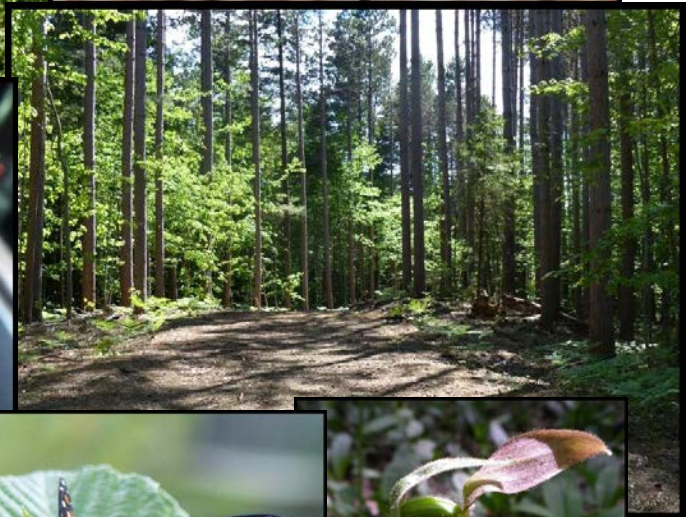


Larose Forest BioBlitz Report: 2016





Ottawa Field-Naturalists' Club
Club des naturalistes d'Ottawa

www.ofnc.ca/

www.prescott-russell.on.ca/en/

The United Counties of Prescott and Russell (Comtés unis de Prescott et Russell) comprises eight municipalities, with its county seat in L'Original. The United Counties was formed in 1820 after Russell County and Prescott County merged. It owns and maintains the Larose Forest, including the many kms of recreational trails. In collaboration with South Nation Conservation, it regulates logging within the forest..

The Ottawa Field-Naturalists' Club was founded in 1879. The club promotes appreciation, preservation and conservation of Canada's natural heritage. The OFNC produces two quarterly publications: the peer-reviewed journal, *The Canadian Field-Naturalist*, reporting research in Canadian natural history, and *Trail & Landscape*, providing articles on natural history of the Ottawa Valley.

Written and prepared by Christine Hanrahan.

Thank you to the United Counties of Prescott-Russell for supporting this report

Photographs provided by : Ken Allison, Jacques Bouvier, Fenja Brodo, Christine Hanrahan, Joyce Reddoch and Michael Schwartz

THE LAROSE FOREST BIOBLITZ - 2016

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LAROSE FOREST BIOBLITZ - 2016

SUMMARY

A decade had elapsed since the inaugural Larose Forest BioBlitz on June 15/16, 2006, and it seemed a fitting time to hold another such event and mark the decade which has seen four BioBlitzes (including the current one) held in the forest. Each BioBlitz focused on a different section of the forest, and at roughly 7200 hectares, it will be some time yet before the forest receives complete coverage. Previous Bioblitzes, in addition to the first one in 2006, were held in 2007 and in 2010.

The 2016 BioBlitz was organized by the United Counties of Prescott-Russell (UCPR) and The Ottawa Field-Naturalists' Club (OFNC). Once again we were extremely fortunate in having the participation of an excellent group of experts in various disciplines. Many new species were found for our ongoing inventory of the forest and attests to the richness of this particular area. Although some major groups were not covered this time around (aquatic invertebrates and fungi in particular), a significant amount of data was collected.

Results from the 2016 BioBlitz

No. of species on BioBlitz: 782

Bird species: 80

Insect species: 306

Arachnid species: 12

Mammal species: 10

Fish species: 2

Mollusc species: 6

Reptile and Amphibian species: 11

Vascular Plant species: 252

Moss and Liverwort species: 60

Lichen species: 41

Algae species: 2

LAROSE FOREST BIOBLITZ - 2016



Wetland between Concessions 10 and 9 C. Hanrahan

INTRODUCTION

The fourth Larose Forest BioBlitz was held on June 3, 2016. Twenty-seven (27) people participated. Most participants were familiar with the forest from previous BioBlitz events or from other activities in the forest, but for those unfamiliar with the area, the event provided a good introduction to the forest. Those who took part enjoyed exploring the BioBlitz area in more depth, and commented on how rich in biodiversity the site was, particularly for insects. A small bog was discovered and generated much interest. A separate report on that site is included below.

LAROSE FOREST: History

The landscape of eastern Ontario is largely that of flat agricultural land, mostly corn and soybeans, interspersed with pastures. Small towns and villages dot this area. Tree cover is very scattered, particularly as more woodlots are felled to make way for cornfields. Therefore, the immense Larose Forest located near the towns of Cheney, Bourget and Limoges, with its roughly 7200 hectares, is extremely significant being the largest intact forested site in Eastern Ontario. Many unpaved forest roads, tracks and trails bisect the forest providing opportunity to access the site for nature study and recreational activities

The Larose Forest was acquired by the UCPR in 1928 and is still owned by the United Counties. Until 2000, the forest was managed by the Ontario Ministry of Natural Resources (OMNR). At present, South Nation Conservation (SNC) is responsible for managing forestry operations in conjunction with the UCPR. Larose Forest is, and has always been, a working forest, with logging an important aspect of the economy. It was not until the late 1970's that OMNR began to take a more holistic approach to forest management, in keeping with the growing public interest in habitat protection and species preservation. A 1979 booklet written by Scott Reid and published by OMNR, noted amongst many objectives, that of "*provision of proper environmental conditions for wildlife*". Today's forest managers are cognizant of the importance of managing for both logging and wildlife, and they care for the forest with a thorough understanding of environmental concerns.

The Prescott-Russell sand plains underlie much of the Larose Forest and the area is drained by both the Ottawa and the South Nation Rivers and their tributaries. Elevation is roughly 61–84 m above sea level and the terrain is generally flat with only a few small ravines or gullies (OMNR, 1979). When the vast Champlain Sea receded about 9,000 years ago, it left widespread deposits of Leda clay in its wake, along with scattered islands of sand, remnants of the broad river deltas formed when sediment-bearing outwash of the glacial meltwaters swept into this inland sea.

We still see great swathes of sand in the forest, which reinforces the notion that relative to the age of the planet, the Champlain Sea was a very recent phenomenon. The mistake made by early European settlers of the area, was to overestimate the fertility of the soil and underestimate the impact that land clearing would have. It wasn't long after the last trees were cut down, that problems with erosion began. Without the stabilizing effect of trees to hold down the sand, the land began to take on the aspect of a desert with wind swept dunes and little vegetation. No wonder it became known as the Bourget Desert. As dreams of making a living from the land met hard reality, farms were abandoned. It was not until the early 1920's that a local Agricultural Representative for the Counties, Ferdinand Larose, decided to sow a new

crop: trees. The forest we see today is the result of his vision and the work of countless tree-planters over the decades.

Although seedlings of both pine and spruce are being produced naturally, tree planting still occurs at various locations throughout the forest to ensure good regeneration.

With time the forest is changing. Native hardwoods such as maples, beech and oak are now flourishing, and the pine and spruce plantations are gradually being replaced by a natural forest ecosystem. Wetlands form a significant part of the forest, perhaps as much as 30%, and a number of ravines cut through different parts of the forest, many with small streams in them. Along with this change in forest cover, comes a significant increase in all types of wildlife.

LAROSE FOREST BIOBLITZ

A BioBlitz is an intensive and rapid survey of the biological diversity of a select area over a defined period of time, usually 24 hours, but this year the event in Larose Forest took place over one day. It brings together both professionals and knowledgeable amateurs who amongst them have a wide range of expertise in a variety of fields. Participants count as many species from as many taxonomic groups as possible during this time. By counting every species found in a defined period and place, we get a 'snapshot' of the biological richness of a site. From this, we can determine potential future areas of study in the forest.

Thanks to these BioBlitz events, we continue adding many more species to our ongoing Larose Forest Species Inventories (available on the OFNC website www.ofnc.ca/conservation/larose/index.php)

The fourth Larose Forest BioBlitz took place from 6:00 a.m. to 10:00 p.m. on Friday, June 3, 2016. Twenty-seven scientists and naturalists participated for varying lengths of time, anywhere from a few hours to almost the entire day.

Results of their work are shown in the attached tables, and discussed in more detail below. The event was organized by the United Counties of Prescott-Russell (UCPR) and The Ottawa Field-Naturalists' Club, represented by Manon Besner (UCPR) and Christine Hanrahan (OFNC), with much appreciated logistical help from Nic Gauthier (UCPR), Steven Hunter (UCPR) and Louis Prévost (UCPR).

Weather thus far had been very dry and hot, and continued so on the day of the BioBlitz. The

dry heat and sun were perfect conditions for flying insects such as butterflies and dragonflies, and the warm night contributed to an exceptional list of moth species. However, these same weather conditions meant that many wetlands and vernal pools were dry which has an adverse impact on other species.

This year, the meeting place was at the Henri Latreille picnic shelter on Concession 11 (Indian Creek Road), only one concession road over from the BioBlitz site and therefore, perfectly located for quick and easy access for participants.

In previous years we had provided microscopes for participants to use, but these went largely unused, and so in part because of this and in part because the meeting place was outside (with the problems of dust and debris getting into the microscopes), we decided to dispense with the optical equipment. We did provide data sheets and two excellent maps courtesy of UCPR.

Field guides for most taxonomic groups were available for reference purposes .

Large signs advising motorists of the event and asking them to slow down, were placed at all appropriate intersections.

Water, juice, fruit and cookies were available throughout both days. A catered lunch of sandwiches, salads, desserts and fruit juice was provided at noon. All participants were given a complimentary container of maple syrup produced from sugar maple trees tapped in Larose Forest.

Volunteers manned the picnic shelter, providing information, advice, offering refreshments, helping with queries, making sure people signed in and out, and in general ensuring that the operation ran very smoothly. They were particularly important in making our day run very well.



Lunch at the picnic shelter

C. Hanrahan

FLORA AND FAUNA - BIOBLITZ RESULTS

Seven hundred and eighty-two (782) species from 11 taxonomic groups were found on the BioBlitz. This is the highest number of species found on any of the four BioBlitzes to date.

With the exception of a few bird records which were counted from a wider section of the forest, all data were collected from within the BioBlitz site.

Some taxonomic groups were not covered this time around, or covered only casually in the course of looking for other species, as no experts for those groups were available on the day of the BioBlitz. Other major groups were covered very well.

Data were collected for Mammals, Bryophytes (mosses and liverworts), Lichens, Insects, Molluscs, Reptiles and Amphibians, Birds, and Vascular Plants. Records for fish, Arachnids and Algae were also contributed.

Fifteen species (15) species of federal/provincial and/or regional significance/concern were found as follows: one reptile species, three bird species, ten plant species, and one moss species, which is also ranked by the Natural Heritage Information Centre (NHIC) as S2, defined as “Very rare in Ontario; usually between 5 and 20 occurrences in the province or with many individuals in fewer occurrences; often susceptible to extirpation.”

The scientists and naturalists participated for anywhere from 3 hours to more than 12 hours over the one day dedicated to this event. Some remained in the forest well into the night-time searching for nocturnal insects, in particular, moths.

BIOBLITZ SITE

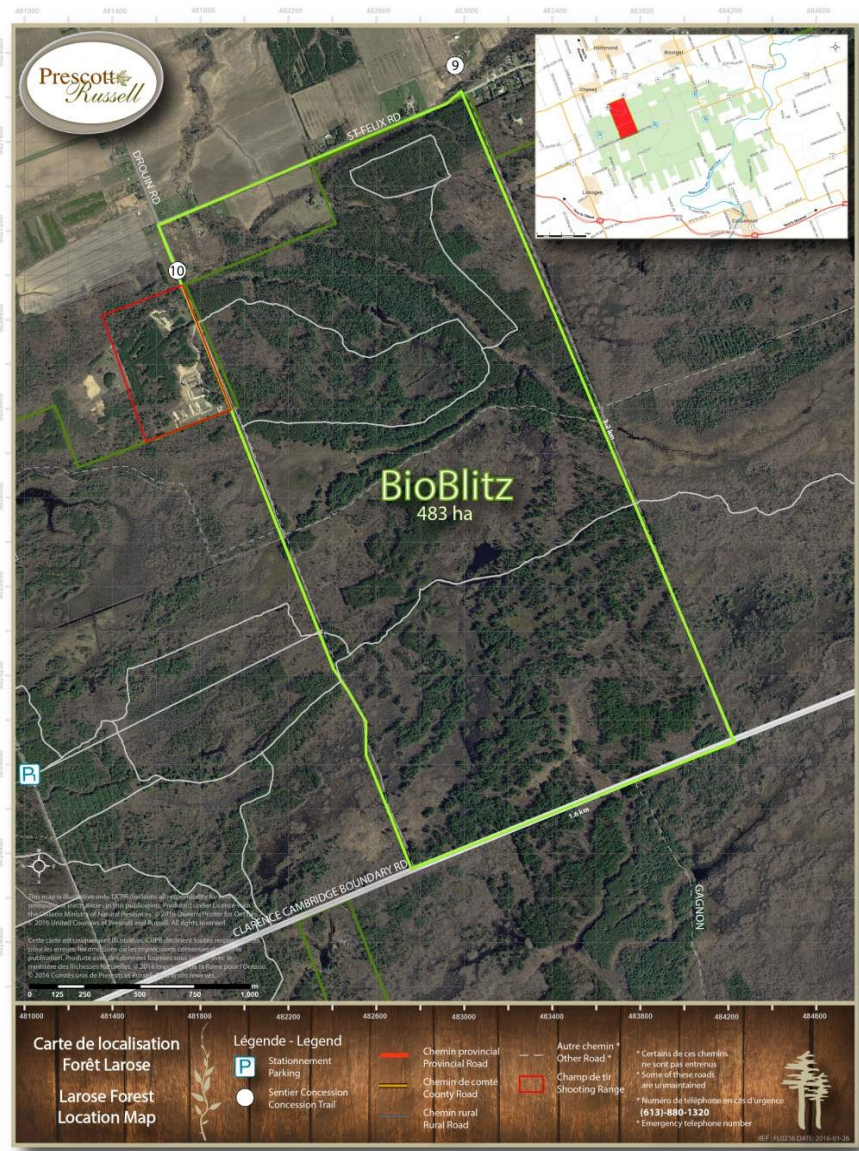
Identified as one of the most biodiverse sites in the forest, by Horizon Multiressource, Inc. In their 2008 report on the forest, the location of the 2016 BioBlitz certainly proved to be so and comments from participants, bore this out. It is bordered on the west by Concession 10 (Drouin Rd.), on the east by Concession 9 (Goyer Rd.), to the north by St. Felix Rd., and on the south by Clarence-Cambridge Rd. The approximate size of the BioBlitz site is 483 hectares.

Habitat overview

Plantations are dominated mostly by red pine (*Pinus resinosa*) but with significant stands of white pine (*Pinus strobus*) and white spruce (*Picea glauca*). Here and there are smaller numbers of jack pine (*Pinus banksiana*), scotch pine (*Pinus sylvestris*), norway spruce (*Picea abies*) and tamaracks (*Larix laricina* and *L. decidua*). In stands of pure pine, the native pink

lady-slipper (*Cypripedium acaule*) can be found, sometimes in good numbers. Ferns, wildflowers such as Pyrolas (*Pyrola* spp) and shrubs such as velvet-leaf blueberry (*Vaccinium myrtilloides*) form part of the groundcover.

As plantations are logged (thinned or occasionally clearcut), both mixed and deciduous forest components become increasingly frequent. In the BioBlitz site, as elsewhere in Larose, red maple (*Acer rubrum*) is an abundant species, particularly on damp sites. However, basswood (*Tilia americana*), sugar maple (*Acer saccharum*), cherries such as black cherry (*Prunus serotina*) and choke cherry (*P. virginiana*), increasing numbers of beech (*Fagus grandifolia*), american elm (*Ulmus americana*) and bur oak (*Quercus macrocarpa*) are also found.



Map of 2016 BioBlitz site

Groundcover consists of ferns, including wood ferns (*Dryopteris* spp), sarsaparilla (*Aralia nudicaulis*), canada mayflower (*Maianthemum canadense*), and a plethora of other species. Damper sites contain swamp dewberry (*Rubus hispidus*), royal fern (*Osmunda regalis*) and cinnamon fern (*Osmunda cinnamomea*). Various shrubs and small trees such as wild raisin (*Viburnum cassinoides*), the regionally significant mountain holly (*Nemopanthus mucronatus*) and several species of dogwoods (*Cornus* spp.) form part of the understory.

A long, and in places, steep-sided, treed ravine extends east-west near the northern boundary of the area. A narrow, shallow stream runs through it, mostly dry this year, but in some sections still with a small amount of water. Eastern hemlocks (*Tsuga canadensis*) and mountain maples (*Acer spicatum*) are common on the slopes here, as they are on all other ravines within the forest.



Wetland, Conc. 10 C. Hanrahan

A large wetland occurs in the northeast section of the BioBlitz site, off Concession 10, dominated by scrub willow (*Salix* spp.), meadowsweet (*Spiraea*) and cattails (*Typha*) in many sections. Wild rice (*Zizania palustris*) grows there later in the year. *Carex* and *Juncus* species are common. A smaller wetland is situated in the middle of the site, halfway between the two concession



Wetland C. Hanrahan

roads, accessed by a multi-use trail (horse riding, hiking). A few streams run through the area, and smaller wet sites occur alongside the roads. One such is located on the east side of Concession 9 (Goyer Rd) opposite a small bog, which is described much more fully below. Because of the dry spring, and lower than normal winter snow pack, most of the smaller and ephemeral wet areas were dry.

An important component of this site in terms of wildlife, as of the forest as a whole, are the roadsides where grasses and wildflowers (native and not) abound. These 'edge habitats' are really transition zones, formed where one plant community meets another, and are especially significant for a variety of wildlife species, including the many species of butterflies that call the forest home. The 2016 BioBlitz site has an abundance of such mini-habitats: the entire length of Concession roads 9 and 10, as well as Road 25, Clarence-Cambridge Road, and various of the trails.

Small bog on Concession 9 (Goyer Rd)

The discovery, by Ken Allison, of a small bog habitat on the west side of Concession 9, north of Road 25, is an interesting find. Several people explored this site in some detail. Two rare-in-the-



Shrub bog

J. Reddoch

region dragonfly species were found there by Ken. A number of plants and mosses specific to bog habitats were also recorded. Joyce Reddoch undertook a more detailed exploration of the bog over several visits, and Joyce provided the following report.

Larose Forest Bog Basin - Goyer Road North

A 4 ha wetland that lies across the northern stretch of Goyer Road in the Larose Forest (45°23'47" N, 75°12'45"W) consists of a 1.6 ha bog basin on the west side of the road and a 2.4 ha willow shrub carr on

the east side. The willow shrub carr is likely connected to adjacent wetlands farther east and south, while the bog basin appears to be separated from the rest of the wetland by Goyer Road. This may be the first bog habitat to be discovered in the Larose Forest.

The bog basin is surrounded on the north, west and south by a strip of red maple swamp interfacing with the surrounding mesic forest of mature pine/tamarack plantations. The basin consists of three related components: a shrub bog, a circular bog feature, and an area predominantly of willows. The ground cover of the shrub bog habitat is a continuous expanse of Sphagnum mosses. Leatherleaf is the dominant shrub, present as both mature shrubs and as abundant seedlings. Three-leaved solomon's seal is also common in the moss layer. Among taller, abundant shrubs are black chokeberry and highbush blueberry. Gray birch and red maple trees up to 5 m high are widely dispersed throughout the bog habitat. Most of the taller trees are partially dead. Throughout the shrub bog habitat, the moss was moist in June, and the water level in the adjacent road-side ditch indicates that the water level in the bog is not far below the moss surface. By August of this drought summer, the surface mosses in some areas had dried out, but moisture remained about 25 cm below the surface.

Within the central western edge of the bog basin is a circular bog feature 30 m across. Here, the ground cover is a continuous layer of Sphagnum mosses and leatherleaf; there are few other shrubs. Plants of a non-flowering, broad-leaved sedge (*Scirpus cf microcarpus*) dot the area. There are no other obvious plants except for a few small gray birches and red maples up to 4 m high. The basin lobe that is south and east of the circular feature merges into an area that is mainly willows. This area is probably also based on peat, and likely indicates the wettest part of the bog basin.

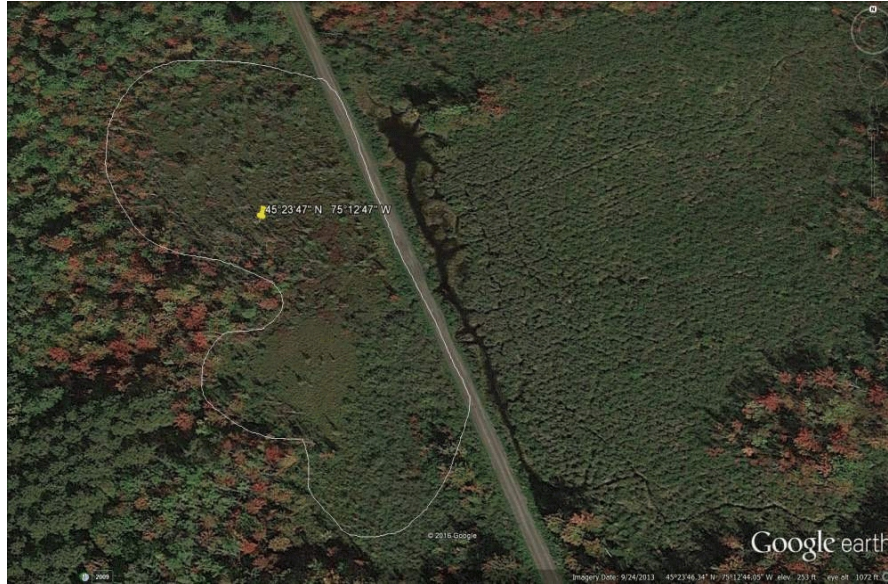


Circular bog feature

J. Reddoch

This bog basin is probably the surviving remnant of a peatland habitat that originally extended throughout the whole 4 ha wetland. Possibly Goyer Road protected the basin during the flooding of the eastern component sometime in the recent past. The circular bog feature is of particular interest. It may indicate a wetter area within the bog, possibly a kettle hole, which was more recently filled in than the shrub bog.

This bog basin merits further study to determine its age and origins, and its relationship to the willow shrub carr east of Goyer Road. It would be useful to get some peat boring done to determine



Goyer Rd. (Concession 9) bog habitat

the depth of the peat and its age in various parts of the basin. Any changes planned for Goyer Road should take into account possible impacts to the bog. There may well be other bog habitat fragments in as-yet-unexplored wetlands in this area. (See **Table 6a** for a list of plants and their relative abundance in the bog as recorded by Joyce and Allan).

FAUNA

Birds, insects, mammals, amphibians, all wildlife need a place to live, feed, breed, and find shelter. While many species are restricted to specific communities or habitats throughout their life cycle, others will utilize different habitats at different stages, moving from one to the other as necessary. Many amphibians, for example, require wetlands for breeding but move to upland areas later in their life cycle. Moose may utilize different areas for feeding in summer and winter. Birds may find shelter and food during migration in areas different from those they nest in. A mosaic of habitats encourages and promotes a healthy diversity of species. Larose Forest provides an exceptionally varied suite of habitats, as evidenced by the great variety of wildlife species present.



Lithobates pipiens C. Hanrahan

Amphibians and Reptiles (Table 1)

Ten (10) species of amphibians and reptiles were recorded during the BioBlitz, the same number as on the last such event in 2010. Vernal pools are especially important for various frogs and salamanders and this year's lack of rain and decreased snow cover (thus, reduced moisture) clearly had an impact on those species dependent on these ephemeral habitats.

Two turtle species were found, midland painted turtle (*Chrysemys picta*) (at least 5 individuals) and snapping turtle

(*Chelydra serpentina*) (two individuals). The latter has been designated a Species of Special Concern both provincially and federally. These ancient looking reptiles face various threats, key amongst them susceptibility to being killed on roads, (mostly females crossing roads looking for suitable places to lay eggs), and hunting. Females do not even begin to breed until they are at least 17 years old, thus it is easy to see that a reduction in breeding females will have, and is having, a long-term impact on breeding populations. Under the Ontario Fish and Wildlife Conservation Act, the midland painted turtle has been designated a Specially Protected Reptile, although no regulations really protect the species. Like all other turtles, they are highly susceptible to being killed when crossing roads. No real census of turtles has taken place in the forest and therefore, we have no statistics on their numbers. We do know that in addition to the above two species, blanding's turtle (*Emydoidea blandingii*) has also been found in Larose Forest.

Five (5) species of frogs and toads were noted, northern leopard frog (*Lithobates pipiens*) and green frog (*Lithobates clamitans*) being the most frequently recorded. Some spring peeper tadpoles (*Hyla crucifer*) were found in "drying wetland" as reported by Fred Schueler, who deepened the depression for them. No wood frogs were found during this BioBlitz, and only a couple of bullfrogs (*Lithobates catesbeianus*). Not surprisingly, gray treefrogs (*Hyla versicolor*) were heard more often than seen during the event.

Eastern garter snakes (*Thamnophis sirtalis sirtalis*) are habitat generalists meaning they can be found in many types of habitats from forests to open sites, wetlands and roads where they often bask in the sun, making them highly susceptible to road mortality. Only a few were recorded on the BioBlitz, and no other snake species was noted. In fact, the only other snake recorded for the forest is the little red-bellied snake (*Storeria occipitomaculata*). As a nocturnal species it is usually seen only with some effort (looking under logs for example), or luck.



Thamnophis sirtalis sirtalis
C. Hanrahan

Although five species of salamander have been recorded in the forest (a pretty impressive number and a testament to the ecological integrity of the forest if it can support that number of species) only two species were noted during the BioBlitz, and only one was actually seen, the eastern newt (red-spotted newt) (*Notophthalmus viridescens*). Egg masses of the blue-spotted salamander (*Ambystoma laterale*) were found in dried out vernal pools. Somewhat surprisingly, no eastern red-backed salamanders (*Plethodon cinereus*), possibly the most common salamander in the region were located on the BioBlitz. This species lays its eggs in very decayed, wet logs or stumps. The province has deemed this species a Specially Protected Amphibian under the Ontario Fish and Wildlife Conservation Act. Habitat loss is the major threat. Nonetheless, in Larose Forest, and within the BioBlitz site, good habitat still occurs and over the years, many red-backed salamanders have been found in the forest. No doubt if we'd had someone searching primarily for reptiles and amphibians, especially salamanders, we'd have recorded more species. It takes time and effort to search for these often elusive creatures



Dolichonyx oryzivorus
J. Bouvier

Birds (Table 2)

We recorded eighty (80) species of birds, one more than on the previous BioBlitz. Two new species were added to our bird list for Larose, killdeer (*Charadrius vociferus*) and bobolink (*Dolichonyx oryzivorus*), the latter a Species at Risk with the status of Threatened both provincially and federally.

Five individual whip-poor-wills (*Caprimulgus vociferus*) were noted. This is another Species at Risk, listed as threatened by the provincial and the federal governments. As with most aerial insectivores, these birds are declining across their range. During our first BioBlitz a decade ago (2006) 32 individuals were reported; since then, the numbers have gone down in each subsequent BioBlitz (20 in 2007, 8 in 2010, and 5 in 2016).

However, this species is most often found (usually heard only, but sometimes seen in car headlights) when conditions are just right, such as on clear, calm nights with a bright moon, especially in June. During the BioBlitz, while other conditions were good, the moon was a new moon. Under ideal conditions, more birds may have been heard. Nonetheless, it is encouraging that five birds were reported. Whip-poor-wills were surveyed both within and without the BioBlitz site, as was true for previous BioBlitzes. Some of the best sites seem to be on either side of Clarence-Cambridge Road, along much of its length, particularly between Concessions 7 and 10. Larose continues to provide reasonably good habitat for the species although as the open areas fill in and forest matures, habitat value for the species declines. They prefer open areas for foraging at night, close to woodlands, either deciduous, coniferous or mixed. Hence, edge habitats, or woodlands near fields, meadows, clearings, are best. Loss of habitat and a decline in insect populations are probably primary causes of their decline, although there is still uncertainty as to what else is contributing to this. In 2007, the National Audubon Society in the US, said the species had declined 57% over 40 years.

The third avian Species at Risk found on the BioBlitz, was the Canada Warbler (*Wilsonia canadensis*). Listed as threatened both federally and provincially, it breeds in damp to wet forests, on the ground or on stumps or logs. Fortunately, Larose has an abundance of such habitat, including within the BioBlitz site. At least 6 individuals were reported. That is a pretty significant number and needs to be taken into consideration when future work in this area is being planned.

Including Canada Warbler, sixteen (16) species of warblers were found this year, two less than in previous BioBlitzes, but an excellent number nonetheless.

Once again, no owls were found during the BioBlitz, but this does not indicate absence. Owls are generally found (mostly



Wilsonia canadensis J. Bouvier

heard) earlier in the year. Three (3) raptors were reported, sharp-shinned hawk (*Accipiter striatus*), broad-winged hawk (*Buteo platypterus*), and red-tailed hawk (*Buteo jamaicensis*). No goshawks were noted, although not surprising, for their numbers are never high in Larose. However, they do nest in the forest.

Insects (Table 3)

Three hundred and six (306) species of insects were recorded, a substantial and significant increase over any of our previous BioBlitzes. A number are new for the Larose Forest insect list, although far fewer new species were reported during this BioBlitz compared to the 2010 event, when 102 species new for the insect list were found.

Of interest is the ongoing work by Fenja Brodo on crane flies (in the families Limoniidae and Tipulidae) in the forest (Fenja has also done work on this group of insects in the forest at times other than on BioBlitzes). She has participated in all of our previous BioBlitzes, and each time has found species that she has not recorded previously in Larose, as well as species new to the region. In 2007, she commented that she has barely scratched the surface in terms of the diversity of crane flies to be found in the forest. 2016 proved to be the best year yet for finding crane flies. Following is a report by Fenja, on her experience finding crane flies in Larose Forest.

Crane flies in Larose Forest: June 3, 2016



***Tipula longiventris* F. Brodo**

This was the seventh time that I had done serious collecting in Larose Forest and 3 June 2016 proved to be the best collecting event of them all. The weather had a lot to do with this but also the fact that I spent about six hours hand netting as well as four hours going back and forth among seven different sheets with black lights. These sheets were spread out down a wooded path, about 100 m or more apart from each other. A total of 38 species of crane flies were tallied. (The previous high was 22 species collected 21 June 2014.) Of the 38 species, eight are new to Larose Forest and one of these, *Austrolimnophila unica*, is new to the Ottawa District. This brings up the count to 65 species of crane flies known from Larose Forest to date and 226 species from the Ottawa District, a 50 km radius centred on the Peace Tower.

I noted that all my collecting in Larose Forest occurred in the first two weeks of June and each time I added new species to the list. Clearly there are still more crane flies on the wing at that time, not to mention the many other species that fly either earlier or later in the year. Spending significant time hand netting as well as black lighting pays off. Of the 38 species

collected, 20 were only collected at the lights, 4 were only hand-netted and 14 were collected using both methods. Fifteen out of the 38 species were represented by a single individual

Fenja Brodo, moth expert Diane Lepage, and several other naturalists, set up seven black lights in the woods at the BioBlitz site. They were joined by members of The Ottawa Field-Naturalists' Club for a combined moth excursion/BioBlitz event. In addition to the crane flies noted by Fenja, above, other insects come to the black lights including



***Pyrausta orphisalis*
C. Hanrahan**

fishflies (*Chauliodes* sp.). The primary attraction though, is the moths, and this year was one of the best ever mothing events in the forest. One-hundred and thirty-eight (138) species of moths were recorded during the BioBlitz, and most of those (110 sp) were found at night using black lights. The rest were found during the day either as roosting adults or in their larval form.

Larose is noted for its extraordinary butterfly habitat, mostly provided by the roadside habitats where grasses and wildflowers flourish alongside wetlands and the forest edge . It even merits special attention in the recently published “Butterflies of Ontario”. Concession 10 has always been the place to go to find the increasingly uncommon mulberry wing skipper (*Poanes massasoit*) which, according to the Hall (2014) is uncommon and local across southern Ontario “north to the southern edge of the Canadian Shield.” It was a bit too early to find this species on the BioBlitz, however. Another uncommon skipper, the pepper-and-salt skipper (*Amblyscirtes hegon*) was found during the event, not a butterfly easy to find because of small numbers, and because, as Hall notes, “small populations of this species can appear for a year or two in some locations, then seem to disappear.” (IBID) They have been found sporadically in Larose, most noticeably during the 2007 BioBlitz when they were recorded from several locations.

Fewer butterflies species were recorded this year, perhaps due to the already very noticeable effects of heat and dry weather, with many nectar plants wilting. For example, only five species of skippers were reported compared to double that number on the 2007 BioBlitz and almost as many on the 2010 event. One new butterfly species was recorded, the giant swallowtail (*Papilio cresphontes*), reported by several participants in different parts of the forest. Unless its sole host plant in this region, prickly ash (*Zanthoxylum americanum*), is found, it won't be breeding in the forest. Canadian tiger swallowtails were present in good numbers and reported by most participants.

Two species of dragonfly new for the Larose Forest list, and also rare in the region, were recorded by Ken Allison, both in the small bog on concession 9. The harlequin darter (*Gomphaeschna furcillata*) is listed by Bracken and Lewis (2008) as very rare and local, although in recent years it seems to be appearing more frequently in more areas. The ocellated emerald (*Somatochlora minor*) is another rarity in the region, listed by Bracken and Lewis (IBID) as scarce and local.



Gomphaeschna furcillata K. Allison



Somatochlora minor K. Allison

The insect list for Larose Forest, though now longer thanks to the 2016 BioBlitz, is just the tip of the iceberg, a minute fraction of those inhabiting the forest. We would need experts in a wide variety of fields to do a thorough survey over a period of time, to get even close to an idea of the number of species and their relative abundance here. The BioBlitzes, however, aid immeasurably in helping us to understand the diversity and distribution of many species.

Arachnids (Table 4)

Arachnids (spiders, ticks and mites) were noted on a casual basis during surveys for other taxa. As with the 2010 BioBlitz, we were once again unable to find an Arachnid expert. Nonetheless, 12 species were noted, and one, *Tetragnatha staminea* was new for the Larose Forest Arachnida list.

Mammals (Table 5)

During this BioBlitz, ten (10) species of mammals were noted, many observations based on finding fresh scat or tracks. White-tailed deer (*Odocoileus virginianus*) and moose (*Alces alces*) were noted most often, but only by evidence of their presence, not sight records. With decreasing water levels in the wetlands, and with some almost dried up, one of the favourite summer foods of moose, aquatic vegetation, would be in short supply. Two new species were added to our overall list of mammal species, a masked shrew (*Sorex cinereus*) and a mink (*Mustela vison*). Given how large the forest is, and how secretive most mammals are, it is little wonder that their presence is mostly recorded by signs not actual sightings, except for insectivores like shrews and moles, which are often found dead on trails or roads.

The list of mammals found in the forest now stands at twenty-nine (29) species, including the two new additions. It is worth noting that the overall size of the forest with its mosaic of habitats, is important for sustaining a variety of animals, large and small, in healthy numbers. Further work on assessing the abundance of some of the key species would provide information important for management decisions.

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Vascular Plants (Table 6)

Two hundred and fifty-two species (252) of vascular plants were recorded during the BioBlitz, fewer than in the two previous events. Despite that, 12 new species were added to our existing list of plants, bringing the overall total for the forest to six-hundred and eighty-six (686) species.

Ten of the 252 species are considered Regionally Significant. These include such species as Northern ground cedar (*Diphasiastrum tristachyum*), Bog laurel (*Kalmia polifolia*), Balsam willow (*Salix pyrifolia*), Nodding sedge (*Carex gynandra*), and Water-shield (*Brasenia schreberi*).

Of the 252 species observed on June 3rd, forty-six (46) are non-native. These are mostly herbaceous plants, common roadside and



Brasenia schreberi C. Hanrahan

trailside vegetation such as ox-eye daisy (*Leucanthemum vulgare*), queen anne's lace (*Daucus carota*), white sweet clover (*Melilotus alba*) and various other wildflowers, as well as some tree species such as norway spruce (*Picea abies*), and invasive species such as pale swallowwort (*Cynanchum rossicum*).

When assessing the health of a forest ecosystem it is a truism that in addition to such things as standing dead trees (for insects and birds), a rich humusy soil with a good duff layer, logs and coarse woody debris, vegetation diversity is a key consideration. Schulz and Gray (2004), discuss the importance of this diversity as follows: "*The composition, diversity, and structure of vascular plants are important indicators of forest health. Plants are the source of primary production and the main determinant of habitat. Changes in vegetation can have cascading effects through an ecosystem. Changes in species diversity, structural diversity, and the abundance of non-native species are common national concerns, and are part of the international criteria for assessing sustainability of forestry practices.*"

Ongoing work in other areas of the forest will reveal more species to add to our ongoing inventory. Unfortunately, additional invasive plant species are quite likely to also be found as time goes by.

Invasive Plants



Cynanchum rossicum
C. Hanrahan

During this BioBlitz, both species of the invasive buckthorn (*Frangula alnus* and *Rhamnus cathartica*) were commonly noted, especially along roadsides and trails, from where they have infiltrated the woods to a disturbing extent. In fact, they are so common (particularly *R. cathartica*), that control not eradication is probably the only option now. Pale swallowwort, also known more commonly as dog-strangling vine (DSV) (*Cynanchum rossicum*) has rarely been found in the forest. Only one small population was found prior to 2016, that on Concession 8 in 2008. It was swiftly dealt with and has not been found again in that location. However, a fairly large population (several hundred plants) was found during the BioBlitz, on Concession 10 just north of Road 25. It too has been dealt with and will be monitored in subsequent years. Unfortunately, with

more vehicle traffic on the concession roads and others, such as Grant and Perron roads, DSV is likely to become more common than we would like, as the seeds are often transported on tires (amongst many other means).

Bryophytes (Table 7)

Mosses, liverworts and hornworts are collectively called Bryophytes. A remarkable 60 species were identified during the 2016 BioBlitz thanks to the work of Bryologist, Linda Ley. Of those, 21 species are new for our Bryophyte inventory of the forest, and one is ranked by the Natural Heritage Information Centre (NHIC) a provincial agency which gathers data on all species, as S2 (Very rare in Ontario; usually between 5 and 20 occurrences in the province or with many individuals in fewer occurrences; often susceptible to extirpation.).

Bryophytes are nonvascular land plants, often growing in tight clumps or mats on the ground, on rocks and on trees. Barbara Crandall-Stotler describes how they differ from vascular plants this way: “...in all bryophytes the ecologically persistent, photosynthetic phase of the life cycle is the haploid, gametophyte generation rather than the diploid sporophyte; bryophyte sporophytes are very short-lived, are attached to and nutritionally dependent on their gametophytes and consist of only an unbranched stalk, or seta, and a single, terminal sporangium. Second, bryophytes never form xylem tissue, the special lignin-containing, water-conducting tissue that is found in the sporophytes of all vascular plants.” In other words, mosses, liverworts and hornworts differ most significantly in their lack of vessels to transport food and water. Lacking roots, bryophytes must absorb nutrients into their leafy tissues directly from moisture in their surrounding environment. Because they require cool, moist sites for survival, bryophytes are generally restricted to specific habitats. Remarkably, they can withstand both desiccation and freeze-thaw cycles. During particularly dry spells, they become dormant, but when moisture returns, they will revive. We have all seen mosses that look brown and dehydrated, only to return after a rainfall and discover that they are thriving.

We probably don't pay as much attention as we should to the role that bryophytes play in the forest ecosystem where they contribute in numerous ways to the overall forest health. Crandall-Stotler (2005) notes that “*Their ecological roles are many. They provide seed beds for the larger plants of the community, they capture and recycle nutrients that are washed with rainwater from the canopy and they bind [protect] the soil to keep it from eroding. In the northern hemisphere peatlands, wetlands often dominated by the moss Sphagnum, are particularly important bryophyte communities.*” (Crandall-Stotler, 2005). In addition, “*many are pioneer plants, growing on bare rock and contributing to soil development.... They provide habitat for other plants and small animals, as well as microorganisms like N2-fixing blue-green bacteria.*” (Carrington, 1997) They are also important “*bioindicators of pollution and environmental degradation.*” (IBID)

And finally, from a purely aesthetic point of view, Bryophytes are remarkably beautiful and intricately designed little plants, well worth more than a mere glance.

Lichens (Table 8)

Forty-one (41) species of lichens were observed during the BioBlitz, with a significant number new for our ongoing list of Larose Forest lichens.

Red maple and trembling aspen were hosts for many of the lichen species, with others found on white pine, speckled alder (*Alnus incana*), american elm, tamarack (*Larix*), on snags, pieces of bark, soil and fallen pine branches.

Like bryophytes, lichens are one of the landscape features that are frequently overlooked, and yet their importance to nature cannot be overstated. Lichens are often vulnerable to air quality and their presence and diversity is used as an indicator of air pollution levels. But they are equally valuable and remarkable in other ways. Renowned lichenologist, Irwin Brodo, who helped collect the lichen data on our BioBlitz, along with Troy McMullin of the Canadian Museum of Nature, calls lichens “nature's pioneers”, and has this to say:

“Lichens have been nicknamed “nature’s pioneers” because they have the ability to colonize bare rock and are often the first plant-like forms to become established on newly exposed surfaces...Lichens can function as pioneers because of several quirks of their biology: they can withstand long periods of drought...; they are self-sufficient, taking what few minerals they require from the ambient dust and whatever dissolved moisture they receive; they contain their own suppliers of carbohydrates, the sugar producing photobionts; and their propagules are extremely tiny, enabling them to become established on all but the smoothest surfaces.” (Brodo and Sharnoff, 2001).

Lichens have an impact on natural systems in a myriad of ways, for example in helping with *“consolidating and stabilizing soil”* and by providing *“organic matter and nitrogen.”* (Brodo and Sharnoff, 2001) Their role in forest ecology is acknowledged by foresters and ecologists who understand that some lichens have *“the ability to change the reflectivity of the soil surface (from a heat-absorbing, drought-inducing dark brown to reflective pale gray)”*. (IBID)

One more example suffices to show how valuable these organisms are. As Brodo and Sharnoff (2001) explain: *“The lichens that inhabit forest trees affect several aspects of the forest habitat. They absorb significant amounts of nutrients from rainwater that passes through the canopy over the leaves and differentially absorb minerals flowing down the trunk. ... By absorbing and then releasing water after a rain, lichens can also influence the level of humidity within a forest ecosystem. Most interesting and potentially important, however, is the lichens’ contribution of fixed nitrogen to ecosystems.”*

Miscellaneous Observations (Table 9)

Collected under this heading are the species for which only a few observations were recorded on the BioBlitz: Fish; Molluscs; and Algae. The very dry conditions which saw many vernal pools dried up, and streams and channels devoid of water, meant that it was difficult, if not impossible to collect data for the above. Nonetheless, as noted, some species were recorded thanks to the sharp eyes of Aleta Karstad and Fred Schueler. More mollusc data will be added later as specimens collected by Fred and Aleta are identified. These results will be added to the online Larose BioBlitz report on the OFNC website:

<http://www.ofnc.ca/conservation/larose/index.php>

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Bruce Gill, Entomologist

Judy Hall, The Ottawa Field-Naturalists' Club

Peter Hall, The Ottawa Field-Naturalists' Club

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Steven Hunter, United Counties of Prescott-Russell

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Photographers at work

C. Hanrahan

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**Reptiles and Amphibians: Larose Forest BioBlitz
June 3, 2016**

Caudata

Ambystoma laterale
Notophthalmus viridescens

Newts and Salamanders

Blue-spotted salamander (eggs found)
Eastern newt (Red-spotted newt)

Salienta

Hyla versicolor
Lithobates catesbeianus
Lithobates clamitans
Lithobates pipiens
Lithobates sylvaticus

Toads and Frogs

Gray treefrog
American bullfrog
Green frog
Northern leopard frog
Wood frog

Testudines

Chelydra serpentina

Chrysemys picta

Turtles

Snapping turtle, Species of Special Concern (Provincially and Federally)

Midland painted turtle

Squamata

Thamnophis sirtalis sirtalis

Lizards and Snakes

Eastern garter snake

Data: all BioBlitz participants



Lithobates clamitans C. Hanrahan

Table 2

Birds: Larose Forest BioBlitz June 3, 2016

Species in **blue** are new for the Larose Forest List

Species designated as SAR are Species at Risk as defined Provincially and/or Federally

Anatidae

Aix sponsa
Anas platyrhynchos

Phasianidae

Bonasa umbellus
Meleagris gallopavo

Ardeidae

Ardea herodias

Cathartidae

Cathartes aura

Accipitridae

Accipiter striatus
Buteo platypterus
Buteo jamaicensis

Scolopacidae

Charadrius vociferus
Gallinago gallinago
Scolopax minor

Columbidae

Zenaida macroura

Cuculidae

Coccyzus erythrophthalmus

Caprimulginae

Caprimulgus vociferus

Alcedinidae

Ceryle alcyon

Picidae

Sphyrapicus varius
Picoides pubescens
Picoides villosus
Colaptes auratus
Dryocopus pileatus

Ducks

Wood duck
Mallard

Partridges

Ruffed grouse
Wild turkey

Hérons

Great blue heron

Vultures

Turkey vulture

Hawks

Sharp-shinned hawk
Broad-winged hawk
Red-tailed hawk

Shorebirds

Killdeer
Wilson's snipe
American woodcock

Doves

Mourning dove

Cuckoos

Black-billed cuckoo

Goatsuckers

Whip-poor-will SAR (Threatened-Provincially and Federally)

Kingfishers

Belted kingfisher

Woodpeckers

Yellow-bellied sapsucker
Downy woodpecker
Hairy woodpecker
Northern flicker
Pileated woodpecker

Tyrannidae

Contopus virens
Empidonax alnorum
Empidonax minimus
Sayornis phoebe
Myiarchus crinitus
Tyrannus tyrannus

Vireonidae

Vireo solitarius
Vireo gilvus
Vireo olivaceus

Corvidae

Cyanocitta cristata
Corvus brachyrhyncho
Corvus corax

Hirundinidae

Tachycineta bicolor
Hirundo rustica

Paridae

Poecile atricapillus

Sittidae

Sitta canadensis
Sitta carolinensis

Certhiidae

Certhia americana

Troglodytidae

Troglodytes troglodytes

Regulidae

Regulus satrapa

Turdidae

Catharus fuscescens
Catharus guttatus
Hylocichla mustelina
Turdus migratorius

Mimidae

Dumetella carolinensis

Sturnidae

Sturnus vulgaris

Bombycillidae

Bombycilla cedrorum

Parulidae

Vermivora ruficapilla

Flycatchers

Eastern wood-pewee
Alder flycatcher
Least flycatcher
Eastern phoebe
Great crested flycatcher
Eastern kingbird

Vireos

Blue-headed vireo
Warbling vireo
Red-eyed vireo

Jays and Crows

Blue jay
American crow
Common raven

Swallows

Tree swallow
Barn swallow

Chickadees

Black-capped chickadee

Nuthatches

Red-breasted nuthatch
White-breasted nuthatch

Creepers

Brown creeper

Wrens

Winter wren

Kinglets

Golden-crowned kinglet

Thrushes

Veery
Hermit thrush
Wood thrush
American robin

Mockingbirds, Thrashers

Gray catbird

Starlings

European starling

Waxwings

Cedar waxwing

Wood-warblers

Nashville warbler

Dendroica petechia
Dendroica pensylvanic
Dendroica magnolia
Dendroica tigrina
Dendroica coronata
Dendroica virens
Dendroica fusca
Dendroica pinus
Mniotilta varia
Setophaga ruticilla
Seiurus aurocapilla
Seiurus noveboracensi
Oporornis philadelphia
Geothlypis trichas
Wilsonia canadensis

Yellow warbler
Chestnut-sided warbler
Magnolia warbler
Cape may warbler
Yellow-rumped warbler
Black-throated green warbler
Blackburnian warbler
Pine warbler
Black-and-white warbler
American redstart
Ovenbird
Northern waterthrush
Mourning warbler
Common yellowthroat
Canada warbler SAR (Special concern-Ontario; Threatened-Federally)

Thraupidae

Piranga olivacea

Tanagers

Scarlet tanager

Emberizidae

Spizella passerina
Melospiza melodia
Melospiza georgiana
Zonotrichia albicollis

Sparrows

Chipping sparrow
Song sparrow
Swamp sparrow
White-throated sparrow

Cardinalidae

Pheucticus ludovicianu
Passerina cyanea

Cardinals

Rose-breasted grosbeak
Indigo bunting

Icteridae

Dolichonyx oryzivorus
Agelaius phoeniceus
Quiscalus quiscula
Molothrus ater
Icterus galbula

Blackbirds

Bobolink SAR (Threatened, both Federally and Provincially)
Red-winged blackbird
Common grackle
Brown-headed cowbird
Baltimore oriole

Fringillidae

Carpodacus purpureus
Carduelis pinus
Carduelis tristis

Finches

Purple finch
Pine siskin
American goldfinch

Data: K. Allison, J. Bouvier, C. Brunet, B. Ladoucer and G. Zbitnew.

Insects: Larose Forest BioBlitz June 3, 2016

Species in **blue** are new for the Larose Forest List
Non-native species indicated by an asterisk*

ODONATA**Suborder Zygoptera****Lestidae***Lestes* sp.**Coenagrionidae***Chromagrion conditum**Enallagma* sp.*Nehalennia irene***Suborder Anisoptera****Aeshnidae***Gomphaeschna furcillata***Gomphidae***Arigomphus cornutus***Corduliidae***Dorocordulia libera**Epitheca canis**Epitheca spinigera**Somatochlora minor***Libellulidae***Leucorrhinia frigida**Leucorrhinia hudsonica**Leucorrhinia intacta**Libellula pulchella**Libellula quadrimaculata**Plathemis lydia***ORTHOPTERA****Gryllidae***Gryllus pennsylvanicus***Rhaphidophoridae**

Rhaphidophoridae sp.

Tettigoniidae*Scudderia* sp.**HEMIPTERA****Aphididae***Paraprociophilus tessellatus***Cicadellidae***Neokolla hieroglyphica**Ponana pectoralis***DRAGONFLIES, DAMSELFLIES****Damselflies****Spreadwings**

Spreadwing sp.

Pond Damsels

Aurora damsel

Bluet

Sedge sprite

Dragonflies**Darners***Harlequin darter***Clubtails**

Horned Clubtail

Emeralds

Racket-tailed emerald

Beaverpond baskettail

Spiny baskettail

*Ocellated emerald***Skimmers**

Frosted whiteface

Hudsonian whiteface

Dot-tailed whiteface

Twelve-spotted skimmer

Four-Spotted skimmer

Common whitetail

Grasshoppers, Crickets and Katydid**Crickets**

Field cricket

Camel Crickets

Camel cricket

Katydid

Bush katydid

True Bugs**Aphids**

Woolly alder aphid

Leafhoppers

Leafhopper

Leafhopper

Cercopidae
Philaenus spumarius

Eriococcidae
Cryptococcus fagisuga

Gerridae
Gerris sp.

Membracidae
Entylia carinata
Publilia concava

Nabidae
Nabis americanoferus

Pentatomidae
Pentatomidae spp.
Euschistus tristigmus

Reduviidae
Zelus sp.

Rhopalidae
Stictopleurus punctiventris

BUTTERFLIES
Hesperiidae
Thorybes pylades
Erynnis icelus
Carterocephalus palaemon
Poanes hobomok
Amblyscirtes hegon

Papilionidae
Papilio cressphontes
Papilio canadensis

Pieridae
Pieris oleracea

Lycaenidae
Feniseca tarquinius
Celastrina ladon
Glaucopsyche lygdamus

Nymphalidae
Boloria selene
Phyciodes cocyta
Euphydryas phaeton
Nymphalis antiopa
Vanessa virginiensis
Limenitis arthemis
Limenitis archippus

MOTHS
Drepanidae
Drepana arcuate
Oreta rosea

Spittlebugs
Meadow spittlebug*

Felt Scales
Beech Scale

Water Striders
Water strider

Treehoppers
Treehopper
Treehopper

Damsel Bugs
Damsel bug

Stink Bugs
Stink bugs
Dusky stink bug

Assassin Bugs and Thread-legged Bugs
Assassin bug

Scentless Plant Bugs
Scentless Plant Bug

LEPIDOTERA
Skippers
Northern cloudywing
Dreamy duskywing
Arctic skipper
Hobomok skipper
Pepper and salt skipper

Swallowtails
Giant swallowtail
Canadian tiger swallowtail

Whites and Sulphurs
Mustard white

Gossamer-winged Butterflies
Harvester
Northern spring azure
Silvery blue

Brush-footed Butterflies
Silver-bordered fritillary
Northern crescent
Baltimore checkerspot (adult and larvae)
Mourning cloak
American lady
White admiral
Viceroy

LEPIDOPTERA
Arched hooktip
Rose hooktip

Lasiocampidae

Malacosoma americana
Malacosoma disstria
Phyllodermia Americana

Eastern tent caterpillar moth (larva)
 Forest tent caterpillar moth (larva)
 Lappet moth

Saturnidae

Antheraea Polyphemus
Callosamia promethea
Dryocampa rubicunda
Hyalophora cecropia

Polyphemus moth
 Promethea moth
 Rosy maple moth
 Cecropia moth

Sphingidae

Darapsa choerilus
Hemaris thysbe
Pachysphinx modesta
Paonis excaecata
Sphinx poecila
Smerinthus cerisyi

Azalea sphinx
 Hummingbird moth
 Poplar sphinx
 Blinded sphinx
 Northern apple sphinx
 One-eyed sphinx

Geometridae

Aethalura intertexta
Anticlea vasilata
Besma quercivoraria
Campaea perlata
Caripeta piniata
Ectropis crepuscularia
Euchlaena tigrinaria
Eufidonia discospilata
Eufidonia notataria
Eupithecia columbiata
Eupithecia tripunctaria
Eutrapela clemataria
Horisme intestinata
Hydrelia inornata
Hydriomena perfracta
Hydriomena renunciata
Iridopsis ephyraria
Iridopsis larvaria
Iridopsis vellivolata
Lobophora nivigerata
Lomographa semiclarata
Lomographa vestaliata
Mesoleuca ruficillata
Metanema determinata
Nemoria mimosaria
Pero ancetaria
Pero honestaria
Phaeoura quernaria
Phigalia titea
Plagodis serinaria
Probole alienaria
Probole amacaria
Rheumaptera prunivorata
Rheumaptera subhastata
Scopula quadrilineata
Tetracis cachexiata
Tetracis crocallata
Trichodezia albovittata
Xanthorhoe lacustrata

Four-barred gray
 Variable carpet moth
 Oak besma
 Pale beauty
 Northern pine looper
 Small engrailed moth
 Mottled euchlaena moth
 Sharp-lined powder moth
 Powdered moth
 Columbia pug
 White-spotted pug
 Curve-toothed geometer
 Brown bark carpet moth
 Unadorned carpet moth
 Shattered hydriomena
 Renounced hydriomena
 Pale-winged gray
 Bent-line gray
 Large purplish gray
 Powder bigwing
 Bluish spring moth
 White spring moth
 White ribbon carpet
 Dark metanema
 White fringed emerald
 Hubner's pero moth
 Honest pero
 Oak beauty
 Half-wing (larva)
 Lemon plagodis
 Alien probole
 Friendly probole
 Cherry scallop shell
 White-banded black
 Four-lined wave
 White-slant-line
 Yellow-slant-line
 White-striped black
 Toothed brown carpet

Erebidae: Arctiinae

Ctenucha virginica
Halysidota tessellaris
Lophocampa maculata
Spilosoma Virginia

Virginia ctenucha (cocoon)
 Banded tussock moth
 Spotted tussock moth
 Virginia tiger moth

Erebidae: remaining subfamilies

Hypena baltimoralis
Hyphantria cunea
Lascoria ambigualis
[Melanomma auricinctaria](#)
Palthis angulalis
Scoliopteryx libratrix
[Zale duplicata](#)
[Zale galbanata](#)
Zale lunata
Zale minerea
[Zale phaeocapna](#)
[Zale submediana](#)

Baltimore snout
 Fall webworm
 Ambiguous moth
[Gold-lined melanomma moth](#)
 Dark-spotted palthis
 The herald
[Pine false looper zale](#)
[Maple zale](#)
 Lunate zale
 Colorful zale moth
[Hazel zale](#)
[Gray spring zale](#)

Noctuidae

[Acronicta fragilis](#)
Acronicta impleta
Acronicta innotata
Acronicta superans
[Acronicta vinnula](#)
[Amphipyra pyramidoides](#)
[Bellura vulnifica](#)
Caenurgina crassiuscula
Calyptra canadensis
[Cerma cora](#)
Chytonix palliatricula
Colocasia propinquilinea
[Elaphria alapalida](#)
[Elaphria versicolor](#)
[Epiglaea decliva](#)
Eudryas unio
Euplexia benesimilis
Harrisimemna trisignata
[Leuconycta diphteroides](#)
Leuconycta lepidula
Maliattha synochitis
[Orthodes cynica](#)
Orthosia alurina
Orthosia revicta
[Orthosia rubescens](#)
Panthea acronyctoides
Panthea furcilla
Parallela bistriaris
Phlogophora iris
[Plusia putnami](#)
Raphia frater

[Fragile dagger moth](#)
 Yellow-haired dagger moth
 Unmarked dagger
 Splendid dagger
[Delightful dagger](#)
[Copper underwing \(larva\)](#)
[Cattail borer](#)
 Clover Looper moth
 Canadian owlet (larva)
[Owl-Eyed bird dropping moth](#)
 Cloaked marvel
 Close-Banded yellowhorn
[Pale-Winged midget](#)
[Variegated midget moth](#)
[Sloping sallow moth](#)
 Pearly wood-nymph
 American angle shades
 Harris's Three-spot Moth
[Green leuconycta](#)
 Marbled-green leuconycta
 Black-dotted glyph
[Cynical quaker moth](#)
 Gray quaker (larva)
 Subdued quaker
[Ruby quaker \(larva\)](#)
 Black zigzag panthea
 Eastern panthea
 Maple looper moth
 Olive angle shades
[Putnam's looper moth](#)
 The brother

Nolidae

Baileya ophthalmica

Eyed baileya

Notonididae

Clostera albosigma
Clostera apicalis
Clostera inclusa
[Furcula cinerea](#)

Sigmoid prominent
 Striped chocolate-tip
 Angle-lined prominent
[Gray furcula](#)

Glusphisia septentrionis
Heterocampa biundata
Heterocampa guttivitta
Misogada unicolor
Nadata gibbosa
Notodonta torva
Odontosis elegans
Pheosia rimosa
Schizura leptinoides
Schizura unicornis

Common gluphisia
Wavy-lined heterocampa moth
Saddled prominent
Drab prominent
White-dotted prominent
Northern finned prominent moth
Elegant prominent
Black-rimmed prominent
Black-blotched schizura moth
Unicorn prominent

Limacodidae

Tortricidia flexuosa

Abbreviated button slug moth

Crambidae

Crambus agitatellus
Elophila icciusalis
Palpita magniferalis
Pyrausta orphisalis

Double-banded grass-veneer
Pondside crambid
Splendid palpita
Orange-spotted pyrausta

Pyralidae

Acrobasis sp.

Pyralid moth sp.

Tortricidae

Archips purpurana
Argyrotaenia pinatubana
Choristoneura fractivittana
Clepsis melaleucana
Clepsis persicana
Epiblema scudderiana
Eucosma radiatana
Eucosma umbrastriana
Eulia ministrana
Olethreutes sp.
Olethreutes bipartitana
Pseudosciaphila duplex

Omnivorous leafroller
Pine tube moth (Larval case)
Broken-banded leafroller
Black-patched clepsid moth
White-triangle clepsid
Goldenrod gall moth (Gall)
Tortricid moth
Shaded phaneta
Ferruginous eulia moth

Divided olethreutes
Poplar leafroller moth

Sesiidae

Synanthedon acerni

Maple callus borer moth

Depressariidae

Antaeotricha schlaegeri
Bibarrambla allenella
Semioscopis packardella

Schlaeger's fruitworm moth
Bog bibarrambla moth
Packard's concealer moth

Psychidae

Psychidae sp.

Bagworm moth

Thyrididae

Thyris maculata

Window-winged Moths

Spotted thyris

MEGALOPTERA

Corydalidae

Chauliodes sp.

Alderflies, Dobsonflies, and Fishflies

Dobsonflies and Fishflies

Fishfly

COLEOPTERA

Buprestidae

Anthaxia inornata
Dicera divaricata
Taphrocerus gracilis

Beetles

Metallic Woodborers, Jewel Beetles

Jewel beetle
Flatheaded hardwood borer
Jewel beetle

Cantharidae

Podabrus intrusus
Podabrus rugosulus

Carabidae

Lebia sp.

Cerambycidae

Analeptura lineola
Desmocerus palliatus
Monochamus scutellatus

Chrysomelidae

Calligrapha alni
Calligrapha multipunctata
Calligrapha philadelphica
Chrysomela mainensis
Chrysomela scripta
Donacia spp.
Labidomera clivicollis
Microrhopala excavata
Neogalerucella californiensis
Ophraella conferta
Plagioderma versicolora
Plateumaris sp.

Cicindelidae

Cicindela sexguttata

Coccinellidae

Chilocorus sp.
Coleomegilla maculata lengi
Harmonia axyridis
Propylea quatuordecimpunctata

Curculionidae

Aphrastus taeniatus
Lepyryus palustris
Phyllobius oblongus
Pissodes strobi
Polydrusus formosus
Polydrusus impressifrons
Rhyssomatus lineaticollis

Elateridae

Elateridae spp.
Limonius sp.

Lampyridae

Ellychnia corrusca
Lucidota sp.
Photinus sp.
Photuris sp.

Mordellidae

Mordellidae sp.

Scarabaeidae

Dichelonyx sp.
Hoplia trifasciata
Trichiotinus affinis

Soldier Beetles

Soldier beetle
Soldier beetle

Ground Beetles

Ground beetle

Long-horned Beetles

Long-horned beetle
Elderberry borer
White-spotted pine sawyer

Leaf Beetles

Russet alder leaf beetle
Common willow calligrapher
Dogwood calligrapher
Alder leaf beetle
Cottonwood leaf beetle
Aquatic leaf beetles
Milkweed leaf beetle
Leaf beetle
Loosestrife leaf beetle*
Leaf beetle
Willow leaf beetle*
Aquatic leaf beetle

Tiger Beetles

Six-spotted tiger beetle

Lady Beetles

Twice-stabbed lady beetle sp.
Spotted lady beetle
Asian lady beetle*
Fourteen-spotted lady beetle*

Weevils

Weevil
Weevil
European snout weevil*
White pine weevil
Green immigrant leaf weevil*
Green weevil*
Milkweed stem weevil

Click Beetles, Wireworms

Click beetles, several species
Click beetle

Fireflies

Winter firefly
Firefly
Firefly
Firefly

Tumbling Flower Beetles

Tumbling flower beetle sp.

Dung Beetles, Tumblebugs

Chafer beetle
Scarab beetle
Flower scarab

Silphidae
Necrophila americana

DIPTERA
Agromyzidae
Agromyzidae spp.

Asilidae
Asilid sp.

Calliphoridae
Lucilia sp.

Cecidomyiidae
Dasyneura balsamica
Rhabdophaga strobiloides
Rhopalomyia solidaginis

Chironomidae
Chironomidae sp.

Culicidae
Culicidae spp.

Limoniidae
Austrolimnophila unica (New to the Ottawa Region)
Cheilotrichia (Empeda) stigmatica
Dicranomyia distendens
Dicranophragma fuscovaria.
Epiphragma fasciapenne
Erioptera (E.) septemtrionis
Erioptera (Mesocyphona) caliptera
Euphylidorea adusta
Euphylidorea auripennis
Gonomyia (G.) subcinerea
Gonomyia (Leiponeura) sulphurella
Helius flavipes
Hoplolabis armata
Metalimnobia indigena
Metalimnobia quadri. solitaria
Molophilus hirtipennis
Ormosia affinis
Phylidorea platyphallus
Pilaria quadrata
Pilaria recondita
Pilaria tenuipes
Prionolabis rufibasis
Pseudolimnophila inornata
Pseudolimnophila luteipennis
Rhipidia fidelis
Rhipidia maculata
Shannonomyia lenta
Symplecta cana
Tricyphona calcar
Tricyphona johnsoni
Ula elegans

Syrphidae
Eristalis sp.
Syrphus sp.
Toxomerus geminatus
Toxomerus marginatus

Carrion Beetles
American carrion beetle

Flies
Leaf-mining Flies
Leaf miners, several spp.

Robber Flies
Robber fly

Blow Flies
Blow fly

Gall Midges
Balsam gall midge
Willow gall midge
Goldenrod gall midge

Midges
Midge

Mosquitoes
Mosquito spp.

Limoniid Crane Flies

Flower Flies, Hover Flies
Hover fly
Hover fly
Hover fly
Hover fly

Tabanidae

Chrysops sp.
Chrysops excitans
Chrysops indus
Chrysops niger
Tabanus sp.

Horse Flies, Deer Flies

Deer fly
 Deer fly
 Deer fly
 Deer fly
 Horse fly

Tipulidae

Dolichocheza similis
Nephrotoma ferruginea
Nephrotoma occipitalis
Tipula (Lindnerina) senega
Tipula (Vestiplex) longiventris
Tipula (Yamatotipula) furca
Tipula (Yamato.) tephrocephala

Large Crane Flies**HYMENOPTERA****Apidae**

Bombus sp.
Bombus borealis
Bombus ternarius

Sawflies, Wasps, Bees and Ants**Bumblebees, Honey Bees, Carpenter Bees, Cuckoo Bees**

Bumblebee
 Bumblebee
 Red-banded bumblebee

Argidae

Arge spp.

Argid sawflies

Argid sawfly species (several)

Braconidae

Braconidae Spp.

Braconid Wasps

Braconid species, several species

Diprionidae

Diprion similis

Conifer Sawflies

Pine sawfly*

Halictidae

Agapostemon sp.
Agapostemon pura
Lasioglossum sp,

Sweat Bees

Sweat bee
 Sweat bee
 Sweat bee

Ichneumonidae

Ichneumonidae spp.
Netelia sp.

Ichneumonid Wasps

Ichneumonid wasps, several species
 Ichneumonid wasp

Megachilidae

Megachilidae sp.

Leafcutter Bees, Mason Bees, and their Relatives

Leafcutter bee

Tenthredinidae

Macremphytus testaceus
Tenthredo spp.
Tenthredo verticalis

Common Sawflies

Dogwood sawfly
 Sawfly species, several
 Sawfly

Vespidae

Eumenes sp.
Polistes fuscatus
Vespula maculifrons

Yellowjackets, Hornets and their Relatives

Potter wasp
 Paper wasp
 Eastern yellowjacket

Data: K. Allison, F. Brodo, S. Deschênes, B. Gill, P. and J. Hall, C. Hanrahan, D. Lepage, J. and A. Reddoch

Arachnids: Larose Forest BioBlitz June 3, 2016

Species in blue are new for the Larose Forest List

ARACHNIDA

Araneidae

Araniella displicata

Linyphidae

Frontinella communis

Phalangidae

Phalangid spp.

Philodromidae

Tibellus oblongus

Pisauridae

Dolomedes triton

Salticidae

Eris militaris

Pelegrina proterva

Phidippus princeps?

Tetragnathidae

Tetragnatha staminea

Theridiidae

Theridion sp.

Thomisidae

Misumena vatia

Xysticus punctatus

Orb Weavers

Six-spotted orb weaver

Sheet Web Weavers and Dwarf Spiders

Bowl and doily weaver

Harvestmen

Harvestman sp.

Philodromid Spiders

Oblong running crab spider

Nursery Web Spiders

Six-spotted fishing spider

Jumping Spiders

Bronze jumper

Reckless jumper

Jumping spider

Long-jawed Orb Weavers

Long-jawed orb weaver

Cobweb Weavers

Cobweb weaver

Crab Spiders

Goldenrod crab spider

Ground crab spider



Xysticus punctatus
C. Hanrahan

Data: C. Hanrahan

**Mammals: Larose Forest BioBlitz
June 3, 2016**

Species in blue are new for the Larose Forest List

INSECTIVORA

Soricidae

Blarina brevicauda
Sorex cinereus

RODENTIA

Sciuridae

Tamias striatus
Tamiasciurus hudsonicus

CARNIVORA

Canidae

Canis latrans
Vulpes vulpes

Mustelidae

Mustela vison

Procyonidae

Procyon lotor

ARTIODACTYLA

Cervidae

Alces alces
Odocoileus virginianus

SHREWS AND MOLES

Shrews

Short-tailed Shrew
Masked Shrew

RODENTS

Squirrels

Eastern Chipmunk
Red Squirrel

Carnivores

Dogs

Coyote
Red Fox

Weasels and their Allies

Mink

Raccoons

Raccoon

Cloven-hoofed Mammals

Deer

Moose
White-tailed Deer



Tamias striatus

C. Hanrahan

Data: All participants

Vascular Plants: Larose Forest BioBlitz June 3, 2016

- Non-native species indicated by an asterisk*
- Species in blue type are new additions to the Larose Forest Plant List.
- Species in **boldface** are regionally or provincially significant.
- Regional significance follows Brunton's definition: "plants known from 10 or fewer *contemporary* populations (post-1969) in the City of Ottawa" (Brunton 2005).

Lycopodiaceae

Diphasiastrum digitatum

Diphasiastrum tristachyum

Huperzia lucidula

Lyopodium annotinum

Lycopodium dendroideum

Lycopodium obscurum

Equisetaceae

Equisetum arvense

Equisetum fluviatile

Equisetum hyemale

Equisetum sylvaticum

Osmundaceae

Osmunda cinnamomea

Osmunda claytoniana

Osmunda regalis

Dennstaedtiaceae

Pteridium aquilinum

Thelypteridaceae

Phegopteris connectilis

Thelypteris noveboracensis

Thelypteris palustris

Polypodiaceae

Athyrium filix-femina

Dryopteris carthusiana

Dryopteris intermedia

Dryopteris marginalis

Gymnocarpium dryopteris

Matteuccia struthiopteris

Onoclea sensibilis

Pinaceae

Abies balsamea

Larix decidua

Larix laricina

Picea abies

Picea glauca

Pinus banksiana

Pinus resinosa

Pinus strobus

Pinus sylvestris

Tsuga canadensis

Cupressaceae

Thuja occidentalis

Clubmoss Family

Southern ground cedar

Northern ground cedar, Regionally Significant

Shining clubmoss

Stiff clubmoss

Prickly tree clubmoss

Ground pine

Horsetail Family

Field horsetail

Water horsetail

Dwarf scouring rush

Wood horsetail

Flowering Fern Family

Cinnamon fern

Interrupted fern

Royal fern

Bracken Fern Family

Bracken

Marsh Fern Family

Northern beech fern

New york fern

Marsh fern

Fern Family

Lady fern

Spinulose wood fern

Evergreen wood fern

Marginal wood fern

Oak fern

Ostrich fern

Sensitive fern

Pine Family

Balsam fir

European larch*

Tamarack

Norway spruce*

White spruce

Jack pine

Red pine

White pine

Scotch pine*

Eastern hemlock

Cypress Family

Eastern white cedar



Osmunda claytoniana C. Hanrahan

Typhaceae

Typha angustifolia
Typha latifolia

Alismataceae

Sagittaria latifolia

Hydrocharitaceae

Hydrocharis morsus-ranae

Poaceae

Anthoxanthum nitens

Anthoxanthum odoratum

Phalaris arundinacea

Phragmites australis, ssp. *australis*

Poa compressa

Cyperaceae

Carex arctata

Carex brunescens

Carex canescens

Carex crinita

Carex deweyana

Carex disperma

Carex granularis

Carex gynandra

Carex intumescens

Carex pseudo-cyperus

Carex stipata

Carex trisperma

Carex vesicaria

Dulichium arundinaceum

Eleocharis palustris

Scirpus atrocintus

Scirpus cyperinus

Scirpus cf. *microcarpus*

Juncaceae

Juncus canadensis

Araceae

Calla palustris

Liliaceae

Clintonia borealis

Hemerocallis fulva

Maianthemum canadense

Maianthemum racemosum

Maianthemum trifolium

Medeola virginiana

Polygonatum pubescens

Streptopus lanceolatus

Trillium erectum

Iridaceae

Iris versicolor

Sisyrinchium montanum

Orchidaceae

Cypripedium acaule

Cattail Family

Narrow-leaved cattail
Broad-leaved cattail

Water-plantain Family

Broad-leaved arrowhead

Frog's-bit Family

Frog's-bit*

Grass Family

Sweet grass, Regionally Significant

Vernal grass* (Rare)

Reed canary grass*

European reed grass*

Canada bluegrass*

Sedge Family

Drooping wood sedge

Green bog sedge

Silvery sedge

Fringed sedge

Dewey's sedge

Two-seeded bog sedge

Meadow sedge

Nodding sedge, Regionally Significant

Shining bladder sedge

Cypress-like sedge

Awl-fruited sedge

Three-seeded bog sedge

Inflated sedge

Three-way sedge

Marsh spike-rush

Black-girdled bulrush

Wool-grass

Red-sheathed bulrush

Rush Family

Canada rush, Regionally Significant

Arum Family

Water arum

Lily Family

Bluebead

Day-lily*

Canada mayflower

False solomon's seal

Three-leaved false solomon's seal

Indian cucumber root

Solomon's seal

Rosy twisted stalk

Red trillium

Iris Family

Blue Flag, Wild iris

Blue-eyed grass

Orchid Family

Pink lady's-slipper orchid



Anthoxanthum nitens
C. Hanrahan



Iris versicolor C.Hanrahan

Salicaceae

Populus balsamifera
Populus deltoides
Populus grandidentata
Populus tremuloides
Salix alba
Salix amygdaloides
Salix bebbiana
Salix discolor
Salix eriocephala
Salix lucida
Salix petiolaris
Salix pyrifolia

Myricaceae

Myrica gale

Betulaceae

Alnus incana
Betula alleghaniensis
Betula papyrifera
Betula populifolia
Corylus cornuta

Fagaceae

Fagus grandifolia
Quercus macrocarpa

Ulmaceae

Ulmus americana

Cannabaceae

Humulus lupulus

Urticaceae

Urtica dioica ssp *gracilis*

Polygonaceae

Fallopia cilinodis
Rumex crispus
Rumex orbiculatus

Caryophyllaceae

Silene vulgaris
Stellaria media

Nymphaeaceae

Nuphar variegata

Cabombaceae

Brasenia schreberi

Ranunculaceae

Actaea pachypoda
Actaea rubra
Anemone canadensis
Caltha palustris
Clematis virginiana
Coptis trifolia
Ranunculus abortivus
Ranunculus acris
Thalictrum pubescens

Willow Family

Balsam poplar
 Eastern cottonwood
 Large-toothed aspen
 Trembling aspen
 White willow*
 Peach-leaf willow
 Bebb's willow
 Pussy willow
 Heartleaf willow
 Shining willow
 Slender willow
Balsam willow, Regionally Significant

Bayberry Family

Bog myrtle, Sweet gale

Birch Family

Speckled alder
 Yellow birch
 White birch
 Gray birch
 Beaked hazel

Beech Family

Beech
 Bur oak

Elm Family

American elm, White elm

Hemp Family

Hops*

Nettle Family

Slender stinging nettle

Buckwheat Family

Fringed bindweed
 Curled dock*
 Great water dock

Pink Family

Bladder campion*
*Common chickweed**

Waterlily Family

Bullhead-lily, Yellow pond-lily

Water-shield Family

Water-shield, Regionally Significant

Crowfoot Family

Doll's eye
 Red baneberry
 Canada anemone
 Marsh marigold
 Old man's beard
 Goldthread
 Woodland buttercup
 Buttercup*
 Tall meadow-rue



***Humulus lupulus* K. Allison**

Brassicaceae

Barbarea vulgaris
Capsella bursa-pastoris

Saxifragaceae

Ribes cynosbati
Ribes glandulosum
Tiarella cordifolia

Rosaceae

Amelanchier arborea
Crataegus cf. chrysoarpa
Fragaria virginiana
Geum aleppicum
Malus cf. X purpurea
Photinia melanocarpa
Potentilla argentea
Potentilla norvegica
Potentilla recta
Prunus pensylvanica
Prunus serotina
Prunus virginiana
Rosa blanda
Rubus allegheniensis
Rubus canadensis
Rubus flagellaris
Rubus hispidus
Rubus idaeus var. strigosus
Rubus odoratus
Rubus pubescens
Sorbus americana.
Spiraea alba
Spiraea latifolia
Spiraea tomentosa
Waldsteinia fragarioides

Fabaceae

Lotus corniculatus
Medicago lupulina
Melilotus alba
Trifolium pratense
Trifolium repens
Vicia cracca

Geraniaceae

Geranium bicknellii

Oxalidaceae

Oxalis acetosella
Oxalis stricta

Anacardiaceae

Rhus hirta
Toxicodendron rydbergii

Aquifoliaceae

Ilex mucronatus
Regionally Significant
Ilex verticillata

Mustard Family

Yellow-rocket, Wintercress*
Shepherd's purse*

Saxifrage Family

Wild gooseberry
Skunk currant
Foamflower

Rose Family

Downy serviceberry
Hawthorn
Wild strawberry
Yellow avens
Apple*
Black chokeberry
Silvery cinquefoil*
Rough cinquefoil
Sulphur cinquefoil*
Pin cherry
Black cherry
Choke cherry
Wild rose
Blackberry
Canada blackberry
Northern dewberry
Swamp dewberry
Red raspberry
Red-flowering raspberry
Dewberry, Dwarf raspberry
American mountain ash
Meadowsweet
Broad-leaved meadowsweet
Steeplebush, Pink meadowsweet
Barren-strawberry



Photinia melanocarpa C. Hanrahan

BEAN FAMILY

Bird's foot trefoil*
Black medic*
White sweet clover*
Red clover*
White clover*
Purple vetch*

Geranium Family

Bicknell's geranium

Wood-sorrel Family

Wood sorrel
Yellow wood sorrel

Cashew Family

Staghorn sumac
Poison ivy

Holly Family

Mountain Holly,

Winterberry



Acer pensylvanicum C. Hanrahan

Aceraceae

Acer negundo
Acer pensylvanicum
Acer rubrum
Acer saccharinum
Acer saccharum
Acer spicatum

Balsaminaceae

Impatiens capensis

Rhamnaceae

Frangula alnus
Rhamnus cathartica

Vitaceae

Parthenocissus inserta
Vitis riparia

Tiliaceae

Tilia americana

Hypericaceae

Hypericum boreale?
Hypericum canadense

Violaceae

Viola labradorica
Viola macloskeyi ssp. *pallens*
Viola pubescens
Viola renifolia

Lythraceae

Lythrum salicaria

Onagraceae

Circaea lutetiana
Epilobium angustifolium
Ludwigia palustris
Oenothera biennis

Araliaceae

Aralia nudicaulis
Aralia racemosa

Apiaceae

Daucus carota
Pastinaca sativa

Cornaceae

Cornus alternifolia
Cornus amomum
Cornus canadensis
Cornus rugosa
Cornus sericea

Pyrolaceae

Chimaphila umbellata
Monotropa uniflora
Pyrola elliptica

Maple Family

Manitoba maple*
 Striped maple
 Red maple
 Silver maple
 Sugar maple
 Mountain maple

Touch-me-not Family

Jewelweed

Buckthorn Family

Glossy buckthorn*
 Common buckthorn*

Grape Family

Virginia creeper
 Wild grape

Linden Family

Basswood

St. John's-wort Family

Dwarf St. John's-wort, Regionally Significant
 Canada St. john's-wort

Violet Family

Dog violet
 Northern white violet
 Downy yellow violet
[Kidney-leaved violet](#)

Loosestrife Family

Purple loosestrife*

Evening Primrose Family

Enchanter's nightshade
 Fireweed
 Marsh purslane
 Evening primrose

Ginseng Family

Sarsaparilla
 Spikenard

Carrot Family

Queen ann's lace*
 Wild Parsnip*

Dogwood Family

Alternate-leaved dogwood
[Silky dogwood](#)
 Bunchberry
 Round-leaved dogwood
 Red osier dogwood

Wintergreen Family

Pipsissewa
 Indian pipe
 Shinleaf

Ericaceae

Chamaedaphne calyculata
Gaultheria procumbens
Kalmia angustifolia

Kalmia polifolia

Rhododendron groenlandicum
Vaccinium angustifolium
Vaccinium corymbosum
Vaccinium myrtilloides

Primulaceae

Lysimachia terrestris
Lysimachia thyrsoiflora
Trientalis borealis

Oleaceae

Fraxinus americana
Fraxinus nigra
Fraxinus pennsylvanica

Apocynaceae

Apocynum androsaemifolium

Asclepiadaceae

Asclepias syriaca
Cynanchum rossicum

Lamiaceae

Lycopus americanus
Prunella vulgaris
Stachys palustris

Solanaceae

Physalis heterophylla
Solanum dulcamara

Scrophulariaceae

Verbascum thapsus

Plantaginaceae

Plantago major

Lentibulariaceae

Utricularia macrorhiza

Rubiaceae

Galium sp.
Galium mollugo
Galium palustre
Galium trifidum
Galium triflorum
Mitchella repens

Caprifoliaceae

Diervilla lonicera
Lonicera canadensis
Lonicera dioica
Sambucus canadensis
Sambucus racemosa
Viburnum cassinoides
Viburnum lentago
Viburnum trilobum

Heath Family

Leatherleaf
 Wintergreen
 Sheep laurel
Bog Laurel, Regionally Significant
 Labrador tea
 Low-bush blueberry
 Highbush blueberry
 Velvet-leaf blueberry

Primrose Family

Swamp candles
 Tufted loosestrife
 Starflower

Olive Family

White ash
 Black ash
 Red ash, Green ash

Dogbane Family

Spreading dogbane

Milkweed Family

Milkweed
 Pale swallowwort*

Mint Family

Water horehound
 Heal-all*
 Marsh hedge-nettle*

Nightshade Family

Clammy ground-cherry
 Deadly nightshade*

Figwort Family

Mullein*

Plantain Family

Common plantain*

Bladderwort Family

Common bladderwort

Bedstraw Family

Galium
 White bedstraw*
 Marsh bedstraw
 Small bedstraw
 Woodland bedstraw
 Partridgeberry

Honeysuckle Family

Bush honeysuckle
 Canada honeysuckle
 Honeysuckle
 Canada elderberry
 Red elderberry
 Wild raisin, Withered
 Nannyberry
 Highbush-cranberry

Asteraceae

Achillea millefolium
Ambrosia artemisiifolia
Antennaria neglecta
Arctium minus
Cirsium arvense
Erigeron philadelphicus
Eupatorium perfoliatum
Eutrochium maculatum
Hieracium caespitosum
Lactuca canadensis
Leucanthemum vulgare
Prenanthes altissima
Rudbeckia hirta
Senecio pauperculus
Solidago canadensis
Solidago rugosa
Symphotrichum novae-angliae
Taraxacum officinale
Tragopogon pratensis
*Tussilago dubius**

Composite Family

Yarrow
Ragweed
Field pussytoes
Burdock*
Canada thistle*
Daisy fleabane
Boneset
Joe-pye-weed
Field hawkweed*
Wild lettuce
Ox-eye daisy*
Tall white lettuce
Brown-eyed susan
Balsam ragwort
Canada goldenrod
Rough goldenrod
New england aster
Dandelion*
Yellow Goat's-beard*
Coltsfoot

Data: K. Allison, M. Besner, O. Clarkin, D. Drapeau, C. Hanrahan, S. Hunter, L. Ovenden, J. & A. Reddoch



Senecio pauperculus
C. Hanrahan

Plants of the Shrub Bog Habitat in Descending Order of Abundance

Non-native species indicated by an asterisk*

<i>Sphagnum fallax</i>	Flat-topped peat moss
<i>Sphagnum fuscum</i>	Brown peat moss
<i>Sphagnum magellanicum</i>	Magellan's peat moss

(The three *Sphagnum* species together provide continuous cover.)

<i>Chamaedaphne calyculata</i>	Leatherleaf (almost continuous)
<i>Maianthemum trifolium</i>	Three-leaved solomon's seal (widespread throughout)
<i>Scirpus cf microcarpus</i>	Red-sheathed bulrush
<i>Vaccinium corymbosum</i>	Highbush blueberry (abundant throughout)
<i>Photinia melanocarpa</i>	Black chokeberry (abundant throughout)
<i>Kalmia angustifolia</i>	Sheep laurel (scattered throughout)
<i>Kalmia polifolia</i>	Bog laurel (thinly scattered)
<i>Rhododendron groenlandicum</i>	Labrador tea (one group encountered)
<i>Ilex mucronata</i>	Mountain holly (near western edge)
<i>Carex disperma</i>	Two-seeded bog sedge (one group, near western edge)
<i>Carex trisperma</i>	Three-seeded bog sedge (together with above)
<i>Eriophorum virginicum</i>	Tawny cottongrass (scattered plants (August 30))
<i>Betula populifolia</i>	Gray birch (thinly scattered throughout)
<i>Acer rubrum</i>	Red maple (thinly scattered throughout)
<i>Pinus strobus</i>	White pine (a few at north end)
<i>Pinus sylvestris</i> *	Scots pine (a few at north end)

Other Shrubs along Road and in the Southeastern Section of the Bog

<i>Salix petiolaris</i>	Slender willow
<i>Alnus rugosa</i>	Speckled alder

Data: Ken Allison, Joyce Reddoch, Linda Ley (mosses)

Mosses and Liverworts: Larose Forest BioBlitz June 3, 2016

Species in blue are new for the Larose list

Provincial ranking and definition follows the NHIC:

S2 - Very rare in Ontario; usually between 5 and 20 occurrences in the province or with many individuals in fewer occurrences; often susceptible to extirpation

DIVISION HEPATICAE LIVERWORTS

Calypogeiaceae

Calypogeia neesiana

Nee's pouchwort

Frullaniaceae

Frullania eboracensis

New york scalewort

Geocalycaceae

Geocalyx graveolens

Turp's pouchwort

Jamesoniellaceae

Jamesoniella autumnalis

Autumn flapwort

Lepidoziaceae

Lepidozia reptans

Creeping fingerwort

Lophocoleaceae

Chiloscyphus pallescens

Pallid crestwort

Chiloscyphus profundus

Variable-leaved crestwort

Ptilidiaceae

Ptilidium pulcherrimum

Tree fringewort

Radulaceae

Radula complanata

Flattened scalewort

DIVISION MUSCI MOSESSES

Amblystegiaceae

Drepanocladus aduncus

Knieff's hook moss

Hygroamblystegium varium

Willow feather moss

Aulacomniaceae

Aulacomnium palustre

Ridged smoothcap moss; Wavy starburst moss

Bartramiaceae

Philonotis fontana

Fountain apple moss

Brachytheciaceae

Brachythecium campestre
Brachythecium curtum
Brachythecium erythrorrhizon

Field ragged moss; Golden foxtail moss
Short-leaved ragged moss
Taiga ragged moss

Bryaceae

Bryum argenteum
Bryum sp.

Silvery bryum

Calliergonaceae

Calliergon cordifolium
Calliergon giganteum

Heart-leaved spear moss
Giant spear moss

Climaceae

Climacium dendroides

Northern tree moss

Dicranaceae

Dicranella heteromalla
Dicranum flagellare
Dicranum montanum
Dicranum scoparium

Silky forklet moss
Whip broom moss; Asparagus broom moss
Mountain broom moss; Crispy broom moss
Common broom moss

Ditrichaceae

Ditrichum pusillum

Brown cow-hair moss

Entodontaceae

Entodon cladorrhizans

Flat-stemmed entodon moss

Fontinalaceae

Dichelyma pallescens

Pale claw moss

Funariaceae

Funaria hygrometrica

Common cord moss

Grimmiaceae

Schistidium apocarpum

Radiate bloom moss

Hylocomiaceae

Pleurozium schreberi

Red-stemmed feather moss

Hypnaceae

Callicladium haldanianum
Herzogiella turfacea
Hypnum imponens
Hypnum lindbergii
Hypnum pallescens
Platygyrium repens
Ptilium crista-castrensis
Pylasia polyantha
Pylaisia selwynii

Beautiful branch moss; Sword moss
Flat stump moss; Flat tassel moss
Pellucid plait moss
Lindberg's plait moss; Pale plait moss
Stump plait moss; Lesser plait moss
Flat-brocade moss; Oil-spill moss
Knight's plume moss
Many-flowered pylaisia
Selwyn's pylaisia

Meesiaceae

Leptobryum pyriforme

Golden thread moss

Mniaceae

Plagiomnium cuspidatum

Woodsy leaf moss

<i>Pohlia nutans</i>	Common nodding moss; Copper wire moss
<i>Pohlia prolifera</i> S2	Cottony nodding moss
<i>Rhizomnium appalachianum</i>	Appalachian leafy moss
<i>Rhizomnium punctatum?</i>	Dotted leafy moss
Orthotrichaceae	
<i>Ulota crispa</i>	Crisped pincushion moss; Crispy tuft moss
Plagiotheciaceae	
<i>Plagiothecium denticulatum</i>	Dented silk moss
<i>Plagiothecium laetum</i>	Bright silk moss
Polytrichaceae	
<i>Atrichum altecristatum</i>	Wavy starburst moss
<i>Polytrichum commune</i>	Common haircap moss
Pottiaceae	
<i>Barbula convolluta</i>	Curly beard moss
Sphagnaceae	
<i>Sphagnum angustifolium</i>	Narrow-leaved peat moss
<i>Sphagnum capillifolium</i>	Small red peat moss
<i>Sphagnum fallax</i>	Flat-top peat moss
<i>Sphagnum fuscum</i>	Brown peat moss
<i>Sphagnum magellanicum</i>	Magellan's peat moss
<i>Sphagnum squarrosum</i>	Shaggy peat moss
Tetraphidaceae	
<i>Tetraphis pellucida</i>	Common four-toothed moss
Thuidiaceae	
<i>Thuidium delicatulum</i>	Delicate fern moss

Data: L. Ley

Lichens: Larose Forest BioBlitz June 3, 2016

- Common names, where used, are taken from: Brodo, Irwin M., Sylvia Duran Sharnoff and Stephen Sharnoff. 2001. Lichens of North America. Yale University Press.
- Species in blue are new additions to the Larose Forest list

Arthoniaceae

Arthonia caudata

Caliciaceae

Calicium sp.

Candelariaceae

Candelaria concolor

Candleflame lichen

Candelariella efflorescens

Powdery goldspeck lichen

Candelariella lutella

Catillariaceae

Catillaria nigroclavata

Chrysothricaceae

Chrysothrix caesia

Cladoniaceae

Cladonia chlorophaea s. lat.

Cladonia coniocraea

Common powderhorn

Coniocybaceae

Chaenotheca xyloxena

Lecanoraceae

Lecanora hybocarpa

Bumpy rim-lichen

Lecanora pulicaris

Lecanora strobilina

Mealy rim-lichen

Lecanora symmicta

Fused-rim lichen

Lecanora thysanophora

Mapledust lichen

Lecideaceae

Violella fucata

Monoblastiaceae

Anisomeridium polypori

Parmeliaceae

Evernia mesomorpha

Boreal oakmoss lichen

Flavoparmelia caperata

Common greenshield lichen

Flavopunctelia flaventior

Speckled greenshield

Hypogymnia physodes

Monk's-hood lichen

Melanelixia subaurifera

Abraded camouflage lichen

Myelochroa aurulenta

Powdery axil-bristle lichen

Parmelia sulcata

Hammered shield lichen

Punctelia rudecta
Usnocetraria oakesiana

Rough speckled shield lichen

Peltigeraceae
Peltigera evansiana

Peppered pelt

Physiaceae

Buellia cfr. *stillingiana*
Hyperphyscia adglutinata
Phaeophyscia pusilloides
Phaeophyscia rubropulchra
Physcia adscendens
Physcia millegrana
Physcia stellaris

Common button lichen
Grainy shadow-crust lichen
Pompom shadow lichen
Orange-cored shadow lichen
Hooded rosette lichen
Mealy rosette lichen
Star rosette lichen

Stereocaulaceae

Lepraria sp. 1
Lepraria sp. 2

Teloschistaceae

Caloplaca cerina
Xanthomendoza fallax

Gray-rimmed firedot lichen

Calicioid Fungi.

Mycocalicium subtile
Phaeocalicium polyporaenum
Stenocybe pullatula

Data: I. Brodo and T. McMullin

**Miscellaneous Observations: Larose Forest BioBlitz
June 3, 2016**

ALGAE**Characeae***Chara* sp.

Stonewort (alga)

Nitella sp.

Plumewort (Alga)

FISH**Gasterosteiformes****Pipefishes and Sticklebacks****Gasterosteidae***Culea inconstans*

Brook Stickleback

Esociformes**Pikes and Mudminnows****Umbridae***Umbra Limi*

Central Mudminnow

GASTROPODA**Gastrodontidae***Zonitoides* sp.

Terrestrial Snail

Lymnaeidae*Fossaria* sp.*Stagnicola elodes*

Common Stagnicola

Physidae*Physa gyrina***Planorbidae***Gyraulus* sp.*Gyraulus gyraulus circumstriatus***Data:** A. Karstad, F. Schueler