

"THIS WORK INDICATES THAT THE WOLF LAKE OLD-GROWTH FOREST IS A UNIQUE AND RICH NATURAL LABORATORY WITH THE POTENTIAL TO PROVIDE THE ANSWERS TO MANY SCIENTIFIC QUESTIONS RELATING TO THE ECOLOGY AND CONSERVATION OF ENDANGERED FORESTED LANDSCAPES.

WE STRONGLY URGE THAT NO FURTHER INDUSTRIAL DISTURBANCE BE PERMITTED TO THIS ECOSYSTEM UNTIL A THOROUGH PROGRAM OF SCIENTIFIC RESEARCH HAS BEEN DESIGNED AND IMPLEMENTED.

ANY FURTHER INDUSTRIAL DISTURBANCE RISKS DEGRADING
THE SCIENTIFIC VALUE OF THIS IRREPLACEABLE ECOSYSTEM
BEFORE WE HAVE UNCOVERED ITS STOREHOUSE OF
ECOLOGICAL INFORMATION."

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EXECUTIVE SUMMARY

The Wolf Lake Reserve area contains the largest known contiguous old-growth Red Pine (*Pinus resinosa Aiton*) forest in the world. The Ontario Ministry of Natural Resources has determined that this Red Pine forest is approximately 1,600 ha in size. Due to extensive logging, mining, agriculture, and urbanization, however, only roughly 1.2% of the original old-growth Red Pine forests remain making them a critically endangered ecosystem. In addition, Red Pine is an endangered species in Connecticut, Illinois, and New Jersey. Currently, most of the Wolf Lake old-growth forest is designated as a forest reserve where logging is not permitted, but where mineral exploration and mining on existing mineral claims is permitted.

Since 1980, a junior mineral exploration company named Flag Resources Ltd. has drilled 230 exploration holes in and around Wolf Lake carving heavy machinery tracks through the old-growth forest, knocking down ancient pines, and running oily drill rigs through creek beds. In response to concerns about the protection of this forest, the Ontario government has made commitments to add the forest to an adjacent protected area. However, continued government approval of mining claims and leases in the Wolf Lake Reserve indicates that the Ontario government has not honored their commitment to protect this unique and rare ecosystem.

The ecological uniqueness and scientific value of the Wolf Lake old-growth forest, and the imminent threat of intensified industrial impacts to this largely intact natural laboratory, create a timely need to thoroughly assess the biodiversity present there. This initial field assessment of biodiversity within the Wolf Lake old-growth forest will improve our understanding of this ecosystem, inform policy making, and form a sound foundation for future studies. The field work focussed primarily on six species group including lichens (47 species), plants (84 species), aquatic invertebrates (6 species), reptiles and amphibians (10 species), and birds (60 species). Incidental observations of mammals (3 species) were also recorded.

Some of the more notable findings of this study include the following:

- a high diversity of lichens,
- an unusually high abundance of Red Pine regeneration,
- observations at the northern range limits of several species of reptiles and amphibians that have helped fill knowledge gaps of species' distributions, and
- observations of two bird species at risk (special concern) (Canada Warbler and Common Nighthawk)

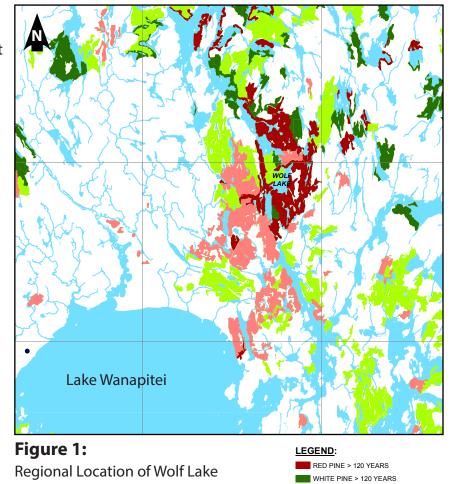
The results of this initial biodiversity assessment are very limited in nature and cannot substitute for a comprehensive biodiversity assessment, which should build on this work as soon as possible. There is a need to determine the true extent of the Wolf Lake old-growth Red Pine forest, which extends beyond the 1,600 ha suggested by MNR, and outside of the area protected from logging and future mineral exploration. We strongly urge that no further industrial impacts be permitted to this ecosystem until this assessment has been completed. Any further industrial disturbance to this unique ecosystem risks degrading its scientific value. In addition, many recommendations for future work are presented in this report.

INTRODUCTION

The Wolf Lake area contains the largest known contiguous ancient Red Pine (*Pinus resinosa Aiton*) forest in the world (Quinby 1996). Located approximately 8 km northeast of Lake Wanapitei near Sudbury, Ontario (see Regional Location Map – Figure 1), towering Red Pines – some as old as 300 years – quartzite cliffs, and sparkling blue lakes dominate the landscape. Prior to European settlement ancient Red Pine forests covered an estimated 1.8 million hectares (ha) of eastern North America. Extensive logging, mining, agriculture, and urbanization have eliminated these ancient forests on all but 1.2% of their original range (Quinby 1996), making them a critically endangered ecosystem (Noss 1995). In addition, Red Pine is an endangered species in Connecticut, Illinois, and New Jersey (Natural Resources Conservation Service 2013).

Estimated at approximately 1,600 ha, the Wolf Lake ancient Red Pine forest is more than triple the size of the next largest remnant of this once extensive forest (Quinby 1996). In the Sudbury Forest Management Unit, only 0.3% of the total forested area is composed of old-growth Red Pine dominated stands (2,342 ha) (Dingwall 2011). In the neighbouring Nipissing Forest Management Unit only 0.02% of the total forested area is old-growth Red Pine (Thauvette 2011).

Currently, most of the Wolf Lake old growth forest is designated under "forest reserve" status, which means that logging is not permitted, but mineral exploration and mining on existing mineral claims and leases are. A junior mineral exploration company named Flag Resources Ltd. holds mining leases and claims over a large majority of the Wolf Lake old growth area (MNDM 2012). Since 1980 Flag has drilled 230 exploration holes in and around Wolf Lake in MacKelcan Township (Flag Resources Ltd. 1985). In the process Flag has carved heavy machinery tracks through the old growth, knocked down ancient Pines, and run oily drill rigs through creek beds (Back 2006). In February of 2012, Flag announced plans for future exploratory drilling in the Wolf Lake area (Business Wire 2012). Despite commitments from the Ontario government to add the forest to an adjacent protected area, The Wolf Lake Coalition has documented continued government approval of the claims and



RED PINE < 120 YEARS

WHITE PINE < 120 YEARS

WATER

RIVER/STREAM/DRAINAGE

leases in the Wolf Lake Reserve (Wolf Lake Coalition 2012). In the unlikely event that an economically viable mineral is discovered, the lease allows Flag or its successor to develop a mine.

In May of 2012, Cleveland based Cliffs Natural Resources announced plans to build a \$1.8-billion chromite processing facility near Capreol, north of Sudbury (CBC News 2012a). The site is approximately 20 km west of Wolf Lake, raising the potential for increased influx of industrial pollutants. Chromite mining is associated with hexavalent chromium, a potentially deadly by-product (CBC News 2012b).

The ecological uniqueness of the Wolf Lake old growth, and the imminent threat of intensified industrial impacts to this largely intact natural laboratory, create a timely need to thoroughly assess the biodiversity present at Wolf Lake. A biodiversity assessment is necessary to contribute to our scientific knowledge of this ecosystem, to inform policy making, and to form a sound baseline for future comparison (Yoccoz et al. 2001).

To date, few scientific studies have been conducted to examine biodiversity features of the Wolf Lake landscape. These studies have focussed mainly on plant diversity (Carleton and Gordon, 1992, Leithead et al. 2010, Joner et al. 2012) and general old-growth forest characteristics (Henry and Quinby 2010). This report documents the first effort towards a comprehensive biodiversity assessment of the Wolf Lake landscape and makes recommendations for future studies.

METHODS

Ecosystems that make up the Wolf Lake landscape are shown on Figure 2 and are based on available digital mapping. Figure 2 also shows the elevation gradients (contour lines) in the Wolf Lake landscape. This information showing the distribution of ecosystem types and elevation gradients was used by the field biologists to plan their studies and locate their sample sites. Appendix A includes location coordinates and habitat types for the sample sites.

Lichens

Results of field work to assess lichens will be reported separately as a peer-reviewed publication. Lichen presence/absence and abundance was surveyed on live trees, logs, snag and stumps in July 2012 in the Wolf Lake Forest Reserve (46.860°, -80.643°). At least 20 sampling units for each substrate type were sampled, which

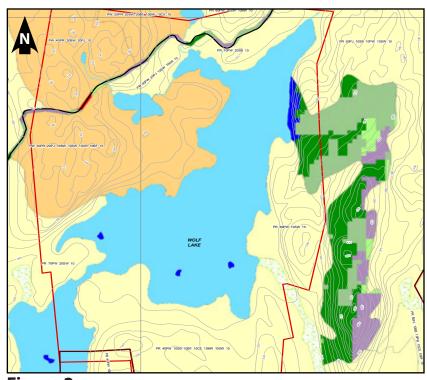


Figure 2: Wolf Lake Landscape



were randomly chosen along five 50 m-200 m transects. Each lichen sampling plot was a 10×10 cm plastic grid separated into 1.0×1.0 cm subplots. A detailed description of sampling design, methods, and results can be found in Wagner et al. (submitted). A few lichen species were identified and listed in this report as part of the plant species assessment field work.

Plants

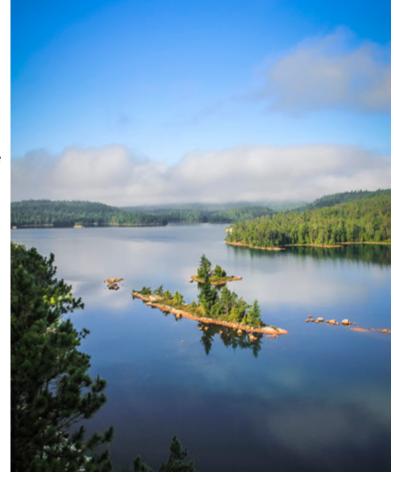
Using topographic maps and a GPS unit from September 10-12, 2012, visits were made to all accessible habitat types in the mining lease area of the Wolf Lake Reserve. In order to visit as many habitat types with different moisture regimes, slope aspects, slope percentages, and elevation as possible, four forest stands that represented the greatest variety in these habitat conditions were selected. Each stand was searched from the lowest elevation (the lake) along the slope to the highest point within a corresponding aspect.

In addition, more specialized habitat types were sought out and searched including riparian habitats such as lake edge, streams, bogs, and rivers as well as cliffs, ledges, cave openings, etc. A second field trip (September 29-30) was made to explore the Wolf Lake old-growth forest area. Incidental observations of plant species that were considered to be uncommon in the area were recorded along the portage between Wolf Lake and Laundry Lake.

Aquatic Invertebrates

Invertebrate samples were collected by dip net in the short expanse of river flowing between Dewdney Lake and Wolf Lake on June 17, 2012. Samples were collected from three sites along the river: site 1 was at the outflow of Dewdney Lake; site 2 was immediately downstream of the bridge where the road crosses the river and site 3 was at the mouth of the river where it flows into Wolf Lake. All samples were collected using a dip net with 0.5 mm mesh.

The aim of the sampling was to identify species and determine species richness; therefore no effort was made to quantify the area sampled. At each of the three sites, all possible habitats were sampled that were accessible with the dip net. In areas of higher flow, the 'kick and sweep' method was used. For this, the net is held vertically just downstream of one's feet – the collector then proceeds to move backwards while disturbing the substrate vigorously with



her/his feet in an effort to dislodge any organisms that will then flow into the waiting dip-net. In shallow areas, rocks and other larger substrates were picked up by hand and invertebrates were collected using fingers or forceps.

All specimens were preserved immediately in 70% reagent alcohol (90% ethanol, 5% methanol, 5% isopropyl alcohol). Specimens were identified to genus using Pennak's Freshwater Invertebrates of the United States (1978) and cross referenced with the University of Guelph Publication Common Benthic Invertebrates, Zooplankton, Algae, and Macrophytes of the Speed River Watershed, by Mackie (1991). Specimens were further verified by making visual comparison's to online images.

Reptiles and Amphibians

Visual surveys were conducted in early July (1-3) for reptile and amphibian species. A total of 65 person-hours were spent surveying. Effort was focused on wetlands in the southeastern, northern, and western portions of Wolf Lake because density and diversity were expected to be highest in those habitats. Surveys were conducted on foot for frogs, snakes, and salamanders; and by canoe for basking turtles near shorelines. Due to the low detectability of most species and the limited survey effort, results can confirm the presence of species, but not their abundance. In addition, calling frogs were detected during the auditory surveys for detecting bird songs and calls (see below Birds, Survey 2).

Birds

Survey 1

This survey was carried out on May 29, 2012 from 6:30 am until 2:00 pm at the following four locations:

- SW corner of the Wolf Lake Old-Growth Area (46 50.844' 80 38.830')
- The trapper's cabin at 46 50.842' 80 38.855'
- A campsite at 46 51.205'80 38.199'
- The bridge at 46.51.218' 80 38.217'

These four locations and their surrounding area were surveyed by identifying bird songs and calls, and by visual sightings. Areas were accessed by foot and by vehicle, and other animal observations made while travelling between these locations were also recorded. The habitat surveyed was primarily old-growth Red Pine and associated riparian habitat along the shores of the waterways. A Tamarack wetland and smaller waterways were also surveyed. The month of May (2012) was generally very dry but the entire area had just received a substantial rainfall the night before, allowing for ideal avian activity in the morning. Mammal species observed were also recorded.

Survey 2

In a second survey, song meters (Wildlife Acoustics – SM2+) were deployed in a variety of habitat types within the Wolf Lake old-growth Red Pine during the 2012 breeding bird season (June 10-20) in order to record bird songs and calls that were later used to identify bird species and other animal species (e.g., amphibians). One song meter was placed in each of the following habitat types.

- Red Pine Stand, Hilltop
- Red Pine Stand, Mid-Slope, East-Facing
- Red Pine Stand, Mid-Slope, South-Facing
- Red Pine Stand, Lower Slope, Stream-side
- Red Pine Stand, Lower Slope, Beside Swamp
- Red Pine Stand, Lower Slope, Beside Wetland

The song meters were programmed to record 14 times over a 24 hour period for 11 days. Seven recordings were obtained in the a.m. including 1:00, 3:00, 5:00, 5:30, 6:00, 7:00, and 7:30, and seven recordings starting in the evenings included 21:00, 21:30, 22:00, 22:30, 23:00, 23:30 and 23:59. For this study, recordings from June 11-14 and June 19-20 were interpreted, with at least two recordings in the a.m. (taken from 5:00, 5:30, 6:00 or 7:00), and two recordings in the p.m. (taken from 21:00, 21:30, 22:00, 22:30 or 23:00). The recordings from 1:00 and 3:00 were also checked at least once for each station.

The June 11-14 and June 19-20 recording sessions were used in order to simulate a two-visit point count as per Bird Studies Canada Point Count protocols, which are two visits to a site, minimum of 6 days between visits, and with the first visit May 24-June 17, and the second June 13-July 10. Rough estimates for the distance birds were from the song meters was also noted using the following codes: 1 = 50 m or closer, 2 = 50-100 m, 3 = 100 m and greater. Note that distance estimates even from observers in the field are highly variable and may not be reliable (see Alldredge et al. 2007a).

Each 10-minute recording was divided into three time intervals for potential future analysis using time-of-detection methods to estimate bird population parameters (see Alldredge et al. 2007b, for example). The time interval codes are 1 =first three minutes, 2 =the next two minutes, 3 =last five minutes. Birds were placed into the interval in which they were first heard.

Recordings were opened in Adobe Audition 2.0 and were cleaned up using the light hiss removal option. They were converted to spectrograms (e.g. Fig. 3), and listened to using BOSE QuietComfort 15 Noise Cancelling Headphones.

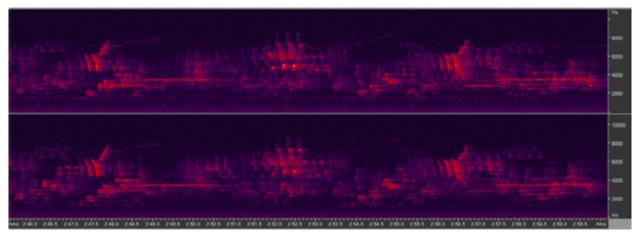


Figure 3: Example of a spectrogram from AF4, June 19, 2012, 5:30 hours showing White-throated Sparrow, two Swainson's Thrushes, Golden-crowned Kinglet, and American Redstart as well as some other background birds

Calls were identified conservatively. That is, if there was a possibility between a call belonging to a common species or a relatively uncommon one, then the more common species was chosen. For example, Pine Warblers were identified as Dark-eyed Juncos so the results from the song meters would under-represent Pine Warblers. Point counts conducted in the field will balance this conservative bias. Scientific names for birds include all changes up to May 1, 2012 (12th supplement to 7th edition of AOU's Check-list of North American Birds 1998; also see Chesser et al. 2012).

Survey 3

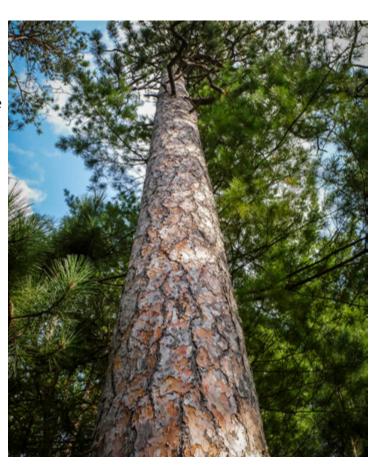
This bird survey was conducted from July 4-6 with the field work based out of the large, high campsite on the east side of Wolf Lake. Species were observed and recorded during casual activities as well as during formal survey efforts. The formal surveys occurred in the morning and evening of July 4 with transects of points approximately 200 m apart where 10-minute, 50 m radius point counts were completed. A total of 10 point counts were completed. Observations made between point counts were also recorded but were kept separate from the point count data. On July 5, additional species were recorded while hiking up to and along the ridge west of Wolf Lake. On July 6 additional species were also recorded while hiking around the two small lakes to the east of Wolf Lake and south of the old logging road. Weather conditions throughout the three days were mostly clear with light to moderate winds.

RESULTS AND DISCUSSION

A total of 164 species distributed among six species groups were found during the 2012 biodiversity inventory conducted in the Wolf Lake Forest Reserve (excluding the species observed by Wagner et al. (submitted)). Details for each species observation are presented in Appendix A.

Lichens

Forty-seven species of lichen were identified by Wagner et al. (submitted), which indicates that surprisingly high levels of lichen diversity can be found in Red Pine-dominated old-growth forests of the Wolf Lake Forest Reserve. This list of lichen species will be available once the manuscript has been published in a refereed journal. Three lichen species were found as part of the plant species inventory (Table 1). A preliminary assessment showed that none of these lichen species are threatened or endangered.



Plants

A total of 84 plant species were found during the plant species inventory (Table 1). The plant species found in the forests at Wolf Lake are typical of Red Pine-dominated ecosystems, which is generally characterized by low light levels, relatively nutrient poor/acidic and shallow soils, and historically frequent and hot wildfires. However, what is most unusual about Wolf Lake, is the very successful recruitment of uneven-aged Red Pine regeneration throughout the vertical structure of the forest.

Future plant and vegetation field studies should include a spring and summer visit to the same sites visited in this fall study as well as to additional areas within the Wolf Lake Red Pine ecosystem. The

second visit should focus on plant species that complete their life cycles at an earlier point during the growing season and should search for species missed during the first investigation. Habitats not visited in the first study should also be targeted in the future. A thorough on-site survey is required to determine the full extent of the old-growth Red Pine forest area, which extends beyond the 1,600 ha identified by MNR mapping. Finally, the Wolf Lake Red Pine Forest presents an excellent opportunity to study the role that fire plays in the creation and maintenance of natural Red Pine-dominated forest ecosystems, particularly in terms of Red Pine regeneration.

It is also recommended that pollen analysis of sediment in Wolf Lake be conducted in order assess the history of tree species composition in the area. In particular, this method could identify the duration of time during which the Wolf Lake Red Pine forest has been self-sustaining through natural regeneration.

Aquatic Invertebrates

Six species of aquatic invertebrates were found at the Wolf Lake Reserve (Table 1). More expansive surveys should be conducted on a variety of waterways throughout the Wolf Lake area. These should include shorelines of lakes and surveys of streams and rivers that are accessible. Benthic analysis of lake bottom littoral zones should also be conducted to determine benthic species representation within the lakes and other waterbodies associated with Red Pine-dominated landscapes. It may be wise to sample streams of the Wolf Lake area using protocols provided by the Ontario Benthic Biomonitoring Network or by using methods developed by the Canadian Aquatic Biomonitoring Inventory Network. These protocols and methods can be used to assess stream water quality. Sampling should be conducted twice per year in each area, once in the early summer and again in early fall so that species with differing temporal emergence patterns will be collected.

Reptiles and Amphibians

A total of 10 species of reptiles and amphibians were found in the Wolf Lake Forest Reserve (Table 1). The data collected on reptile and amphibian distribution in the Wolf Lake area represents the first recent observations (<20 years old) collected within a 25 kilometer radius of this site. This region represents the northern range limits of several species of reptiles and amphibians, and has helped fill

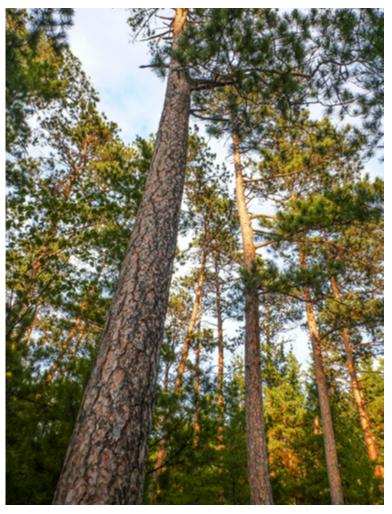
knowledge gaps of species' distributions. Future work on this species group at Wolf Lake should focus on completing species lists and estimating abundances for more common species, especially anurans. Work during 2012 did not result in any salamander sightings and very few turtle observations, thus, spring surveys should target these groups.



Birds

The breeding bird surveys suggest high quality heterogeneous bird habitat is found throughout the forest reserve. While the species identified (total of 60; see Table 1) were typical of the region, the densities of Swainson's Thrush, Pine Warbler, and Ovenbird are impressive. Birds detected at all six song meter sites were Yellowrumped Warbler, White-throated Sparrow, Swainson's Thrush, Ovenbird Nashville Warbler, Hermit Thrush, and Blackburnian Warbler. Redeyed Vireo and Magnolia Warbler were detected at five of the six song meter sites. Two species at risk were found including Common Nighthawk and Canada Warbler. Both of these species are designated as "special concern" at the provincial level and "threatened" at the federal level.

The significance of the Wolf Lake Forest to birds may not be in the provision of habitat for unique or rare species, but in the abundance of birds that are able to thrive in the forests' distinct habitats. Some future high-priority field projects include the following.



- Surveys should be expanded to include more stations and habitat types. If possible, surveys
 should start earlier and run a few days later. This would require moving the song meters
 around more often or having people out in the field doing point counts.
- Key species such as Pine Warbler should be better documented using standardized methods including comparison with other areas. Data from the Forest Bird Monitoring Program or Ontario Breeding Bird Atlas could be used for this.
- It would be useful to examine the success of breeding and productivity of the bird populations given the quality of the habitat. For example, there appears to be a separation in areas of high Swainson's Thrush and Hermit Thrush, which may be of interest to ornithologists.
- Hawk watching along the one of the ridges should be done, especially during migration season.
- Owl surveys should be carried out. They are typically done in April before running water and spring peepers drown out distant owls. Surveys can be conducted along the roadway using owl survey protocols (drive a set distance, play standardized recording disk, listen for responses, drive to next station).
- Special effort to assess for species at risk including Eastern Whip-poor-will (not found in 2012),
 Common Nighthawk, and Canada Warbler, including breeding habitat, should take place.
- Loon surveys should be conducted, especially to assess nesting success, which can be negatively affected by motor boat wakes and other fishing activity.

Mammals

Three species of mammals were identified by track and observation. Numerous other species of mammals occur in the area and should be targeted for future field surveys. In particular, habitat diversity, vegetation types, and waterway linkages suggest that representatives of the mustelid group likely use the Wolf Lake landscape. Review of mammal harvests along current and historical trap lines in the area might be useful prior to conducting field work. Future surveys should include surveys for small mammals using live traps stratified by habitat types.



CONCLUSION AND DIRECTIONS FOR FUTURE WORK

We stress that the results of this initial biodiversity assessment are very limited in nature and cannot substitute for a comprehensive biodiversity assessment. Our species list is in no way exhaustive and can only be interpreted as a confirmation of the presence of certain species, not proof of absence of any species. However, this work indicates that the Wolf Lake old-growth forest is a unique and rich natural laboratory with the potential to provide the answers to many scientific questions relating to the ecology and conservation of endangered forested landscapes.

We strongly urge that no further industrial disturbance be permitted to this ecosystem until a thorough program of scientific research has been designed and implemented. Any further industrial disturbance

risks degrading the scientific value of this irreplaceable ecosystem before we have uncovered its storehouse of ecological information.

Some of the more notable findings of this initial biodiversity field work include the following:

- a high diversity of lichens,
- an unusually high abundance of Red Pine regeneration,
- observations at the northern range limits of several species of reptiles and amphibians that have helped fill knowledge gaps of species' distributions, and
- observations of two bird species "At Risk" (special concern).

In addition to the specific recommendations for future work addressed for each species group in the Results and Discussion section, we recommend several high-level directions for future work as follows.

Some major taxonomic groups are missing from this study, most notably insects. Thus, further taxonomic surveys are required to address missing species groups as well as to complete lists for groups focused on during 2012.

- 1. Comparative analyses focussing on the variety of habitats within the Wolf Lake Forest reserve are required to determine the role of environmental heterogeneity on forest biodiversity. This includes identifying and mapping all habitats in the reserve.
- 2. While an initial assessment of species presence is essential, the stability of this unique ecosystem needs to be further examined by constructing species interaction networks (e.g., trophic, pollinator, dispersal), which will help to identify keystone and/or core species.
- 3. A comprehensive study to examine forest recruitment dynamics and its implications for plant and lichen diversity should be conducted.
- 4. The relationship between biodiversity and ecosystem function and services should be determined for this forest type.
- 5. Permanent sample plots to characterize changes in ecosystem structure, function, and composition should be established.
- 6. Aerial image analysis as well as ground surveys are required to determine the full extent of the Wolf Lake old-growth Red Pine forest, which extends beyond the 1,600 ha identified by MNR.

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BIOGRAPHIES

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Kevan Cowcill (B.Sc., M.Sc.) is a professional field biologist, and has been conducting bird surveys in Ontario, Alberta, British Columbia, and the Yukon for government and non-government organizations for the past 20 years. He currently specializes in wildlife monitoring and vegetation as it applies to habitat characterization. He is member of the Board of Directors for Ancient Forest Exploration & Research.

Ramsey Hart (B.E.S., M.Sc.) is an ecologist and field naturalist, and is currently the Canada Program Coordinator of MiningWatch Canada. An avid birder, Ramsey was a Regional Coordinator for the Maritime Breeding Bird Atlas. He has also worked with Ontario Parks, Bird Studies Canada, and the Canadian Wildlife Service.

Tim Martens (B.A.) is a professional field biologist with 20 years of experience conducting plant, bird, and mammal inventories for the Ontario Ministry of Natural Resources, various conservation authorities, and consulting companies in Ontario and British Columbia. He is member of the Board of Directors for Ancient Forest Exploration & Research.

James Paterson (B.Sc., M.Sc.) has over five years of field experience working with reptiles and amphibians in Ontario, and has been Coordinator for the Ontario Reptile and Amphibian Atlas with Ontario Nature since 2011. He is a member of the Ontario Multi-Species Turtle at Risk Recovery Team.

Peter Quinby (B.A., M.Sc., Ph.D.) is a professional ecologist and is presently a Senior Environmental Scientist with Knight Piesold Ltd. He has served as a faculty member at Wilfrid Laurier University and the University of Pittsburgh. He specializes in the ecology and conservation of old-growth forests, landscape ecology, species at risk assessments, and baseline studies for environmental assessment. He is also Chair of the Board of Directors for Ancient Forest Exploration & Research.

Paul Smylie (B.Sc., M.Sc.) is a Technologist and Instructor in the Biology Department at Nipissing University. His research interests focus on aquatic ecology and his most recent teaching duties include Conservation Biology, Ornithology, Freshwater Biology Field Camp, and Invertebrate Zoology. In addition to Ontario, he has conducted field studies in Arizona and British Columbia.

David Sone (B.Sc.) is a campaigner at Earthroots, an environmental non-profit organization that works with communities to protect wilderness, watersheds, and wildlife in Ontario.



The red pines surrounding Wolf lake have survived four incidents of fire over the past 300 years.

TABLE 1 - List of Species

| Group | Scientific Name | Common name | # Observations |
|----------|---------------------------|----------------------------|----------------|
| Lichens | Cladonia chorophaea | 1 | |
| Lichens | Cladonia cristatella | British Soldiers | 1 |
| Lichens | Umbilicaria mammulata | Rock Tripe | 1 |
| 3 specie | s | | |
| | | | |
| Plants | Abies balsamea | Balsam Fir | 1 |
| Plants | Acer rubrum | Red Maple | 1 |
| Plants | Acer spicatum | Mountain Maple | 1 |
| Plants | Alnus incana ssp. Rugosa | Speckled Alder | 1 |
| Plants | Alnus viridis | Green Alder | 1 |
| Plants | Amelanchier spp. | Serviceberry spp. | 1 |
| Plants | Aralia hispida | Bristly Sarsaparilla | 2 |
| Plants | Aralia nudicaulis | Wild Sarsaparilla | 1 |
| Plants | Aronia melanocarpa | Chokeberry | 1 |
| Plants | Aster nemoralis | Bog Aster | 1 |
| Plants | Aster umbellatus | Flat-topped White Aster | 1 |
| Plants | Betula alleganiensis | Yellow Birch | 2 |
| Plants | Betula papyrifera | White Birch | 1 |
| Plants | Carex crinita | Fringed Sedge | 1 |
| Plants | Carex trisperma | Three-fruited Sedge | 1 |
| Plants | Chamaedaphne calyculata | Leatherleaf | 1 |
| Plants | Clintonia borealis | Blue-bead Lily | 1 |
| Plants | Coptis trifolia | Goldthread | 1 |
| Plants | Cornis canadensis | Bunchberry | 1 |
| Plants | Cyprepedium acaule | Pink Lady's Slipper | 1 |
| Plants | Dennstaedtia punctilobula | Hay-scented Fern | 1 |
| Plants | Diervilla lonicera | Bush Honeysuckle | 1 |
| Plants | Drosera intermedia | Spatulate-leaved Sundew | 1 |
| Plants | Drosera rotundifolia | Round-leaved Sundew | 1 |
| Plants | Dulichium arundinaceum | Three-way Sedge | 1 |
| Plants | Epigaea repens | Trailing Arbutus | 1 |
| Plants | Eriocaulon aquaticum | Pipewort | 1 |
| Plants | Eriophorum spp. | Cotton Grass spp. | 1 |
| Plants | Euthamia graminifolia? | Flat-topped Goldenrod | 1 |
| Plants | Gaultheria hispidula | Creeping Snowberry | 1 |
| Plants | Gaultheria procumbens | Wintergreen | 1 |
| Plants | Goodyera repens | Dwarf Rattlesnake Plantain | 1 |
| Plants | Hypericum sp. | St. John's Wort spp. | 1 |
| Plants | Hypericum virginicum | Marsh St. Johns Wort | 1 |
| Plants | llex verticillata | Winterberry Holly | 1 |
| Plants | Iris versicolor | Blue Flag Iris | 1 |
| Plants | Juncus canadensis | Canadian Rush | 1 |
| Plants | Kalmia angustifilia | Sheep Laurel | 1 |
| Plants | Kalmia paliifolia | Bog Laurel | 1 |
| Plants | Lycopodium clavatum | Wolf's Claw Clubmoss | 1 |

| Plants | Lycopus uniflorus | Northern Bugleweed | 1 |
|---------|----------------------------|-----------------------------|---|
| Plants | Lysimachia terrestris | Swamp Candles | 1 |
| Plants | Maianthemum canadense | Canada Mayflower | 1 |
| Plants | Maianthemum trifolium | Three-leaved Solomon's Seal | 1 |
| Plants | Mediola virginiana | Indian Cucumber Root | 2 |
| Plants | Myrica Gale | Sweet Gale | 1 |
| Plants | Nemopanthus mucronatus | Mountain Holly | 1 |
| Plants | Orthilia secunda | One-sided Wintergreen | 1 |
| Plants | Osmunda cinnamomea | Cinnamon Fern | 1 |
| Plants | Osmunda regalis | Royal Fern | 2 |
| Plants | Phegopteris connectilis | Northern Beech Fern | 1 |
| Plants | Phegopteris hexagonoptera | Southern Beech Fern | 1 |
| Plants | Picea glauca | White Spruce | 1 |
| Plants | Picea mariana | Black Spruce | 1 |
| Plants | Pinus banksianna | Jack Pine | 1 |
| Plants | Pinus resinosa | Red Pine | 1 |
| Plants | Pinus strobus | White Pine | 1 |
| Plants | Polypodium virginianum | Polypody Fern | 1 |
| Plants | Polytrichum commune | Common Hair Cap Moss | 1 |
| Plants | Pteridium aquilinum | Bracken Fern | 1 |
| Plants | Quercus rubra | Red Oak | 1 |
| Plants | Rhododendron groenlandicum | Labrador Tea | 1 |
| Plants | Rubus pubescens | Dwarf Raspberry | 1 |
| Plants | Rubus alllegheniensis | Common Blackberry | 1 |
| Plants | Sarracenia purpurea | Pitcher Plant | 1 |
| Plants | Scirpus cyperinus | Wool Grass | 1 |
| Plants | Scirpus validus | Soft-stem Bulrush | 1 |
| Plants | Sorbis americana | Mountain Ash | 1 |
| Plants | Sphagnum warnstorfii | Warnstorf's Peat Moss | 1 |
| Plants | Spiraea alba | Meadowsweet | 1 |
| Plants | Spiraea tomentosa | Steeple Bush | 1 |
| Plants | Taxus canadensis | Ground Hemlock | 1 |
| Plants | Thuja occidentalis | Eastern White Cedar | 1 |
| Plants | Trientalis borealis | Starflower | 1 |
| Plants | Trillium undulatum | Painted Trillium | 1 |
| Plants | Tussilago farfara | Coltsfoot | 1 |
| Plants | Vaccinium angustifolium | Low-sweet Blueberry | 1 |
| Plants | Vaccinium myrtilloides | Velvet-leaved Blueberry | 1 |
| Plants | Vaccinium oxycoccus | Small Cranberry | 1 |
| Plants | Viburnum cassinoides | Northern Wild Raisin | 1 |
| Plants | Viola lanceolata | Lance-leaved Violet | 1 |
| Plants | Viola mackloskeyi | Northern White Violet | 1 |
| 82 spec | cies | | |
| | | | |

| Aquatic Inverts | Boyeria spp. | Spotted Darner (nymph) | 1 |
|---------------------------------------|------------------------------|-------------------------------|----|
| Aquatic Inverts | Chimarra spp. | Little Black Sedge Caddisfly | 1 |
| Aquatic Inverts | Hydropsyche spp. | Net-spinning Caddisfly | 1 |
| Aquatic Inverts | Rhyacophila spp. | Green Sedge Caddisfly | 1 |
| Aquatic Inverts | Stenonema spp. | Mayfly Nymph | 1 |
| Aquatic Inverts | Wormaldia spp. | Little Autumn Sedge Caddisfly | 2 |
| 6 species | 1 | , | |
| , , , , , , , , , , , , , , , , , , , | | | |
| Herps | Anaxyrus americanus | American Toad | 3 |
| Herps | Chrysemys picta marginata | Midland Painted Turtle | 2 |
| Herps | Hyla versicolor | Gray Treefrog | 2 |
| Herps | Lithobates pipiens | Leopard Frog | 1 |
| Herps | Lithobates septentrionalis | Mink Frog | 1 |
| Herps | Lithobates sylvaticus | Wood Frog | 1 |
| Herps | Opheodrys vernalis | Smooth Greensnake | 2 |
| Herps | Pseudacris crucifer | Spring Peeper | 6 |
| Herps | Lithobates clamitans | Green Frog | 6 |
| Herps | Thamnophis sirtalis sirtalis | Eastern Gartersnake | 1 |
| 10 species | • | | |
| · · · · · · · · · · · · · · · · · · · | | | |
| Birds | Actitis macularius | Spotted Sandpiper | 2 |
| Birds | Agelaius phoeniceus | Red-winged Blackbird | 2 |
| Birds | Anas rubripes | American Black Duck | 1 |
| Birds | Archilochus colubris | Ruby-throated Hummingbird | 1 |
| Birds | Aythya collaris | Ring-necked Duck | 1 |
| Birds | Bombycilla cedrorum | Cedar Waxwing | 1 |
| Birds | Bonasa umbellus | Ruffed Grouse | 3 |
| Birds | Bucephala albeola | Bufflehead | 1 |
| Birds | Bucephala clangula | Common Goldeneye | 2 |
| Birds | Cardellina canadensis | Canada Warbler (SAR) | 1 |
| Birds | Cardellina pusilla | Wilson's Warbler | 2 |
| Birds | Catharus fuscescens | Veery | 1 |
| Birds | Catharus guttatus | Hermit Thrush | 24 |
| Birds | Catharus ustulatus | Swainson's Thrush | 25 |
| Birds | Certhia americana | Brown Creeper | 1 |
| Birds | Chordeiles minor | Common Nighthawk (SAR) | 5 |
| Birds | Coccyzus erythropthalmus | Black-billed Cuckoo | 1 |
| Birds | Colaptes auratus | Northern Flicker | 2 |
| Birds | Contopus virens | Eastern Wood-pewee | 1 |
| Birds | Corvus corax | Common Raven | 4 |
| Birds | Cyanocitta cristata | Blue Jay | 1 |
| Birds | Dendroica coronata | Yellow-rumped Warbler | 24 |
| Birds | Dendroica pensylvanica | Chestnut-sided Warbler | 2 |
| Birds | Dendroica pinus | Pine Warbler | 2 |
| Birds | Dryocopus pileatus | Pileated Woodpecker | 2 |
| Birds | Empidonax flaviventris | Yellow-bellied Flycatcher | 2 |
| Birds | Empidonax minimus | Least Flycatcher | 1 |
| Birds | Gallinago gallinago | Wilson's Snipe | 2 |
| Birds | Gavia immer | Common Loon | 13 |
| Birds | Geothlypis philadelphia | Mourning Warbler | 3 |

| Birds | Grus canadensis | Sandhill Crane | 2 |
|---------|-------------------------|------------------------------|----|
| Birds | Junco hyemalis | Dark-eyed Junco | 15 |
| Birds | Melospiza georgiana | Swamp Sparrow | 7 |
| Birds | Melospiza melodia | Song Sparrow | 3 |
| Birds | Mergus merganser | Common Merganser | 1 |
| Birds | Mniotilta varia | Black-and-white Warbler | 9 |
| Birds | Oreothlypis ruficapilla | Nashville Warbler | 20 |
| Birds | Pheucticus Iudovicianus | Rose-breasted Grosbeak | 1 |
| Birds | Picoides villosus | Hairy Woodpecker | 2 |
| Birds | Poecile atricapillus | Black-capped Chickadee | 4 |
| Birds | Regulus calendula | Ruby-crowned Kinglet | 1 |
| Birds | Regulus satrapa | Golden-crowned Kinglet | 14 |
| Birds | Seiurus aurocapilla | Ovenbird | 17 |
| Birds | Setophaga caerulescens | Black-throated Blue Warbler | 1 |
| Birds | Setophaga castanea | Bay-breasted Warbler | 1 |
| Birds | Setophaga fusca | Blackburnian Warbler | 18 |
| Birds | Setophaga magnolia | Magnolia Warbler | 24 |
| Birds | Setophaga petechia | Yellow Warbler | 3 |
| Birds | Setophaga ruticilla | American Redstart | 9 |
| Birds | Setophaga virens | Black-throated Green Warbler | 11 |
| Birds | Sitta canadensis | Red-breasted Nuthatch | 3 |
| Birds | Sphyrapicus varius | Yellow-bellied Sapsucker | 2 |
| Birds | Spizella passerina | Chipping Sparrow | 1 |
| Birds | Troglodytes hiemalis | Winter Wren | 2 |
| Birds | Turdus migratorius | American Robin | 2 |
| Birds | Vermivora peregrina | Tennessee Warbler | 1 |
| Birds | Vireo olivaceous | Red-eyed Vireo | 23 |
| Birds | Vireo philadelphicus | Philadelphia Vireo | 2 |
| Birds | Vireo solitarius | Blue-headed Vireo | 11 |
| Birds | Zonotrichia albicollis | White-throated Sparrow | 27 |
| 60 spec | ies | | |
| | | | |
| Mammals | Alces alces | Moose | 1 |
| Mammals | Canis lupus | Grey Wolf | 1 |
| Mammals | Tamiasciurus hudsonicus | Red Squirrel | 6 |
| 3 ѕрес | ies | | |

164 species total

| Habitat | Common name | Scientific Name | Group | Date | Breeding Easting | Northing | Specimen Photos | Observer | Comments |
|--|--|--|------------------|--------------------------------------|--------------------|--------------------|-------------------|--------------------------------|--------------------------|
| Bog | Bog Laurel | Kalmia paliifolia | Plants | Sept 10-12, 2012 | 528411 | 5190030 | n y | Tim Martens | Comments |
| | Cinnamon Fern Coltsfoot | Osmunda cinnamomea Tussilago farfara | Plants Plants | Sept 10-12, 2012 Sept 10-12, 2012 | 527621 528411 | 5187847 5190030 | n y n y | Tim Martens Tim Martens | |
| | Pitcher Plant Ruby-throated Hummingbird | Sarracenia purpurea Archilochus colubris | Plants Birds | Sept 10-12, 2012 May 29, 2012 | 527607 526748 | 5189380 5188246 | n n | Tim Martens Chris Blomme | m |
| | Small Cranberry Smooth Greensnake | Vaccinium oxycoccus Opheodrys vernalis | Plants Herps | Sept 10-12, 2012 July 1-3, 2012 | 528176 528186 | 5189317 5188510 | n n n y | Tim Martens James Paterson | |
| Bog | Tennessee Warbler Three-leaved Solomon's Seal | Vermivora peregrina Maianthemum trifolium | Birds Plants | May 29, 2012 Sept 10-12, 2012 | 526748 527621 | 5188246 5187847 | n n | Chris Blomme Tim Martens | 1 individual |
| 0 | Wolf's Claw Clubmoss | Lycopodium clavatum | Plants Birds | Sept 10-12, 2012 | 528176 | 5189317 5188741 | n n | Tim Martens | |
| Lake | American Black Duck Bufflehead | Anas rubripes Bucephala albeola | Birds | July 4, 2012 May 29, 2012 | 527963 | 5186709 | n n | Ramsey Hart Chris Blomme | m, f |
| | Bufflehead Common Goldeneye | Bucephala albeola Bucephala clangula | Birds Birds | July 6, 2012 May 29, 2012 | H 529316 527963 | 5189817 5186709 | n n | Ramsey Hart Chris Blomme | m, f |
| Lake Lake | Common Goldeneye Common Loon | Bucephala clangula Gavia immer | Birds Birds | July 6, 2012 May 29, 2012 | H 529316 527025 | 5189817 5187970 | n n | Ramsey Hart Chris Blomme | 3 individuals |
| | Common Loon Common Merganser | Gavia immer Mergus merganser | Birds Birds | July 4, 2012 May 29, 2012 | H 527510 527963 | 5188741 | n n | Ramsey Hart Chris Blomme | f |
| Lake | Ring-necked Duck Green Frog | Aythya collaris Lithobates clamitans | Birds Herps | May 29, 2012 July 1-3, 2012 | 527963 527616 | 5186709 5189368 | n n | Chris Blomme James Paterson | m, f |
| Red Pine Stand, Hilltop | Black-and-white Warbler | Mniotilta varia | Birds | June 20, 2012 | 526939 | 5189480 | n n | Kevan Cowcill | |
| Red Pine Stand, Hilltop | Black-billed Cuckoo Blackburnian Warbler | Coccyzus erythropthalmus Setophaga fusca | Birds Birds | June 13, 2012 June 11, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | song meter |
| | Blackburnian Warbler Blackburnian Warbler | Setophaga fusca Setophaga fusca | Birds Birds | June 12, 2012 June 13, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | - |
| | Blackburnian Warbler Blue Jay | Setophaga fusca Cyanocitta cristata | Birds Birds | June 14, 2012 June 13, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | |
| | Blue-headed Vireo Blue-headed Vireo | Vireo solitarius Vireo solitarius | Birds Birds | June 11, 2012 June 12, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | song meter |
| Red Pine Stand, Hilltop | Blue-headed Vireo Blue-headed Vireo | Vireo solitarius Vireo solitarius | Birds Birds | June 13, 2012 June 14, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | song meter |
| Red Pine Stand, Hilltop | Brown Creeper | Certhia americana | Birds | June 13, 2012 | 526939 | 5189480 | n n | Kevan Cowcill | song meter |
| Red Pine Stand, Hilltop Red Pine Stand, Hilltop | Common Loon Common Loon | Gavia immer Gavia immer | Birds Birds | June 13, 2012 June 14, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | song meter |
| | Common Nighthawk Dark-eyed Junco | Chordeiles minor Junco hyemalis | Birds Birds | June 13, 2012 June 11, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | |
| Red Pine Stand, Hilltop | Dark-eyed Junco Golden-crowned Kinglet | Junco hyemalis Regulus satrapa | Birds Birds | June 13, 2012 June 11, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | song meter |
| Red Pine Stand, Hilltop | Green Frog Hermit Thrush | Lithobates clamitans Catharus guttatus | Herps Birds | June 20, 2012 June 11, 2012 | 526939 526939 | | n n | Kevan Cowcill Kevan Cowcill | song meter |
| Red Pine Stand, Hilltop | Hermit Thrush Hermit Thrush | Catharus guttatus | Birds Birds | June 12, 2012 June 13, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill | song meter |
| Red Pine Stand, Hilltop | Hermit Thrush | Catharus guttatus Catharus guttatus | Birds | June 14, 2012 | 526939 | 5189480 | n n | Kevan Cowcill Kevan Cowcill | |
| | Hermit Thrush Magnolia Warbler | Catharus guttatus Setophaga magnolia | Birds Birds | June 20, 2012 June 11, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | |
| | Magnolia Warbler Magnolia Warbler | Setophaga magnolia Setophaga magnolia | Birds Birds | June 14, 2012 June 20, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | |
| Red Pine Stand, Hilltop | Mourning Warbler Nashville Warbler | Geothlypis philadelphia Oreothlypis ruficapilla | Birds Birds | June 11, 2012 June 11, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | song meter |
| Red Pine Stand, Hilltop | Nashville Warbler Nashville Warbler | Oreothlypis ruficapilla | Birds Birds | June 14, 2012 June 20, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | song meter |
| Red Pine Stand, Hilltop | Ovenbird | Oreothlypis ruficapilla Seiurus aurocapilla | Birds | June 11, 2012 | 526939 | 5189480 | n n | Kevan Cowcill | song meter |
| Red Pine Stand, Hilltop | Ovenbird Ovenbird | Seiurus aurocapilla Seiurus aurocapilla | Birds Birds | June 12, 2012 June 13, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | song meter |
| | Ovenbird Ovenbird | Seiurus aurocapilla Seiurus aurocapilla | Birds Birds | June 14, 2012 June 20, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | |
| | Red Squirrel Red-breasted Nuthatch | Tamiasciurus hudsonicus Sitta canadensis | Mammals Birds | June 11, 2012 June 13, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | song meter song meter |
| Red Pine Stand, Hilltop | Red-eyed Vireo Red-eyed Vireo | Vireo olivaceus Vireo olivaceus | Birds Birds | June 13, 2012 June 14, 2012 | 526939 526939 | 5189480 | n n | Kevan Cowcill Kevan Cowcill | song meter |
| Red Pine Stand, Hilltop | Red-eyed Vireo | Vireo olivaceus | Birds | June 20, 2012 | 526939 | 5189480 | n n | Kevan Cowcill | song meter |
| Red Pine Stand, Hilltop | Ruffed Grouse Sandhill Crane | Bonasa umbellus Grus canadensis | Birds Birds | June 14, 2012 June 14, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill | song meter song meter |
| | Swainson's Thrush Swainson's Thrush | Catharus ustulatus Catharus ustulatus | Birds Birds | June 11, 2012 June 12, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | song meter song meter |
| | Swainson's Thrush White-throated Sparrow | Catharus ustulatus Zonotrichia albicollis | Birds Birds | June 20, 2012 June 11, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | |
| | White-throated Sparrow White-throated Sparrow | Zonotrichia albicollis Zonotrichia albicollis | Birds Birds | June 12, 2012 June 13, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | * |
| Red Pine Stand, Hilltop | White-throated Sparrow White-throated Sparrow | Zonotrichia albicollis Zonotrichia albicollis | Birds Birds | June 14, 2012 June 20, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | song meter |
| Red Pine Stand, Hilltop | Yellow-bellied Sapsucker | Sphyrapicus varius | Birds | June 11, 2012 | 526939 | 5189480 | n n | Kevan Cowcill | song meter |
| Red Pine Stand, Hilltop | Yellow-bellied Sapsucker Yellow-rumped Warbler | Sphyrapicus varius Setophaga coronata | Birds Birds | June 13, 2012 June 11, 2012 | 526939 526939 | | n n | Kevan Cowcill Kevan Cowcill | song meter |
| Red Pine Stand, Hilltop Red Pine Stand, Hilltop | Yellow-rumped Warbler Yellow-rumped Warbler | Setophaga coronata Setophaga coronata | Birds Birds | June 12, 2012 June 13, 2012 | 526939 526939 | 5189480 5189480 | n n | Kevan Cowcill Kevan Cowcill | song meter |
| Red Pine Stand, Hilltop Red Pine Stand, Lower Slope, Beside Swamp | Yellow-rumped Warbler American Redstart | Setophaga coronata Setophaga ruticilla | Birds Birds | June 14, 2012 June 11, 2012 | 526939 528452 | 5189480 5190119 | n n | Kevan Cowcill Kevan Cowcill | |
| | American Redstart American Redstart | Setophaga ruticilla Setophaga ruticilla | Birds Birds | June 14, 2012 June 19, 2012 | 528452 528452 | 5190119 5190119 | n n | Kevan Cowcill Kevan Cowcill | |
| Red Pine Stand, Lower Slope, Beside Swamp | American Toad Black-and-white Warbler | Anaxyrus americanus Mniotilta varia | Herps Birds | June 11, 2012 June 12, 2012 | 528452 528452 | 5190119 | n n | Kevan Cowcill | song meter |
| Red Pine Stand, Lower Slope, Beside Swamp | Blackburnian Warbler | Setophaga fusca | Birds | June 11, 2012 | 528452 | 5190119 | n n | Kevan Cowcill Kevan Cowcill | song meter |
| Red Pine Stand, Lower Slope, Beside Swamp | Blackburnian Warbler Blackburnian Warbler | Setophaga fusca Setophaga fusca | Birds Birds | June 12, 2012 June 19, 2012 | 528452 528452 | | n n | Kevan Cowcill | song meter |
| Red Pine Stand, Lower Slope, Beside Swamp | | | Birds Birds | June 14, 2012 June 11, 2012 | 528452 528452 | 5190119 5190119 | n n | Kevan Cowcill Kevan Cowcill | song meter song meter |
| | Black-throated Green Warbler Black-throated Green Warbler | Setophaga virens Setophaga virens | Birds Birds | June 12, 2012 June 14, 2012 | 528452 528452 | 5190119 5190119 | n n | Kevan Cowcill Kevan Cowcill | song meter song meter |
| | Black-throated Green Warbler Blue-headed Vireo | Setophaga virens Vireo solitarius | Birds Birds | June 19, 2012 June 11, 2012 | 528452 528452 | 5190119 5190119 | n n | Kevan Cowcill Kevan Cowcill | |
| Red Pine Stand, Lower Slope, Beside Swamp | Common Loon | Gavia immer | Birds Birds | June 12, 2012 | 528452 528452 | | n n | Kevan Cowcill | song meter |
| Red Pine Stand, Lower Slope, Beside Swamp | Common Nighthawk Common Raven | Chordeiles minor Corvus corax | Birds | June 14, 2012 June 14, 2012 | 528452 | 5190119 | n n | Kevan Cowcill Kevan Cowcill | song meter |
| Red Pine Stand, Lower Slope, Beside Swamp | Dark-eyed Junco Dark-eyed Junco | Junco hyemalis Junco hyemalis | Birds Birds | June 11, 2012 June 12, 2012 | 528452 528452 | 5190119 5190119 | n n | Kevan Cowcill Kevan Cowcill | song meter |
| | Golden-crowned Kinglet Golden-crowned Kinglet | Regulus satrapa Regulus satrapa | Birds Birds | June 11, 2012 June 12, 2012 | 528452 528452 | 5190119 5190119 | n n | Kevan Cowcill Kevan Cowcill | |
| | Golden-crowned Kinglet Golden-crowned Kinglet | Regulus satrapa Regulus satrapa | Birds Birds | June 13, 2012 June 19, 2012 | 528452 528452 | 5190119 5190119 | n n | Kevan Cowcill Kevan Cowcill | song meter song meter |
| Red Pine Stand, Lower Slope, Beside Swamp | Gray Treefrog Green Frog | Hyla versicolor Lithobates clamitans | Herps Herps | June 11, 2012 June 10, 2012 | 528452 528452 | 5190119 | n n | Kevan Cowcill Kevan Cowcill | song meter |
| Red Pine Stand, Lower Slope, Beside Swamp | Green Frog | Lithobates clamitans | Herps | June 11, 2012 | 528452 528452 | 5190119 | n n | Kevan Cowcill | song meter |
| Red Pine Stand, Lower Slope, Beside Swamp | Hermit Thrush Leopard Frog | Catharus guttatus Lithobates pipiens | Birds Herps | June 19, 2012 June 13, 2012 | 528452 | 5190119 | n n | Kevan Cowcill Kevan Cowcill | song meter |
| Red Pine Stand, Lower Slope, Beside Swamp | Magnolia Warbler Magnolia Warbler | Setophaga magnolia Setophaga magnolia | Birds Birds | June 11, 2012 June 12, 2012 | 528452 528452 | | n n | Kevan Cowcill Kevan Cowcill | song meter song meter |
| Red Pine Stand, Lower Slope, Beside Swamp | Magnolia Warbler Magnolia Warbler | Setophaga magnolia Setophaga magnolia | Birds Birds | June 13, 2012 June 14, 2012 | 528452 528452 | 5190119 5190119 | n n | Kevan Cowcill Kevan Cowcill | song meter |
| Red Pine Stand, Lower Slope, Beside Swamp | Magnolia Warbler Mink Frog | Setophaga magnolia Lithobates septentrionalis | Birds Herps | June 19, 2012 June 14, 2012 | 528452 528452 | 5190119 5190119 | n n | Kevan Cowcill Kevan Cowcill | song meter |
| Red Pine Stand, Lower Slope, Beside Swamp | • | Oreothlypis ruficapilla Seiurus aurocapilla | Birds Birds | June 11, 2012 June 19, 2012 | 528452 528452 | 5190119 5190119 | n n | Kevan Cowcill | song meter |
| Red Pine Stand, Lower Slope, Beside Swamp | Philadelphia Vireo | Vireo philadelphicus | Birds | June 12, 2012 | 528452 | 5190119 | n n | Kevan Cowcill Kevan Cowcill | song meter |
| | Philadelphia Vireo Red Squirrel | Vireo philadelphicus Tamiasciurus hudsonicus | Birds Mammals | June 13, 2012 June 11, 2012 | 528452 528452 | 5190119 5190119 | n n | Kevan Cowcill Kevan Cowcill | |
| | | | | | | | | | |
| Red Pine Stand, Lower Slope, Beside Swamp | Red Squirrel Red-eyed Vireo | Tamiasciurus hudsonicus Vireo olivaceus | Mammals Birds | June 13, 2012 June 12, 2012 | 528452 528452 | 5190119 5190119 | n n | Kevan Cowcill Kevan Cowcill | |

| Red Pine Stand, Lower Slope, Beside Swamp | | Pseudacris crucifer | Herps | June 11, 2012 | 528452 5190119 n | n | Kevan Cowcill song meter |
|---|--|--|---|---|---|---------------------------------------|--|
| Red Pine Stand, Lower Slope, Beside Swamp Red Pine Stand, Lower Slope, Beside Swamp | Spring Peeper Spring Peeper | Pseudacris crucifer Pseudacris crucifer | Herps Herps | June 12, 2012 June 13, 2012 | 528452 5190119 n 528452 5190119 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Swamp Red Pine Stand, Lower Slope, Beside Swamp | Swainson's Thrush Swainson's Thrush | Catharus ustulatus Catharus ustulatus | Birds Birds | June 11, 2012 June 12, 2012 | 528452 5190119 n 528452 5190119 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Swamp Red Pine Stand, Lower Slope, Beside Swamp | Swainson's Thrush Swainson's Thrush | Catharus ustulatus Catharus ustulatus | Birds Birds | June 13, 2012 June 14, 2012 | 528452 5190119 n 528452 5190119 n | n n | Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Swamp | Swainson's Thrush | Catharus ustulatus | Birds | June 19, 2012 | 528452 5190119 n | n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Swamp Red Pine Stand, Lower Slope, Beside Swamp | Swamp Sparrow Swamp Sparrow | Melospiza georgiana Melospiza georgiana | Birds Birds | June 11, 2012 June 12, 2012 | 528452 5190119 n 528452 5190119 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Swamp Red Pine Stand, Lower Slope, Beside Swamp | Swamp Sparrow Swamp Sparrow | Melospiza georgiana Melospiza georgiana | Birds Birds | June 13, 2012 June 14, 2012 | 528452 5190119 n 528452 5190119 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Swamp | Swamp Sparrow | Melospiza georgiana Zonotrichia albicollis | Birds Birds | June 19, 2012 June 11, 2012 | 528452 5190119 n | n | Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Swamp Red Pine Stand, Lower Slope, Beside Swamp | White-throated Sparrow White-throated Sparrow | Zonotrichia albicollis | Birds | June 12, 2012 | 528452 5190119 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Swamp Red Pine Stand, Lower Slope, Beside Swamp | White-throated Sparrow White-throated Sparrow | Zonotrichia albicollis Zonotrichia albicollis | Birds Birds | June 13, 2012 June 14, 2012 | 528452 5190119 n 528452 5190119 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Swamp Red Pine Stand, Lower Slope, Beside Swamp | White-throated Sparrow Winter Wren | Zonotrichia albicollis Troglodytes hiemalis | Birds Birds | June 19, 2012 June 13, 2012 | 528452 5190119 n 528452 5190119 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Swamp | Yellow Warbler | Setophaga petechia | Birds | June 14, 2012 | 528452 5190119 n | n | Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Swamp Red Pine Stand, Lower Slope, Beside Swamp | Yellow Warbler Yellow-bellied Flycatcher | Setophaga petechia Empidonax flaviventris | Birds Birds | June 19, 2012 June 12, 2012 | 528452 5190119 n 528452 5190119 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Swamp Red Pine Stand, Lower Slope, Beside Swamp | Yellow-bellied Flycatcher Yellow-rumped Warbler | Empidonax flaviventris Setophaga coronata | Birds Birds | June 14, 2012 June 11, 2012 | 528452 5190119 n 528452 5190119 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Swamp | Yellow-rumped Warbler | Setophaga coronata | Birds Birds | June 12, 2012 | 528452 5190119 n | n | Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Swamp Red Pine Stand, Lower Slope, Beside Swamp | Yellow-rumped Warbler Yellow-rumped Warbler | Setophaga coronata Setophaga coronata | Birds | June 13, 2012 June 14, 2012 | 528452 5190119 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | | Setophaga ruticilla Setophaga ruticilla | Birds Birds | June 10, 2012 June 11, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | | Setophaga ruticilla Setophaga ruticilla | Birds Birds | June 12, 2012 June 19, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland | American Robin | Turdus migratorius | Birds | June 10, 2012 | 527237 5189546 n | n | Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | Black-and-white Warbler | Mniotilta varia Mniotilta varia | Birds Birds | June 12, 2012 June 19, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | | Setophaga fusca Setophaga fusca | Birds Birds | June 10, 2012 June 11, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | Blackburnian Warbler | Setophaga fusca Setophaga virens | Birds Birds | June 12, 2012 June 11, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland | Black-throated Green Warbler | Setophaga virens | Birds | June 12, 2012 | 527237 5189546 n | n | Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | Cedar Waxwing | Setophaga virens Bombycilla cedrorum | Birds Birds | June 19, 2012 June 10, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | | Setophaga pensylvanica Gavia immer | Birds Birds | June 10, 2012 June 11, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | Common Loon | Gavia immer Corvus corax | Birds Birds | June 12, 2012 June 10, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland | Hermit Thrush | Catharus guttatus | Birds | June 11, 2012 | 527237 5189546 n | n | Kevan Cowcill Isong meter Kevan Cowcill Isong meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | Hermit Thrush | Catharus guttatus Catharus guttatus | Birds Birds | June 12, 2012 June 19, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | | Catharus guttatus Empidonax minimus | Birds Birds | June 19, 2012 June 10, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | Magnolia Warbler | Setophaga magnolia Setophaga magnolia | Birds Birds | June 10, 2012 June 11, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland | Magnolia Warbler | Setophaga magnolia | Birds | June 12, 2012 | 527237 5189546 n | n | Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | | Setophaga magnolia Geothlypis philadelphia | Birds Birds | June 19, 2012 June 10, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | | Geothlypis philadelphia Oreothlypis ruficapilla | Birds Birds | June 11, 2012 June 10, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | Nashville Warbler | Oreothlypis ruficapilla Oreothlypis ruficapilla | Birds Birds | June 11, 2012 June 19, 2012 | 527237 5189546 n | n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland | Ovenbird | Seiurus aurocapilla | Birds | June 11, 2012 | 527237 5189546 n | n n | Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | | Vireo olivaceus Vireo olivaceus | Birds Birds | June 11, 2012 June 12, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | | Vireo olivaceus Aaelaius phoeniceus | Birds Birds | June 19, 2012 June 10, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland | Rose-breasted Grosbeak | Pheucticus Iudovicianus | Birds | June 11, 2012 | 527237 5189546 n | n | Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | Spring Peeper | Melospiza melodia Pseudacris crucifer | Birds Herps | June 10, 2012 June 10, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | | Pseudacris crucifer Pseudacris crucifer | Herps Herps | June 11, 2012 June 19, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | | Catharus ustulatus Catharus ustulatus | Birds Birds | June 11, 2012 June 19, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland | Swamp Sparrow | Melospiza georgiana | Birds | June 19, 2012 | 527237 5189546 n | n | Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | | Zonotrichia albicollis Zonotrichia albicollis | Birds Birds | June 10, 2012 June 12, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Beside Wetland | | Zonotrichia albicollis Setophaga coronata | Birds Birds | June 19, 2012 June 11, 2012 | 527237 5189546 n 527237 5189546 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Beside Wetland Red Pine Stand, Lower Slope, Stream-side | | Setophaga coronata Setophaga fusca | Birds Birds | June 19, 2012 June 13, 2012 | 527237 5189546 n 527697 5189906 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side | Blue Jay | Cyanocitta cristata | Birds | June 13, 2012 | 527697 5189906 n | n | Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side Red Pine Stand, Lower Slope, Stream-side | Blue-headed Vireo Blue-headed Vireo | Vireo solitarius Vireo solitarius | Birds Birds | June 11, 2012 June 13, 2012 | 527697 5189906 n 527697 5189906 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side Red Pine Stand, Lower Slope, Stream-side | Dark-eyed Junco Dark-eyed Junco | Junco hyemalis Junco hyemalis | Birds Birds | June 11, 2012 June 12, 2012 | 527697 5189906 n 527697 5189906 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side | Dark-eyed Junco Dark-eyed Junco | Junco hyemalis Junco hyemalis | Birds Birds | June 13, 2012 June 20, 2012 | 527697 5189906 n | n | Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side Red Pine Stand, Lower Slope, Stream-side | Golden-crowned Kinglet | Regulus satrapa | Birds | June 11, 2012 | 527697 5189906 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side Red Pine Stand, Lower Slope, Stream-side | Golden-crowned Kinglet Golden-crowned Kinglet | Regulus satrapa Regulus satrapa | Birds Birds | June 12, 2012 June 13, 2012 | 527697 5189906 n 527697 5189906 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side Red Pine Stand, Lower Slope, Stream-side | Golden-crowned Kinglet Hermit Thrush | Regulus satrapa Catharus guttatus | Birds Birds | June 20, 2012 June 11, 2012 | 527697 5189906 n 527697 5189906 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side Red Pine Stand, Lower Slope, Stream-side | Hermit Thrush Hermit Thrush | Catharus guttatus | Birds Birds | June 12, 2012 June 13, 2012 | 527697 5189906 n 527697 5189906 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side | Hermit Thrush | Catharus guttatus Catharus guttatus | Birds | June 20, 2012 | 527697 5189906 n | n | Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side Red Pine Stand, Lower Slope, Stream-side | Magnolia Warbler Magnolia Warbler | Setophaga magnolia Setophaga magnolia | Birds Birds | June 11, 2012 June 12, 2012 | 527697 5189906 n 527697 5189906 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side Red Pine Stand, Lower Slope, Stream-side | Nashville Warbler Nashville Warbler | Oreothlypis ruficapilla Oreothlypis ruficapilla | Birds Birds | June 11, 2012 June 12, 2012 | 527697 5189906 n 527697 5189906 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side | Nashville Warbler | Oreothlypis ruficapilla | Birds | June 20, 2012 | 527697 5189906 n | n | Kevan Cowcill song meter |
| DEUTINE SIAND LOWER SIONS STROOM-CIAS | Ovenbird | Seiurus aurocapilla Seiurus aurocapilla | Birds Birds | June 11, 2012 June 20, 2012 | 527697 5189906 n 527697 5189906 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side Red Pine Stand, Lower Slope, Stream-side | Ovenbird | | | | | | |
| Red Pine Stand, Lower Slope, Stream-side Red Pine Stand, Lower Slope, Stream-side Red Pine Stand, Lower Slope, Stream-side | Red Squirrel Red-eyed Vireo | Tamiasciurus hudsonicus Vireo olivaceus | Mammals Birds | June 12, 2012 June 11, 2012 | 528467 5190031 n 527697 5189906 n | n n | Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side Red Pine Stand, Lower Slope, Stream-side Red Pine Stand, Lower Slope, Stream-side Red Pine Stand, Lower Slope, Stream-side | Red Squirrel Red-eyed Vireo Red-eyed Vireo | Tamiasciurus hudsonicus | Birds Birds | June 11, 2012 June 12, 2012 | 528467 5190031 n 527697 5189906 n 527697 5189906 n | | Kevan Cowcill song meter Kevan Cowcill song meter Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side Red Pine Stand, Lower Slope, Stream-side | Red Squirrel Red-eyed Vireo Red-eyed Vireo Red-eyed Vireo Red-eyed Vireo Red-eyed Vireo | Tamiasciurus hudsonicus Vireo olivaceus Vireo olivaceus Vireo olivaceus Vireo olivaceus | Birds Birds Birds Birds | June 11, 2012 June 12, 2012 June 13, 2012 June 20, 2012 | 528467 5190031 n 527697 5189906 n 527697 5189906 n 527697 5189906 n 527697 5189906 n | n n n | Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side Red Pine Stand, Lower Slope, Stream-side | Red Squirrel Red-eyed Vireo Red-eyed Vireo Red-eyed Vireo Red-eyed Vireo Swainson's Thrush Swainson's Thrush | Tamiasciurus hudsonicus Vireo olivaceus Vireo olivaceus Vireo olivaceus Vireo olivaceus Vireo olivaceus Catharus ustulatus Catharus ustulatus | Birds Birds Birds Birds Birds Birds | June 11, 2012 June 12, 2012 June 13, 2012 June 20, 2012 June 11, 2012 June 12, 2012 | 528467 5190031 n 527697 5189906 n 527697 5189906 n 527697 5189906 n 527697 5189906 n 527697 5189906 n 527697 5189906 n | n n n n | Kevan Cowcill Song meter |
| Red Pine Stand, Lower Slope, Stream-side Red Pine Stand, Lower Slope, Stream-side | Red Squirrel Red-eyed Vireo Red-eyed Vireo Red-eyed Vireo Red-eyed Vireo Swainson's Thrush | Tamiasciurus hudsonicus Vireo olivaceus Vireo olivaceus Vireo olivaceus Vireo olivaceus Catharus ustulatus | Birds Birds Birds Birds Birds | June 11, 2012 June 12, 2012 June 13, 2012 June 20, 2012 June 11, 2012 | 528467 5190031 n 527697 5189906 n 527697 5189906 n 527697 5189906 n 527697 5189906 n 527697 5189906 n | n n n n | Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side Red Pine Stand, Lower Slope, Stream-side | Red Squirrel Red-eyed Vireo Red-eyed Vireo Red-eyed Vireo Red-eyed Vireo Swainson's Thrush Swainson's Thrush Swainson's Thrush White-throated Sparrow White-throated Sparrow | Tamiasclurus hudsonicus Vireo olivaceus Vireo olivaceus Vireo olivaceus Vireo olivaceus Vireo olivaceus Catharus ustulatus Catharus ustulatus Catharus ustulatus Catharis ustulatus Catharis ustulatus Zonotrichia albicollis | Birds | June 11, 2012 June 12, 2012 June 13, 2012 June 13, 2012 June 20, 2012 June 11, 2012 June 12, 2012 June 13, 2012 June 20, 2012 June 11, 2012 | \$28467 \$190031 n \$27697 \$189906 n | n n n n n n n n n n n n | Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side | Red Squirrel Red-eyed Vireo Red-eyed Vireo Red-eyed Vireo Red-eyed Vireo Red-eyed Vireo Swainson's Thrush Swainson's Thrush Swainson's Thrush White-throated Sparrow White-throated Sparrow White-throated Sparrow White-throated Sparrow | Tamiasciurus hudsonicus Vireo olivaceus Vireo olivaceus Vireo olivaceus Vireo olivaceus Vireo olivaceus Vireo olivaceus Catharus ustulatus Catharus ustulatus Catharus ustulatus Catharus ustulatus Zanotrichia olibicallis Zonotrichia olibicallis Zonotrichia olibicallis | Birds | June 11, 2012 June 12, 2012 June 13, 2012 June 13, 2012 June 11, 2012 June 11, 2012 June 12, 2012 June 13, 2012 June 13, 2012 June 14, 2012 June 12, 2012 June 12, 2012 June 13, 2012 June 13, 2012 | \$28467 \$190031 n \$27697 \$189906 n | n n n n n n n n n n n n n n n n n n n | Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side | ned Squirrel Red-yed Vireo Red-yed Vireo Red-yed Vireo Red-yed Vireo Red-yed Vireo Swalison's Thrush Swalison's Thrush Swalison's Thrush White-throated Sparrow | Tamiasciurus hudsonicus Vireo olivaceus Vireo olivaceus Vireo olivaceus Vireo olivaceus Vireo olivaceus Catharus ustulatus Catharus ustulatus Catharus ustulatus Catharus ustulatus Catharus ustulatus Zonatrichia albicollis Zonatrichia albicollis Zonatrichia albicollis Zonatrichia albicollis Zonatrichia albicollis Zonatrichia olivaciolis Setophaga coronata | Birds | June 11, 2012 June 12, 2012 June 13, 2012 June 20, 2012 June 20, 2012 June 11, 2012 June 12, 2012 June 13, 2012 June 11, 2012 June 11, 2012 June 13, 2012 June 13, 2012 June 13, 2012 June 13, 2012 June 20, 2012 June 10, 2012 June 11, 2012 June 20, 2012 June 11, 2012 | \$28467 \$190031 n \$27697 \$189906 n | n n n n n n n n n n n n n n n n n n n | Kevan Cowcill song meter |
| Red Pine Stand, Lower Slope, Stream-side | Red Squirrel Red-eyed Vireo Red-eyed Vireo Red-eyed Vireo Red-eyed Vireo Swalinson's Thrush Swalinson's Thrush Swalinson's Thrush Swalinson's Thrush Swalinson's Thrush White-throated Sparrow White-throated Sparrow White-throated Sparrow White-throated Sparrow White-throated Sparrow White-throated Sparrow | Tamiasciurus hudsonicus Vireo olivaceus Vireo olivaceus Vireo olivaceus Vireo olivaceus Vireo olivaceus Catharus ustulatus Catharus ustulatus Catharus ustulatus Catharus ustulatus Catharus ustulatus Canotrichia olibicallis Zonotrichia olibicallis Zonotrichia olibicallis | Birds | June 11, 2012 June 12, 2012 June 13, 2012 June 13, 2012 June 20, 2012 June 11, 2012 June 12, 2012 June 13, 2012 June 13, 2012 June 20, 2012 June 14, 2012 June 15, 2012 June 12, 2012 June 12, 2012 June 13, 2012 June 20, 2012 June 20, 2012 | \$28467 \$190031 n \$27697 \$189906 n | n n n n n n n n n n n n n n n n n n n | Kevan Cowcill isong meter Kevan Cowcill isong meter Kevan Cowcill isong meter Kevan Cowcill song meter Kevan Cowcill song meter Kevan Cowcill song meter Kevan Cowcill isong meter Kevan Cowcill song meter Kevan Cowcill song meter Kevan Cowcill song meter Kevan Cowcill isong meter Kevan Cowcill isong meter Kevan Cowcill isong meter Kevan Cowcill isong meter |
| Red Pine Stand, Lower Slope, Stream-side | Red Squirrel Red-eyed Vireo Red-eyed Vireo Red-eyed Vireo Red-eyed Vireo Red-eyed Vireo Swalinson's Thrush Swalinson's Thrush Swalinson's Thrush Swalinson's Thrush Swalinson's Thrush Swalinson's Thrush White-throated Sparrow Wellow-urmped Warbler Yellow-urmped Warbler | Tamiasciurus hudsonicus Vireo olivaceus Vireo olivaceus Vireo olivaceus Vireo olivaceus Vireo olivaceus Vireo olivaceus Catharus ustulatus Catharus ustulatus Catharus ustulatus Catharus ustulatus Canotrichia olibicallis Zonotrichia olibicallis Zonotrichia olibicallis Zonotrichia olibicallis Zonotrichia olibicallis Setophaga coronata Setophaga coronata | Birds | June 11, 2012 June 12, 2012 June 13, 2012 June 13, 2012 June 13, 2012 June 11, 2012 June 12, 2012 June 12, 2012 June 13, 2012 June 13, 2012 June 11, 2012 June 13, 2012 June 13, 2012 June 13, 2012 June 14, 2012 June 15, 2012 June 11, 2012 June 11, 2012 June 12, 2012 June 12, 2012 June 12, 2012 | \$28467 \$190031 n \$27697 \$189906 n | n n n n n n n n n n n n n n n n n n n | Kevan Cowcill song meter |
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| March Marc | | | | | | | | |
| Month Mont | Red Pine Stand, Mid-Slope, East-Facing | Black-and-white Warbler | Mniotilta varia | Birds | June 12, 2012 | 528022 5189903 n | n | Kevan Cowcill song meter |
| April 1997 Apr | Red Pine Stand, Mid-Slope, East-Facing | Blackburnian Warbler | | Birds | June 11, 2012 | 528022 5189903 n | | |
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| The part of the | Red Pine Stand, Mid-Slope, East-Facing | | Setophaga virens | | June 11, 2012 | 528022 5189903 n | | Kevan Cowcill song meter |
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| March 1965 | Red Pine Stand, Mid-Slope, East-Facing | Common Loon | Gavia immer | Birds | June 20, 2012 | 528022 5189903 n | n | Kevan Cowcill song meter |
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| Prof. Prof | Red Pine Stand, Mid-Slope, East-Facing | Dark-eyed Junco | | Birds | June 20, 2012 | 528022 5189903 n | n | Kevan Cowcill song meter |
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| Fig. 10 Fig. | | | | | | | | |
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| Section Control Cont | Red Pine Stand, Mid-Slope, East-Facing | Magnolia Warbler | Setophaga magnolia | Birds | June 13, 2012 | 528022 5189903 n | n | Kevan Cowcill song meter |
| Extra December D | | | | | | | | |
| Enter December D | Red Pine Stand, Mid-Slope, East-Facing | Nashville Warbler | Oreothlypis ruficapilla | Birds | June 12, 2012 | 528022 5189903 n | | Kevan Cowcill song meter |
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| Bell Part 2014 Mil Stage (art Part 2014 Mi | Red Pine Stand, Mid-Slope, East-Facing | Ovenbird | Seiurus aurocapilla | Birds | June 13, 2012 | 528022 5189903 n | n | Kevan Cowcill song meter |
| Fig. 10 March 2004 1.00 | Red Pine Stand, Mid-Slope, East-Facing | Red-eyed Vireo | Vireo olivaceus | Birds | June 11, 2012 | 528022 5189903 n | n | Kevan Cowcill song meter |
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| Entry Stant, M. 60, Stape, Ent. Factory Continging analysis | Red Pine Stand, Mid-Slope, East-Facing | White-throated Sparrow | Zonotrichia albicollis | Birds | June 20, 2012 | 528022 5189903 n | n | Kevan Cowcill song meter |
| English Mode Supple Color American property of the p | Red Pine Stand, Mid-Slope, East-Facing | Wilson's Snipe | Gallinago gallinago | Birds | June 20, 2012 | 528022 5189903 n | n | Kevan Cowcill song meter |
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| Exercise (M. 1986, May 1, 2012 1979, May 1 | Red Pine Stand, Mid-Slope, South-Facing | Bay-breasted Warbler | Setophaga castanea | Birds | June 13, 2012 | 527840 5189896 n | n | Kevan Cowcill song meter |
| March Marc | | | | | | | | |
| Each Person Service March | | | Setophaga fusca | | | | | Kevan Cowcill song meter |
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| Red Pine Stand, Mid-Slope, South-Facing | Red Pine Stand, Mid-Slope, South-Facing | Nashville Warbler | Oreothlypis ruficapilla | Birds | June 13, 2012 | 527840 5189896 n | n | Kevan Cowcill song meter |
| Red Pine Stand, Mid-Slope, South-Facing Red Saurier Tamisociarus Mammals June 20, 2012 527840 5188986 n n Kevan Coxwill song meter Red Pine Stand, Mid-Slope, South-Facing Red-eyed-Vireo Vireo oilvaceus Birds June 12, 2012 527840 5188986 n n Kevan Coxwill song meter Red Pine Stand, Mid-Slope, South-Facing Red-eyed-Vireo Vireo oilvaceus Birds June 12, 2012 527840 5188986 n n Kevan Coxwill song meter Red Pine Stand, Mid-Slope, South-Facing Red-eyed-Vireo Vireo oilvaceus Birds June 13, 2012 527840 5188986 n n Kevan Coxwill song meter Red Pine Stand, Mid-Slope, South-Facing Red-eyed-Vireo Vireo oilvaceus Birds June 14, 2012 527840 5188986 n n Kevan Coxwill song meter Red Pine Stand, Mid-Slope, South-Facing Swinson's Thrush Cotharus ustulatus Birds June 12, 2012 527840 5188986 n n Kevan Coxwill song meter Red Pine Stand, Mid-Slope, South-Facing Swinson's Thrush Cotharus ustulatus Birds June 12, 2012 527840 5188986 n n Kevan Coxwill song meter Red Pine Stand, Mid-Slope, South-Facing Swinson's Thrush Cotharus ustulatus Birds June 12, 2012 527840 5188986 n n Kevan Coxwill song meter Red Pine Stand, Mid-Slope, South-Facing Swinson's Thrush Cotharus ustulatus Birds June 12, 2012 527840 5188986 n n Kevan Coxwill song meter Red Pine Stand, Mid-Slope, South-Facing Swinson's Thrush Cotharus ustulatus Birds June 12, 2012 527840 5188986 n n Kevan Coxwill song meter Red Pine Stand, Mid-Slope, South-Facing Swinson's Thrush Cotharus ustulatus Birds June 12, 2012 527840 5188986 n n Kevan Coxwill song meter Red Pine Stand, Mid-Slope, South-Facing White-throated Sparrow Zonotrichia olibicolis Birds June 12, 2012 527840 5188986 n n Kevan Coxwill song meter Red Pine Stand, Mid-Slope, South-Facing White-throated Sparrow Zonotrichia olibicolis Birds June 12, 2012 527840 5188986 n n Ke | Red Pine Stand, Mid-Slope, South-Facing | Nashville Warbler | Oreothlypis ruficapilla | Birds | June 20, 2012 | 527840 5189896 n | n | Kevan Cowcill song meter |
| Red Pine Stand, Mid-Slope, South-Facing Red squirrel Transisciurus hudsonicus Mammals June 20, 2012 \$27840 \$188986 n N. Kevan Cowcill Song meter Red Pine Stand, Mid-Slope, South-Facing Red-eyed Vireo Vireo olivinceus Birds June 13, 2012 \$27840 \$188986 n N. Kevan Cowcill Song meter Red Pine Stand, Mid-Slope, South-Facing Red-eyed Vireo Vireo olivinceus Birds June 13, 2012 \$27840 \$188986 n N. Kevan Cowcill Song meter Red Pine Stand, Mid-Slope, South-Facing Red-eyed Vireo Vireo olivinceus Birds June 14, 2012 \$27840 \$188986 n N. Kevan Cowcill Song meter Red Pine Stand, Mid-Slope, South-Facing Song meter Red Pine Stand, Mid-Slope, South-Facing Swainson's Thrush Cathons isotalotus Birds June 12, 2012 \$27840 \$188986 n N. Kevan Cowcill Song meter Red Pine Stand, Mid-Slope, South-Facing Swainson's Thrush Cathons isotalotus Birds June 12, 2012 \$27840 \$188986 n N. Kevan Cowcill Song meter Red Pine Stand, Mid-Slope, South-Facing Swainson's Thrush Cathons isotalotus Birds June 12, 2012 \$27840 \$188986 n N. Kevan Cowcill Song meter Red Pine Stand, Mid-Slope, South-Facing Swainson's Thrush Cathons isotalotus Birds June 13, 2012 \$27840 \$188986 n N. Kevan Cowcill Song meter Red Pine Stand, Mid-Slope, South-Facing Swainson's Thrush Cathons isotalotus Birds June 14, 2012 \$27840 \$188986 n N. Kevan Cowcill Song meter Red Pine Stand, Mid-Slope, South-Facing White-throated Sparrow Cathons isotalotus Birds June 12, 2012 \$27840 \$188986 n N. Kevan Cowcill Song meter Red Pine Stand, Mid-Slope, South-Facing White-throated Sparrow Cantorichio olibicollis Birds June 12, 2012 \$27840 \$188986 n N. Kevan Cowcill Song meter Red Pine Stand, Mid-Slope, South-Facing White-throated Sparrow Cantorichio olibicollis Birds June 12, 2012 \$27840 \$188986 n N. Kevan Cowcill Song meter Red Pine Stand, Mid-Slope, South | | | | | | | | |
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| Red Pine Stand, Mid-Slope, South-Facing Wilson's Warbler Cordellina pusilla Birds June 20, 2012 527840 5189896 n n Kevan Cowcill song meter Red Pine Stand, Mid-Slope, South-Facing Yellow-rumped Warbler Setophaga coronata Birds June 12, 2012 527840 5189896 n n Kevan Cowcill song meter Red Pine Stand, Mid-Slope, South-Facing Yellow-rumped Warbler Setophaga coronata Birds June 12, 2012 527840 5189896 n n Kevan Cowcill song meter Red Pine Stand, Mid-Slope, South-Facing Yellow-rumped Warbler Setophaga coronata Birds June 13, 2012 527840 5189896 n n Kevan Cowcill song meter Red Pine Stand, Mid-Slope, South-Facing Yellow-rumped Warbler Setophaga coronata Birds June 13, 2012 527840 5189896 n n Kevan Cowcill song meter River Edge, Water Seval Value Setophaga coronata Birds June 13, 2012 527840 5189896 n n Kevan Cowcill song meter River Edge, Water Mayer <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<> | | | | | | | | |
| Red Pine Stand, Mid-Slope, South-Facing Yellow-rumped Warbler Setophaga coronata Birds June 12, 2012 527840 5189896 n n Kevan Cowcill song meter Red Pine Stand, Mid-Slope, South-Facing Yellow-rumped Warbler Setophaga coronata Birds June 13, 2012 527840 5189896 n n Kevan Cowcill song meter Red Pine Stand, Mid-Slope, South-Facing Yellow-rumped Warbler Setophaga coronata Birds June 14, 2012 527840 5189896 n n Kevan Cowcill song meter River Edge, Water Maylin Nymph Setophaga coronata Birds June 10, 2012 527712 5189896 n n Kevan Cowcill song meter River Edge, Water Maylin Nymph Setonema sp. Aquatic Inverts June 10, 2012 527712 5189982 n n Paul Smylie River Head, Water Green Sedge Caddisfly Rhymcophila sp. Aquatic Inverts June 10, 2012 527770 5189973 y n Paul Smylie River Head, Water Net-spinning Caddisfly Hydropsyche sp. Aquatic In | Red Pine Stand, Mid-Slope, South-Facing | Wilson's Warbler | Cardellina pusilla | Birds | June 20, 2012 | 527840 5189896 n | n | Kevan Cowcill song meter |
| Red Pine Stand, Mid-Slope, South-Facing Vellow-rumped Warbler Setophaga coronata Birds June 14, 2012 527840 5189896 n n N Kevan Cowcill Song meter River Edge, Water Little Autumn Sedge Caddisfly Wormoldia spp. Aquatic Inverts June 10, 2012 527712 5189842 y n n Paul Smylie River Head, Water Mayfin Nymph Stenonema spp. Aquatic Inverts June 10, 2012 527712 5189973 y n Paul Smylie River Head, Water Green Sedge Caddisfly Rhyocophila spp. Aquatic Inverts June 10, 2012 527710 5189973 y n Paul Smylie River Head, Water Little Autumn Sedge Caddisfly Hydropsyche spp. Aquatic Inverts June 10, 2012 527710 5189973 y n Paul Smylie River Head, Water Net-spinning Caddisfly Hydropsyche spp. Aquatic Inverts June 10, 2012 52770 5189973 y n Paul Smylie River Head, Water Net-spinning Caddisfly Hydropsyche spp. Aquatic Inverts June 10, 2012 52774 5189973 y n Paul Smylie River Mouth, Water Little Black Sedge Caddisfly Hydropsyche spp. Aquatic Inverts June 10, 2012 52774 5189973 y n Paul Smylie River Mouth, Water Net-spinning Caddisfly Hydropsyche spp. Aquatic Inverts June 10, 2012 52774 5189792 y n Paul Smylie River Mouth, Water Net-spinning Caddisfly Hydropsyche spp. Aquatic Inverts June 10, 2012 52774 5189792 y n Paul Smylie River Mouth, Water Spotted Darner (nymph) Boyeria sp. Aquatic Inverts June 10, 2012 52774 5189792 y n Paul Smylie River Mouth, Water Spotted Darner (nymph) Boyeria sp. Aquatic Inverts June 10, 2012 52774 5189792 y n Paul Smylie Christian Smylie River Mouth, Water Spotted Darner (nymph) Boyeria sp. Aquatic Inverts June 10, 2012 52774 5189792 y n Paul Smylie Christian Smylie River Mouth, Water Spotted Darner (nymph) Boyeria sp. Aquatic Inverts June 10, 2012 52774 5189792 y n Paul Smylie Smylie River Mouth, Water Spotted Darner (nymph) Boyeria sp. Aquatic Inverts June 10, 2012 52774 5189792 y n Paul Smylie Smylie River Mouth, Water Spotted Darner (nymph) Boyeria sp. Aquatic Inverts June 10, 2012 52774 5189792 y n Paul Smylie Smylie River Mouth, Water Sp. May 39, 2012 527001 5188556 n n Chris Biomene River May 39, 2 | Red Pine Stand, Mid-Slope, South-Facing | Yellow-rumped Warbler | Setophaga coronata | Birds | June 12, 2012 | 527840 5189896 n | n | Kevan Cowcill song meter |
| River Edge, Water Utitte Autumn Sedge Caddisfly Wormaldin spp. Aquatic Inverts June 10, 2012 527712 5189842 y n Paul Smylie River Edge, Water Mayfi Nymph Stenonema spp. Aquatic Inverts June 10, 2012 527712 5189842 y n Paul Smylie River Head, Water Green Sedge Caddisfly Rhyacophila spp. Aquatic Inverts June 10, 2012 52770 5189973 y n Paul Smylie River Head, Water Utitte Autumn Sedge Caddisfly Wormaldin spp. Aquatic Inverts June 10, 2012 52770 5189973 y n Paul Smylie River Head, Water Net-spinning Caddisfly Wormaldin spp. Aquatic Inverts June 10, 2012 52770 5189973 y n Paul Smylie River Head, Water Net-spinning Caddisfly Hydropsyche spp. Aquatic Inverts June 10, 2012 52770 5189973 y n Paul Smylie River Mouth, Water Utitle Black Sedge Caddisfly Chimorra spp. Aquatic Inverts June 10, 2012 527744 5189792 y n Paul Smylie River Mouth, Water Net-spinning Caddisfly Hydropsyche spp. Aquatic Inverts June 10, 2012 527744 5189792 y n Paul Smylie River Mouth, Water Spotted Darner (nymph) Boyeria sp. Aquatic Inverts June 10, 2012 527744 5189792 y n Paul Smylie Roadside Green Frog Uthobates clamitans Herps May 29, 2012 52701 5188556 n n Chris Blomme | | | | | | | | |
| River Head, Water Green Sedge Caddisfly Rhyacophila spp. Aquatic Inverts June 10, 2012 527770 5189973 y n Paul Smylle River Head, Water Ultitle Autumn Sedge Caddisfly Mormadilo spp. Aquatic Inverts June 10, 2012 527770 5189973 y n Paul Smylle River Head, Water Net-spinning Caddisfly Hydropsyche spp. Aquatic Inverts June 10, 2012 527770 5189973 y n Paul Smylle River Mouth, Water Little Black Sedge Caddisfly Chimorra spp. Aquatic Inverts June 10, 2012 527770 5189973 y n Paul Smylle River Mouth, Water Net-spinning Caddisfly Chimorra spp. Aquatic Inverts June 10, 2012 527744 5189792 y n Paul Smylle River Mouth, Water Net-spinning Caddisfly Hydropsyche spp. Aquatic Inverts June 10, 2012 527744 5189792 y n Paul Smylle River Mouth, Water Spotted Darner (nymph) Boyeria sp. Aquatic Inverts June 10, 2012 527744 5189792 y n Paul Smylle Goadside Green Frog Lithobates clamitans Herps May 29, 2012 527016 5188956 n n Chris Blomme | River Edge, Water | Little Autumn Sedge Caddisfly | Wormaldia spp. | Aquatic Inverts | June 10, 2012 | 527712 5189842 y | n | Paul Smylie |
| River Head, Water Net-spinning Caddisfly Hydropsyche spp. Aquatic Inverts June 10, 2012 527770 5189973 y n Paul Smylle Niker Mouth, Water Ultite Black Sedge Caddisfly Informar spp. Aquatic Inverts June 10, 2012 527744 5189792 y n Paul Smylle River Mouth, Water Net-spinning Caddisfly Hydropsyche spp. Aquatic Inverts June 10, 2012 527744 5189792 y n Paul Smylle River Mouth, Water Spotted Darner (nymph) Boyeria sp. Aquatic Inverts June 10, 2012 527744 5189792 y n Paul Smylle River Mouth, Water Spotted Darner (nymph) Boyeria sp. Aquatic Inverts June 10, 2012 527744 5189792 y n Paul Smylle River Mouth, Water Spotted Darner (nymph) Boyeria sp. Aquatic Inverts June 10, 2012 527701 5189556 n n Chris Biomme | River Head, Water | Green Sedge Caddisfly | Rhyacophila spp. | Aquatic Inverts | June 10, 2012 | 527770 5189973 y | n | Paul Smylie |
| River Mouth, Water Little Black Sedge Caddisfly Chimorro spp. Aquatic Inverts June 10, 2012 527744 5189792 y n Paul Smylie River Mouth, Water Net-spinning Caddisfly Hydropsyche spp. Aquatic Inverts June 10, 2012 527744 5189792 y n Paul Smylie River Mouth, Water Spotted Darner (nymph) Byeria sp. Aquatic Inverts June 10, 2012 527744 5189792 y n Paul Smylie Roadside Green Frog Lithobates clamitans Herps May 29, 2012 527001 5188556 n n Chris Blomme | | | | | | | | |
| River Mouth, Water Spotted Darner (nymph) Boyeria sp. Aquatic Inverts June 10, 2012 527744 5189792 y n Paul Smylie Roadside Green Frog Lithobates clamitans Herps May 29, 2012 527001 5188556 n n Chris Blomme | River Mouth, Water | Little Black Sedge Caddisfly | Chimarra spp. | Aquatic Inverts | June 10, 2012 | 527744 5189792 y | n | Paul Smylie |
| | River Mouth, Water | Spotted Darner (nymph) | Boyeria sp. | Aquatic Inverts | June 10, 2012 | 527744 5189792 y | n | Paul Smylie |
| producing principal control precisitate populación de la control de la c | | Green Frog Smooth Greensnake | Lithobates clamitans Opheodrys vernalis | Herps Herps | May 29, 2012 May 29, 2012 | 527001 5188556 n 526600 5188308 n | n n | Chris Blomme Chris Blomme |
| Rocky Shoreline American Toad Anaxyrus americanus Herps July 1-3, 2012 528130 5188432 n n James Paterson | Rocky Shoreline | American Toad | Anaxyrus americanus | Herps | July 1-3, 2012 | 528130 5188432 n | n | James Paterson |
| Rocky Shoreline Green Frog Lithobates clamitans Herps July 1-3, 2012 528166 5189085 n n James Paterson | Rocky Shoreline | Green Frog | Lithobates clamitans | Herps | July 1-3, 2012 | 528166 5189085 n | n | James Paterson |
| Shoreline Midland Painted Turtle Chrysemys picta marginata Herps May 29, 2012 526791 5188216 n n Chris Blomme Shoreline Spotted Sandpiper Actitis macularius Birds May 29, 2012 527151 5188217 n n Chris blomme 2 individuals | | | | | | | | |
| Shoreline Riparian American Redstart Setophaga ruticilla Birds May 29, 2012 527963 5186709 n n Chris Blomme m Shoreline Riparian American Toad Anaxyrus americanus Herps May 29, 2012 527001 5188556 n n Chris Blomme | Shoreline Riparian | American Redstart | Setophaga ruticilla | Birds | May 29, 2012 | 527963 5186709 n | n | Chris Blomme m |
| Shoreline Riparian American Todal Anaxyrus americanius neeps way 29, 2012 527001 5188536 n n n Chris Biomine Shoreline Riparian Blue Flag Iris Iris versicolor Plants Sept 10-12, 2012 527225 5188791 n n Tim Martens | | | | | | | | |

| Shoreline Riparian | Bog Aster | Aster nemoralis | Plants | Sept 10-12, 2012 | 528176 | 5189317 | n y | Tim Martens | 5 |
|--|--|--|--|--|---|---|---------------------------------------|--|--|
| Shoreline Riparian Shoreline Riparian | Bristly Sarsaparilla Canadian Rush | Aralia hispida Juncus Canadensis | Plants Plants | Sept 10-12, 2012 Sept 10-12, 2012 | 528355 528411 | 5189595 5190030 | n n | Tim Martens Tim Martens | |
| Shoreline Riparian | Chestnut-sided Warbler | Dendroica pensylvanica | Birds | May 29, 2012 | 527963 | 5186709 | n n | Chris Blomme | 1 individual |
| Shoreline Riparian Shoreline Riparian | Chokeberry Common Blackberry | Aronia melanocarpa Rubus alllegheniensis | Plants Plants | Sept 10-12, 2012 Sept 10-12, 2012 | 527225 528411 | 5188791 5190030 | n n | Tim Martens Tim Martens | 5 |
| Shoreline Riparian Shoreline Riparian | Common Hair Cap Moss Cotton Grass spp. | Polytrichum commune Eriophorum spp. | Plants Plants | Sept 10-12, 2012 Sept 10-12, 2012 | 528411 528411 | 5190030 5190030 | n y y y | Tim Marten: Tim Marten: | |
| Shoreline Riparian | Creeping Snowberry | Gaultheria hispidula | Plants | Sept 10-12, 2012 | 527330 | 5188185 | n n | Tim Marten | 3 |
| Shoreline Riparian Shoreline Riparian | Dwarf Raspberry Eastern White Cedar | Rubus pubescens Thuja occidentalis | Plants Plants | Sept 10-12, 2012 Sept 10-12, 2012 | 527739 528411 | 5189348 5190030 | n y | Tim Martens Tim Martens | 5 |
| Shoreline Riparian Shoreline Riparian | False Pixie Cup | Cladonia chorophaea | Lichens Plants | Sept 10-12, 2012 Sept 10-12, 2012 | 528355 528411 | 5189595 5190030 | n n | Tim Martens Tim Martens | |
| Shoreline Riparian | Flat-topped Goldenrod Fringed Sedge | Euthamia graminifolia Carex crinita | Plants | Sept 10-12, 2012 | 528411 | 5190030 | n y | Tim Marten | 5 |
| Shoreline Riparian Shoreline Riparian | Grey Wolf Hay-scented Fern | Canis lupus Dennstaedtia punctilobula | Mammals Plants | May 29, 2012 Sept 10-12, 2012 | 526705 528411 | 5188339 5190030 | n n | Chris Blomme Tim Martens | tracks in fresh mud |
| Shoreline Riparian | Indian Cucumber Root | Mediola virginiana | Plants | Sept 10-12, 2012 | 528411 | 5190030 | n y | Tim Marten | 3 |
| Shoreline Riparian Shoreline Riparian | Labrador Tea Lance-leaved Violet | Ledum groenlandicum Viola lanceolata | Plants Plants | Sept 10-12, 2012 Sept 10-12, 2012 | 527621 527866 | 5187847 5189083 | n n | Tim Martens Tim Martens | 5 |
| Shoreline Riparian Shoreline Riparian | Leatherleaf Magnolia Warbler | Chamaedaphne calyculata Setophaga magnolia | Plants Birds | Sept 10-12, 2012 May 29, 2012 | 528411 527963 | 5190030 5186709 | n n | Tim Martens | 8 individuals |
| Shoreline Riparian | Marsh St. Johns Wort | Hypericum virginicum | Plants | Sept 10-12, 2012 | 528411 | 5190030 | y n | Tim Martens | 3 |
| Shoreline Riparian Shoreline Riparian | Meadowsweet Moose | Spiraea alba Alces alces | Plants Mammals | Sept 10-12, 2012 May 29, 2012 | 528411 526705 | 5190030 5188339 | n n | Tim Martens Chris Blomme | tracks in fresh mud |
| Shoreline Riparian | Mountain Holly | Nemopanthus mucronatus | Plants | Sept 10-12, 2012 | 528411 | 5190030 | у у | Tim Marten | 3 |
| | Mountain Maple Narrow-leaved Meadowsweet | Acer spicatum Spiraea alba | Plants Plants | Sept 10-12, 2012 Sept 10-12, 2012 | 527739 528411 | 5189348 5190030 | n n | Tim Martens Tim Martens | |
| Shoreline Riparian Shoreline Riparian | Nashville Warbler Northern Bugleweed | Oreothlypis ruficapilla Lycopus uniflorus | Birds Plants | May 29, 2012 Sept 10-12, 2012 | 526918 528411 | 5188247 5190030 | n n | Chris Blomme Tim Martens | 8 individuals |
| Shoreline Riparian | Northern White Violet | Viola mackloskeyi | Plants | Sept 10-12, 2012 | 527607 | 5189380 | n y | Tim Marten | 5 |
| Shoreline Riparian Shoreline Riparian | Northern Wild Raisin Pipewort | Viburnum cassinoides Eriocaulon aquaticum | Plants Plants | Sept 10-12, 2012 Sept 10-12, 2012 | 528411 528411 | 5190030 5190030 | n y n y | Tim Martens | 5 |
| Shoreline Riparian | Red-winged Blackbird | Agelaius phoeniceus | Birds | May 29, 2012 | 526706 | 5188154 | n n | Chris Blomme | m m |
| Shoreline Riparian Shoreline Riparian | Round-leaved Sundew Royal Fern | Drosera rotundifolia Osmunda regalis | Plants Plants | Sept 10-12, 2012 Sept 10-12, 2012 | 527655 528411 | 5189587 5190030 | n n | Tim Martens Tim Martens | 5 |
| Shoreline Riparian | Sheep Laurel | Kalmia angustifilia | Plants | Sept 10-12, 2012 | 528411 527621 | 5190030 | n n | Tim Martens | 3 |
| Shoreline Riparian Shoreline Riparian | Soft-stem Bulrush Song Sparrow | Scirpus validus Melospiza melodia | Plants Birds | Sept 10-12, 2012 May 29, 2012 | 527963 | 5187847 5186709 | n y | | 4 individuals |
| Shoreline Riparian Shoreline Riparian | Song Sparrow Southern Beech Fern | Melospiza melodia Phegopteris hexagonoptera | Birds Plants | July 4 2012 Sept 10-12, 2012 | S 528193 528411 | 5189259 5190030 | n n | Ramsey Hart Tim Martens | t |
| Shoreline Riparian | Spatulate-leaved Sundew | Drosera intermedia | Plants | Sept 10-12, 2012 | 528169 | 5188873 | n y | Tim Marten | 5 |
| Shoreline Riparian Shoreline Riparian | Speckled Alder Spotted Sandpiper | Alnus incana ssp. Rugosa Actitis macularius | Plants Birds | Sept 10-12, 2012 July 4 2012 | 528411 H 528375 | 5190030 5189897 | n n | Tim Martens Ramsey Hart | t . |
| Shoreline Riparian | St. John's Wort spp. | Hypericum sp. | Plants | Sept 10-12, 2012 | 528411 | 5190030 | у у | Tim Marten | 5 |
| Shoreline Riparian Shoreline Riparian | Steeple Bush Swamp Candles | Spiraea tomentosa Lysimachia terrestris | Plants Plants | Sept 10-12, 2012 Sept 10-12, 2012 | 528411 528169 | 5190030 5188873 | n n | Tim Martens Tim Martens | 5 |
| Shoreline Riparian Shoreline Riparian | Swamp Sparrow Sweet Gale | Melospiza georgiana Myrica Gale | Birds Plants | July 4 2012 Sept 10-12, 2012 | S 528233 528411 | 5188792 5190030 | n n | Ramsey Hart Tim Marten | |
| Shoreline Riparian | Three-fruited Sedge | Carex trisperma | Plants | Sept 10-12, 2012 | 528411 | 5190030 | у у | Tim Marten | 5 |
| Shoreline Riparian Shoreline Riparian | Three-way Sedge Warnstorf's Peat Moss | Dulichium arundinaceum Sphagnum warnstorfii | Plants Plants | Sept 10-12, 2012 Sept 10-12, 2012 | 528411 528411 | 5190030 5190030 | n n | Tim Martens Tim Martens | |
| Shoreline Riparian | Winterberry Holly | llex verticillata | Plants | Sept 10-12, 2012 | 527621 | 5187847 | n n | Tim Marten | 5 |
| Shoreline Riparian Shoreline Riparian | Wool Grass Yellow Birch | Scirpus cyperinus Betula alleganiensis | Plants Plants | Sept 10-12, 2012 Sept 10-12, 2012 | 528411 527739 | 5190030 5189348 | n y | Tim Martens | 5 |
| | Midland Painted Turtle | Chrysemys picta marginata | Herps | July 1-3, 2012 | 526610 | 5188226 | n n | James Paterson | |
| | | | | | | | | | location approximate; heard bugling from lower elevation to eastwhile on |
| Unknown Upland Conifer | Sandhill Crane American Robin | Grus canadensis Turdus migratorius | Birds Birds | July 5, 2012 May 29, 2012 | X 529047 527954 | 5188653 5188561 | n n | Ramsey Hart Chris Blomme | |
| Upland Conifer Upland Conifer | Balsam Fir | Abies balsamea | Plants | Sept 10-12, 2012 | 527655 | 5188561 | n n | Tim Martens | |
| | Black Spruce Black-and-white Warbler | Picea mariana Mniotilta varia | Plants Birds | Sept 10-12, 2012 May 29, 2012 | 528355 527963 | 5189595 5186709 | n n | Tim Martens | 4 individuals |
| Upland Conifer | Black-and-white Warbler | Mniotilta varia | Birds | July 4, 2012 | S 528233 | 5188792 | n n | Ramsey Hart | t |
| | Blackburnian Warbler Black-capped Chickadee | Setophaga fusca Poecile atricapillus | Birds Birds | May 29, 2012 July 4, 2012 | 527128 S 528233 | 5188526 5188792 | n n | Chris Blomme Ramsey Hari | 5 individuals |
| Upland Conifer | Black-throated Blue warbler | Setophaga caerulescens Setophaga virens | Birds Birds | May 29, 2012 May 29, 2012 | 527963 527963 | 5186709 | n n | Chris Blomme Chris Blomme | |
| Upland Conifer | | | | | | 5186709 | n n | Chris Biomine | |
| Upland Conifer | Black-throated Green Warbler Black-throated Green Warbler | Setophaga virens | Birds | July 4, 2012 | S 528233 | 5188792 | n n | Ramsey Hart | |
| Upland Conifer Upland Conifer | Black-throated Green Warbler Blue-bead Lily | Setophaga virens Clintonia borealis | Birds Plants | July 4, 2012 Sept 10-12, 2012 | 527330 | 5188185 | n n | Tim Marten | 5 |
| Upland Conifer Upland Conifer Upland Conifer Upland Conifer Upland Conifer | Black-throated Green Warbler Blue-bead Lily Blue-headed Vireo Blue-headed Vireo | Setophaga virens Clintonia borealis Vireo solitarius Vireo solitarius | Birds Plants Birds Birds | July 4, 2012 Sept 10-12, 2012 May 29, 2012 July 4, 2012 | 527330 527128 FY 528233 | 5188185 5188526 5188792 | n n n n n n n n | Tim Martens Chris Blomme Ramsey Hart | t s 4 individuals |
| Upland Conifer Upland Conifer Upland Conifer Upland Conifer Upland Conifer Upland Conifer | Black-throated Green Warbler Blue-bead Lily Blue-headed Vireo Blue-headed Vireo Bracken Fern | Setophaga virens Clintonia borealis Vireo solitarius Vireo solitarius Pteridium aquilinum | Birds Plants Birds Birds Plants | July 4, 2012 Sept 10-12, 2012 May 29, 2012 July 4, 2012 Sept 10-12, 2012 | 527330 527128 FY 528233 527330 | 5188185 5188526 5188792 5188185 | n n n n n n n n n n n n n | Tim Martens Chris Blomme Ramsey Hari Tim Martens | t s 4 individuals |
| Upland Conifer | Black-throated Green Warbler Blue-bead Lily Blue-headed Vireo Blue-headed Vireo Bracken Fern British Soldiers Bunchberry | Setophaga virens Clintonia borealis Vireo solitarius Vireo solitarius Pteridium aquilinum Cladonia cristatella Cornis Canadensis | Birds Plants Birds Birds Plants Plants Lichens Plants | July 4, 2012 Sept 10-12, 2012 May 29, 2012 July 4, 2012 Sept 10-12, 2012 Sept 10-12, 2012 Sept 10-12, 2012 | 527330 527128 FY 528233 527330 528355 527330 | 5188185 5188526 5188792 5188185 5189595 5188185 | n n n n n n n n n n n n n n n n n n n | Tim Marten Chris Blomme Ramsey Hari Tim Marten Tim Marten Tim Marten | t s 4 individuals |
| Upland Conifer | Black-throated Green Warbler Blue-bead Lily Blue-headed Vireo Blue-headed Vireo Bracken Fern British Soldiers | Setophaga virens Clintonia borealis Vireo solitarius Vireo solitarius Pteridium aquilinum Cladonia cristatella | Birds Plants Birds Birds Plants Plants Lichens | July 4, 2012 Sept 10-12, 2012 May 29, 2012 July 4, 2012 Sept 10-12, 2012 Sept 10-12, 2012 | 527330 527128 FY 528233 527330 528355 | 5188185 5188526 5188792 5188185 5189595 | n n n n n n n n n n n n n n n n | Tim Marten Chris Blomme Ramsey Hari Tim Marten: Tim Marten: | t s 4 individuals |
| Upland Conifer | Black-throated Green Warbler Blue-bead Lily Blue-headed Vireo Blue-headed Vireo Bracken Fern British Soldiers Bunchberry Bush honeysuckle | Setophaga virens Clintonia borealis Vireo solitarius Vireo solitarius Pterialium aquilinum Cladonia cristatella Cornis Canadensis Diervilla lonicera | Birds Plants Birds Birds Plants Lichens Plants Plants Plants | July 4, 2012 Sept 10-12, 2012 May 29, 2012 July 4, 2012 Sept 10-12, 2012 Sept 10-12, 2012 Sept 10-12, 2012 Sept 10-12, 2012 | 527330 527128 FY 528233 527330 528355 527330 527330 | 5188185 5188526 5188792 5188185 5189595 5188185 5188185 | n n n n n n n n n n n n n n n n n n n | Tim Marten Chris Blomme Ramsey Harri Tim Marten Tim Marten Tim Marten Tim Marten | 4 individuals |
| Upland Conifer | Black-throated Green Warbler Blue-head Lily Blue-head Vireo Blue-headed Vireo Blue-headed Vireo Bracken Fern British Soldiers Bunchberry Bush honeysuckle Canada Mayflower | Setophaga virens Clintonia barealis Vireo solitarius Pteridium aquilinum Cladonia cristatella Comis Canadensis Diervilla lonicera Maianthemum canadense Cardellina canadensis | Birds Plants Birds Birds Plants Lichens Plants Plants Plants Plants Plants Plants | July 4, 2012 Sept 10-12, 2012 May 29, 2012 July 4, 2012 Sept 10-12, 2012 Sept 10-12, 2012 Sept 10-12, 2012 Sept 10-12, 2012 Sept 10-12, 2012 Sept 10-12, 2012 July 4, 2012 | 527330 527128 FY 528233 527330 528355 527330 527330 | 5188185 5188526 5188792 5188185 5189595 5188185 5188185 5188185 | n n n n n n n n n n n n n n n n n n n | Tim Marten: Chris Blomme Ramsey Har Tim Marten: Tim Marten: Tim Marten: Tim Marten: Tim Marten: Tim Marten: | 4 individuals female feeding young in dense scrubby spruce at edge of small pond |
| Upland Conifer | Black-throated Green Warbler Blue-head Lily Blue-headed Vireo Blue-headed Vireo Blue-headed Vireo Bracken Fern British Soldiers Bunchberry Bush honeysuckle Canada Mayflower | Setophaga virens (Iintonia borealis Vireo solitarius Vireo solitarius Pretridium aquilinum Cladonia cristatelia Cornis Canadensis Diervilla lonicera Maianthemum canadense | Birds Plants Birds Birds Plants Plants Lichens Plants Plants Plants Plants | July 4, 2012 Sept 10-12, 2012 May 29, 2012 July 4, 2012 Sept 10-12, 2012 Sept 10-12, 2012 Sept 10-12, 2012 Sept 10-12, 2012 Sept 10-12, 2012 Sept 10-12, 2012 | 527330 527128 FY 528233 527330 528355 527330 527330 527330 | 5188185 5188526 5188792 5188185 5189595 5188185 5188185 5188185 | n n n n n n n n n n n n n n n n n n n | Tim Marten: Chris Blomme Ramsey Har Tim Marten: Tim Marten: Tim Marten: Tim Marten: Tim Marten: Tim Marten: | 4 individuals female feeding young in dense service spruce at edge of small pond 1 individual 1 individual 1 individual 2 individuals |
| Upland Conifer | Black-throated Green Warbler Blue-head Uireo Blue-head Vireo Blue-headed Vireo Bracken Fern British Soldiers Bunchberry Bush honeysuckle Canada Mayflower Canada Warbler Chipping Sparrow Common Nighthawk | Setophaga virens Cilintonia borealis Vireo solitarius Vireo solitarius Prezidium aquilinum Cladonia cristatella Cornis Canadensis Diervilla lonicera Malanthemum canadense Cardellina canadensis Spizella posserina Chordelles minor | Birds Plants Birds Birds Birds Plants Lichens Plants Plants Plants Plants Plants Plants Birds Birds Birds | July 4, 2012 Sept 10-12, 2012 May 29, 2012 July 4, 2012 Sept 10-12, 2012 Sept 10-12, 2012 Sept 10-12, 2012 Sept 10-12, 2012 Sept 10-12, 2012 Sept 10-12, 2012 July 4, 2012 May 29, 2012 July 4, 2012 | \$27330 \$27128 FY \$28233 \$27330 \$27330 \$27330 \$27330 \$7300 \$7330 \$7300 \$7300 \$7300 \$7300 \$7300 \$7300 \$7300 \$7300 \$7300 \$7300 \$7300 \$7300 \$7300 \$7300 \$7300 \$7300 \$7300 \$7300 \$7300 | 5188185 5188526 5188792 5188185 5189595 5188185 5188185 5188185 5188709 | n n n n n n n n n n n n n n n n n n n | Tim Marten: Chris Blomme Ramsey Har Tim Marten: Ramsey Har | 4 individuals female feeding young in dense scrubby spruce at edge of small pond 1 individual flying and calling overhead south of Wolf Lake |
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| Swainson's Thrush | Catharus ustulatus | Birds | July 4, 2012 | T | 528233 | 5188792 | n | n | Ramsey Hart |
|--------------------------|--|--|--|---|---|--|--|--|--|
| Trailing Arbutus | Epigaea repens | Plants | Sept 10-12, 2012 | | 527330 | 5188185 | n | n | Tim Martens |
| Veery | Catharus fuscescens | Birds | May 29, 2012 | | 527954 | 5188561 | n | n | Chris Blomme 2 individuals |
| Velvet-leaved Bluedberry | Vaccinium myrtilloides | Plants | Sept 10-12, 2012 | | 527330 | 5188185 | n | n | Tim Martens |
| White Birch | Betula papyrifera | Plants | Sept 10-12, 2012 | | 527330 | 5188185 | n | n | Tim Martens |
| White Pine | Pinus strobus | Plants | Sept 10-12, 2012 | | 528411 | 5190030 | n | n | Tim Martens |
| White Spruce | Picea glauca | Plants | Sept 10-12, 2012 | | 527330 | 5188185 | n | n | Tim Martens |
| White-throated Sparrow | Zonotrichia albicollis | Birds | May 29, 2012 | | 527963 | 5186709 | n | n | Chris Blomme 3 individuals |
| White-throated Sparrow | Zonotrichia albicollis | Birds | July 4, 2012 | S | 528233 | 5188792 | n | n | Ramsey Hart |
| Wild Sarsaparilla | Aralia nudicaulis | Plants | Sept 10-12, 2012 | | 527739 | 5189348 | n | n | Tim Martens |
| Wilson's Warbler | Cardellina pusilla | Birds | July 4, 2012 | S | 528233 | 5188792 | n | n | Ramsey Hart |
| Winter Wren | Troglodytes hiemalis | Birds | July 4, 2012 | S | 528233 | 5188792 | n | n | Ramsey Hart |
| Wintergreen | Gaultheria procumbens | Plants | Sept 10-12, 2012 | | 528411 | 5190030 | n | n | Tim Martens |
| Wood Frog | Lithobates sylvaticus | Herps | July 1-3, 2012 | | 527611 | 5189395 | n | n | James Paterson |
| Yellow Warbler | Setophaga petechia | Birds | July 4, 2012 | S | 528233 | 5188792 | n | n | Ramsey Hart |
| Yellow-rumped Warbler | Dendroica coronata | Birds | May 29, 2012 | | 527149 | 5188557 | n | n | Chris Blomme 4 individuals |
| Yellow-rumped Warbler | Setophaga coronata | Birds | July 4, 2012 | S | 528233 | 5188792 | n | n | Ramsey Hart |
| Black-capped Chickadee | Poecile atricapillus | Birds | May 29, 2012 | | 526761 | 5190222 | n | n | Chris Blomme 4 individuals |
| Red-eyed Vireo | Vireo olivaceous | Birds | May 29, 2012 | | 527963 | 5186709 | n | n | Chris Blomme 6 individuals |
| | Trailing Arbutus Veery Veery Velvet-leaved Bluedberry White Birch White Birch White Spruce White Spruce White-throated Sparrow White-throated Sparrow Wild Sarsaparilla Wilson's Warbler Winter Wren Winter Wren Wintergreen Wood Frog Yellow Honged Warbler Yellow-rumped Warbler Yellow-rumped Warbler Yellow-rumped Warbler Yellow-rumped Warbler Yellow-rumped Warbler | Trailing Arbutus Epigaea repens Veery Catharus fuscescens Veery Vaccinium myrtilloides White Birch Betula papyrifera White Birch Pinus Strobus White Spruce Picea glauca White-throated Sparrow Zonotrichia albicollis White-throated Sparrow Zonotrichia albicollis White-throated Sparrow Zonotrichia albicollis White-throated Sparrow Zonotrichia albicollis Wild Sarsaparilla Aralia nudicaulis Cardellina pusilla Winter Wren Traglodytes hiemalis Winter Wren Traglodytes hiemalis Wood Frog Lithobates sylvaticus Yellow Warbler Setophaga petechia Yellow-rumped Warbler Dendroica coronata Yellow-rumped Warbler Setophaga coronata Black-capped Chickadee | Trailing Arbutus Epigace repens Plants Veery Catharus fuscescens Birds Very Catharus fuscescens Birds Veryet-leaved Bluedberry Vaccinium myritiloides Plants White Birch Betulo papyrifera Plants White Birch Pinus strobus Plants White Pine Pinus strobus Plants White Spruce Picca glauca Plants White-throated Sparrow Zonotrichia albicollis Birds White-throated Sparrow Zonotrichia albicollis Birds Willed Saraparilla Aralia nualicaulis Plants Wilson's Warbler Cardellina pusilia Birds Winter Wren Troglodytes hiemalis Birds Wintergreen Gaultheria procumbens Plants Wood Frog Lithbohters sylvaticus Herps Vellow Warbler Setophaga petechia Birds Vellow-rumped Warbler Setophaga petechia Birds Vellow-rumped Warbler Setophaga coronata Birds Vellow-rumped Warbler Setophaga coronata Birds Vellow-rumped Warbler Setophaga coronata Birds Verlow-rumped Varbler Setophaga periodius Birds Verlow-rumped Warbler Setophaga coronata Birds Verlow-rumped Varbler Setophaga periodius Birds Verlow-rumped Varbler Setophaga coronata Setophaga Coronata Setophaga Coronata Setophaga Coronata Setophaga Coronata Setophaga C | Trailing Arbutus Epigoea repens Plants Sept 10-12, 2012 | Trailing Arbutus Epigoea repens Plants Sept 10-12, 2012 | Trailing Arbutus Epigoee repens Plants Sept 10-12, 2012 527330 | Trailing Arbutus Epigaea repens Plants Sept 10-12, 2012 527330 5188185 | Trailing Arbutus Epigoeo repens Plants Sept 10-12, 2012 \$27330 \$188185 n | Trailing Arbutus Epigoee repens Plants Sept 10-12, 2012 \$27330 \$188185 n n n |

NOTES:

1. m = male, f = female

2. FY = Recently fledged young (nidicolous species) or downy young (nidifugous species), including incapable of sustained flight, H = Species observed in its breeding season in suitable nesting habitat, S = Singing male(s) present, or breeding calls heard, in suitable nesting habitat in breeding season, T = Permanent territory presumed through registration of territorial behaviour (song, etc.) on at least two days, a week or more appart, at the same place, X = Species observed in its breeding

