passerina* (Chipping Sparrow) S,N  
*Spizella pallida* (Clay-colored Sparrow) S  
*Spizella pusilla* (Field Sparrow) V  
*Pooecetes gramineus* (Vesper Sparrow) S  
*Chondestes grammacus* (Lark Sparrow) S  
*Passerculus sandwichensis* (Savannah Sparrow) S,N  
*Ammodramus savannarum* (Grasshopper Sparrow) S  
*Ammodramus leconteii* (Le Conte's Sparrow) S  
*Ammodramus caudacutus* (Sharp-tailed Sparrow) M  
*Passerella iliaca* (Fox Sparrow) M  
*Melospiza melodia* (Song Sparrow) S,N  
*Melospiza lincolni* (Lincoln's Sparrow) S  
*Melospiza georgiana* (Swamp Sparrow) S,N  
*Zonotrichia albicollis* (White-throated Sparrow) S,N  
*Zonotrichia querula* (Harris' Sparrow) M  
*Zonotrichia leucophrys* (White-crowned Sparrow) M  
*Junco hyemalis* (Dark-eyed Junco) S,N  
*Calcarius lapponicus* (Lapland Longspur) M  
*Plectrophenax nivalis* (Snow Bunting) W

**Family Cardinalidae**

*Cardinalis cardinalis* (Northern Cardinal) P  
*Pheucticus ludovicianus* (Rose-breasted Grosbeak) S,N  
*Passerina cyanea* (Indigo Bunting) S,N

**Family Icteridae**

*Dolichonyx oryzivorus* (Bobolink) S,N  
*Agelaius phoeniceus* (Red-winged Blackbird) S,N  
*Sturnella magna* (Eastern Meadowlark) S  
*Sturnella neglecta* (Western Meadowlark) M  
*Xanthocephalus xanthocephalus* (Yellow-headed Blackbird) S  
*Euphagus carolinus* (Rusty Blackbird) S  
*Euphagus cyanocephalus* (Brewer's Blackbird) S  
*Molothrix bonariensis* (shiny cowbird) V  
*Quiscalus quiscula* (Common Grackle) S,N  
*Molothrus ater* (Brown-headed Cowbird) S  
*Icterus spurius* (Ochard Oriole) V  
*Icterus galbula* (Northern Oriole) S

**Family Passeridae**

*Passer domesticus* (House Sparrow) P

**Class Mammalia**

**Subclass Eutheria**

This listing is derived primarily from Laundre's (1974) study and documentation of the mammals of the Huron Mountain Club with minor additions from other sources. Laundre's list includes some species documented by Manville in earlier studies (Manville 1948). It also includes several species that have been only tentatively identified or whose occurrence at the Huron Mountain Club is highly speculative (usually based on general

distributions); these are annotated accordingly here. Species not listed by Laundre include two species that appear to have expanded their range northward -- southern flying squirrel (*Glaucomys volans*) (Wells-Gosling 1982) and *Peromyscus leucopus* (Philip Myers, unpublished data) -- and humans (*Homo sapiens*), who seem to qualify as naturalized (if migratory). Several species of bat listed as tentative by Laundre are confirmed (and one species added) by Wan and Myers (2008).

Nomenclature has been updated according to the International Taxonomic Information Structure, ITIS (www.itis.usda.gov), resulting in the following changes from Laundre (1974): *Microsorex* is included in *Sorex*; *Eutamias* is included in *Tamias*; *Euarctos* is included in *Ursus*; the northern bat, formerly *Myotis keenii*, is now *Myotis septentrionalis*; *Gulo luscus* is *G. gulo*; *Lutra canadensis* is *L. lutra*; *Mustela rixosa* is *M. nivalis*; *Felis concolor* is *Puma concolor*; *Felis domesticus* is *F. silvestris*; *Vulpes fulva* is *V. vulpes*; and *Rangifer caribou* is *R. tarandus caribou*.

A number of species are of ambiguous or changing status. Larger mammals are often highly mobile and sparsely distributed. It is difficult, for species like wolves, moose, grey fox, badger, and mountain lions, to distinguish between 'residents' -- representatives of established local populations -- and vagrant individuals. There are very few introduced non-indigenous species in the Huron Mountains; even those ubiquitous human commensals, the house mouse and Norway rat, may not have established persistent populations. Humans and feral house cats are listed here, although it is not clear whether there is a breeding population of the latter. Ranges of some species not historically native to the area have expanded in recent decades to include the Huron Mountains (raccoons, coyotes, grey fox). Several species have been extirpated from the area in historical times, including, with varying degrees of certainty, woodland caribou, mountain lion, wolf, marten, fisher, moose, and lynx (others, like wolverine and badger, may never have occurred here). Most of these are now re-established to some degree, either by active re-introduction to the region (marten, fisher, moose), or by their own efforts (wolf, possibly mountain lion).

Thus, a count of mammal species established in the Hurons is inherently fluid and tentative; the total is currently somewhere between 51-56 species, depending on accounting.

## **Order Lagomorpha**

### **Family Leporidae**

*Lepus americanus* (snowshoe hare)

*Sylvilagus floridanus* (cottontail rabbit) [occasional, no recent records]

## **Order Rodentia**

### **Family Cricetidae**

*Clethrionomys gapperi* (red-backed vole)

*Microtus pennsylvanicus* (meadow vole)

*Ondatra zibethica* (muskrat)

*Peromyscus leucopus* (white-footed mouse)

*Peromyscus maniculatus gracilis* (woodland deer mouse)

*Synaptomys cooperi* (bog lemming)

### **Family Castoridae**

*Castor canadensis* (beaver)

### **Family Erethizontidae**

*Erethizon dorsatum* (porcupine)

### **Family Zapodidae**

*Napaeozapus insignis* (woodland jumping mouse)

*Zapus hudsonius* (meadow jumping mouse)

### **Family Sciuridae**

*Glaucomys sabrinus* (northern flying squirrel)

*Glaucomys volans* (southern flying squirrel)

*Marmota monax* (woodchuck)

*Sciurus carolinensis* (grey squirrel)

*Spermophilus tridecemlineatus* (thirteen-lined ground squirrel) [tentative and recent]

*Tamias minimus* (least chipmunk)

*Tamias striatus* (eastern chipmunk)

*Tamiasciurus hudsonicus* (red squirrel)

### **Family Muridae**

*Mus musculus* (house mouse) [unintentionally introduced, probably not naturalized]  
*Rattus norvegicus* (Norway rat) [unintentionally introduced, probably not naturalized]

## Order Primates

### Family Hominidae

*Homo sapiens* (human) [naturalized]

## Order Chiroptera

### Family Vespertilionidae

*Eptesicus fuscus* (big brown bat)  
*Lasionycteris noctivagans* (silver-haired bat)  
*Lasiurus borealis* (eastern red bat)  
*Lasiurus cinereus* (hoary bat)  
*Myotis septentrionalis* (northern bat)  
*Myotis lucifugus* (little brown bat)

## Order Insectivora

### Family Soricidae

*Blarina brevicauda* (short-tailed shrew)  
*Sorex hoyi* (pygmy shrew)  
*Sorex arcticus* (arctic shrew)  
*Sorex cinereus* (masked shrew)  
*Sorex palustris* (water shrew)

## Order Carnivora

### Family Ursidae

*Ursus americanus* (black bear)

### Family Procyonidae

*Procyon lotor* (raccoon)

### Family Mustelidae

*Gulo luscus* (wolverine) [extirpated, possibly never resident]  
*Lutra canadensis* (river otter)  
*Martes americana* (marten) [extirpated and re-established]  
*Martes pennanti* (fisher) [extirpated and re-established]  
*Mephitis mephitis* (skunk)  
*Mustela erminea* (short-tailed weasel)  
*Mustela frenata* (long-tailed weasel)  
*Mustela nivalis* (least weasel) [tentative and improbable]  
*Mustela vison* (mink)  
*Taxidea taxus* (badger) [tentative and unlikely as resident]

### Family Felidae

*Puma concolor* (mountain lion) [extirpated, perhaps occasional wandering individuals]  
*Felis domesticus* (domestic cat) [feral individuals reported]  
*Lynx canadensis* (lynx) [extirpated, possibly returning]  
*Lynx rufus* (bobcat)

### Family Canidae

*Canis latrans* (coyote)  
*Canis lupus* (wolf) [extirpated, recently re-established]  
*Urocyon cinereoargenteus* (grey fox) [tentative sightings]  
*Vulpes vulpes* (red fox)

## Order Artiodactyla

### Family Cervidae

*Alces alces* (moose) [previously rare or extirpated; apparently returning]  
*Odocoileus virginianus* (white-tailed deer)  
*Rangifer tarandus caribou* (woodland caribou) [extirpated]