



## **Appendix G.6**

Fifteen Mile Stream Priority Species List,  
McCallum Environmental Ltd.

### Fifteen Mile Stream Priority Species List

Scientific Name	Common Name	SARA <sup>i</sup>	COSEWIC <sup>ii</sup>	NESA <sup>iii</sup>	SRank <sup>iv</sup>	Habitat Requirements
<b>Birds</b>						
<i>Botaurus lentiginosus</i>	American Bittern				S3S4B	Preferred habitats of the American bittern include freshwater wetlands with tall emergent vegetation. In Nova Scotia, it occurs widely in most regions, but is scarce on the Atlantic slope and Cape Breton Island, where marshes are few and relatively infertile.
<i>Turdus migratorius</i>	American Robin				S5B, S3N	American Robins are common across the continent in gardens, parks, yards, golf courses, fields, pastures, tundra, as well as deciduous woodlands, pine forests, shrublands, and forests regenerating after fires or logging.
<i>Icterus galbula</i>	Baltimore Oriole				S2S3B	The Baltimore oriole is an adaptable species (found breeding in diverse habitats), but typically favors woodland edge (especially riparian) and open areas with scattered trees; strong preference for deciduous over coniferous trees. During spring and fall migration, it is found in variety of habitats, but generally favors open woodlands, woodland margins, hedgerows, and urban parks.
<i>Riparia riparia</i>	Bank Swallow	Th	Th	Endangered	S2S3B	The Bank Swallow breeds wherever suitable nesting sites in banks and cliffs are available. Nesting colonies are usually found near open areas, and often close to water. Bank Swallows will also nest in artificial banks, such as road cuttings and gravel pits. Found in all regions of the Maritimes, but scarce in many inland forested areas.
<i>Hirundo rustica</i>	Barn Swallow	Th	Th	Endangered	S2S3B	In the Maritimes the Barn Swallow breeds everywhere there are buildings and other structures that provide sheltered, dry nest-sites, even nesting on isolated cabins in deep woodland and on fishing shacks on offshore islands. A recent innovation, in remote logging areas with no alternatives, has been their basing nests on bolt-heads low in the sides of large corrugated metal culverts. However, nests in natural situations, in caves or under overhanging cliffs, usually close to water, are very rare.

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<i>Dendroica castanea</i>	Bay-breasted Warbler				S3S4B	The Bay-breasted is one of the less widespread warblers, breeding in a narrow band across the closed boreal forests from northeast British Columbia to western Newfoundland, and south just into the U.S.A. Although during migrations and while foraging it is often seen in mixed stands, this bird nests only in conifers. Reaching highest densities in balsam fir forest infested with spruce budworm.
<i>Picoides arcticus</i>	Black-backed Woodpecker				S3S4	In the Maritimes, the black-backed woodpecker is widely but thinly distributed in conifer forests throughout, becoming more common farther north. The black-backed woodpecker is very local in southwest Nova Scotia. These birds forage on trees damaged by forest insects, especially bark beetles, and their characteristic flaking-off of bark fragments in search of food can be an aid in detecting them. Nests here are often in quite open situations, such as cut-over areas, open jack pine stands, and the edges of woodland gardens.
<i>Coccyzus erythrophthalmus</i>	Black-billed Cuckoo				S3B	In the northern parts of its range, the Black-billed Cuckoo's numbers vary greatly from year to year in response to outbreaks of both the forest and orchard species of tent caterpillars, on which it feeds. It is associated with open woodland and forest edge and nests in small trees and tall shrubs.
<i>Dendroica striata</i>	Blackpoll Warbler				S3S4B	In the Maritimes, the Blackpoll Warbler breeds mainly in cool, damp spruce forests. During spring and fall migration, it uses a variety of habitats, although often partial to spruces, even when they are only a small component of the habitat.
<i>Poecile hudsonica</i>	Boreal Chickadee				S3	The Boreal chickadee prefers conifer, and especially spruce, forests all across the northern regions of Canada. Boreal Chickadees are found in all parts of the Maritimes. Most are residents, but some wander after breeding season.
<i>Wilsonia canadensis</i>	Canada Warbler	Th	Th	Endangered	S3B	In Nova Scotia, the Canada warbler has only been found sparsely on Cape Breton Island and in the extreme southwest of the province. They are less predictable from habitat than

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						most warblers, they are usually found in dense understory vegetation of mature to mid-aged mixed forest, most closely associated with broad-leafed trees and shrubs, but with conifers usually present too.
<i>Dendroica tigrina</i>	Cape May Warbler				S2B	In summer, the Cape May warbler is found in northern conifer forests. One of several warbler species that attain high densities during spruce budworm outbreaks, but is more usual in mature spruces than in balsam fir stands. Activity is mostly at the tops of tall spruces. Rarely observed in the southwest of Nova Scotia due to unsuitable habitat.
<i>Chaetura pelagica</i>	Chimney Swift	Th	Th	Endangered	S2B, S1M	The chimney swift is most often seen on the wing and while entering their nesting places; these are often in chimneys or old cabins in the forest, but most swifts originally nested, and still nest in hollow trees.
<i>Chordeiles minor</i>	Common Nighthawk	Th	Th	Threatened	S2B	Common nighthawks nest on sparsely vegetated or bare ground in open "wastelands" such as pine barrens, forest cut-overs, or burns, and secondarily on flat roofs of buildings.
<i>Sialia sialis</i>	Eastern Bluebird		NAR		S3B	The Eastern bluebird nests in woodpecker holes, as well as nest-boxes. They forage in open areas of low vegetation with scattered trees for nesting.
<i>Tyrannus tyrannus</i>	Eastern Kingbird				S3B	In its breeding range, the eastern kingbird uses open environments; usually breeds in fields with scattered shrubs and trees, orchards, along shelterbelts, and especially along woodland edges in forested regions. A "savannah species", but given suitable nest sites and perches, will nest in many other habitats—e.g., desert riparian, quaking aspen ( <i>Populus tremuloides</i> ) parkland, recently burned forest, beaver ponds, golf courses and forested river valleys, and urban environments with tall trees and scattered open spaces. Also appears drawn to water; often nests densely in trees that overhang water or in dead, standing snags surrounded by water.

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<i>Contopus virens</i>	Eastern Wood-Pewee	SC	SC	Vulnerable	S3S4B	The Eastern Wood-pewee is a bird of openings and edges more than of closed forest, in the Maritimes, and they readily use well-spaced shade trees in rural and urban settlements. Associated with broad-leafed trees.
<i>Coccothraustes vespertinus</i>	Evening Grosbeak	No Status	SC	Vulnerable	S3S4B, S3N	Evening Grosbeaks breed in mature and second-growth coniferous forests of northern North America and the Rocky Mountains, including spruce-fir, pine-oak, pinyon-juniper, and aspen forests. Less commonly, they nest in deciduous woodlands, parks, and orchards. They breed as far south as Mexico at 5,000–10,000 feet of elevation in pine and pine-oak woodlands. In winter Evening Grosbeaks live in coniferous forest and deciduous forest as well as in urban and suburban areas. When wintering in urban environments they are most abundant in small woodlots near bird feeders
<i>Dumetella carolinensis</i>	Gray Catbird				S3B	The Gray Catbird inhabits shrubbery in both upland and river-edge situations, mostly in areas where tree cover is of broad-leafed species. The Maritimes are at the northeast edge of its range, and catbirds are nearly absent in upland areas of northern New Brunswick, in Prince Edward Island and Cape Breton Island, as well as in regions with extensive conifer forest cover.
<i>Perisoreus canadensis</i>	Gray Jay				S3	The Gray Jay breeds in boreal regions and occurs year-round in the conifer forests. These birds are found all over the Maritimes except where extensive conifer forests are lacking. They seldom leave the spruce and fir forests where they nest.
<i>Tringa melanoleuca</i>	Greater Yellowlegs				S3B, S3S4M	During migration, the greater yellowlegs is a familiar sight in salt marshes and around ponds and rivers, but their breeding habitat is very different. Yellowlegs breed in wooded bogs and muskegs access the boreal forest from northern British Columbia and Mackenzie to Labrador, Newfoundland and eastern Nova Scotia.
<i>Charadrius vociferus</i>	Killdeer				S3B	The killdeer is found throughout Nova Scotia, but scarce on the Atlantic slope and on Cape Breton Island. Breed in



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						farmlands, gravel pits, forest clear-cut areas, and open lands along the coast.
<i>Tringa flavipes</i>	Lesser Yellowlegs				S3M	Breeds in open boreal forest with scattered shallow wetlands. Winters in wide variety of shallow fresh and saltwater habitats.
<i>Asio otus</i>	Long-eared Owl				S2S3	The long-eared owl frequents woodlands large or small, dense or open, conifer or broad-leafed, at all seasons, but it also forages over open areas.
<i>Accipiter gentilis</i>	Northern Goshawk		NAR		S3S4	Though it is more generally found in the boreal forest region, likely because less often disturbed there, the Northern goshawk is also widespread in more temperate habitats. It nests in most forest types found throughout its geographic range. In eastern deciduous forests, Goshawks prefer nesting in mature, mixed hardwood–hemlock stands of birch ( <i>Betula</i> sp.), beech ( <i>Fagus</i> sp.), maple ( <i>Acer</i> sp.), and eastern hemlock. Found scattered throughout the forests of the Maritimes. Hunts in diverse habitats ranging from open-sage steppes to dense forests, including riparian areas.
<i>Mimus polyglottos</i>	Northern Mockingbird				S1B	The Northern mockingbird uses open habitats with scattered shrubs and small trees. In the East, typical habitats are parkland, cultivated lands, and early successional habitat at low elevations. Throughout its range found in suburban and urban habitats such as gardens and cemeteries, especially favoring mowed lawns adjacent to bare areas (e.g. concrete, asphalt, and sidewalks) with access to shrubs or hedges for cover and nesting. Absent from the interior of all forested habitat but frequents forest edge. Found in the same habitat year-round.
<i>Contopus cooperi</i>	Olive-sided Flycatcher	Th	Th	Threatened	S2B	The olive-sided flycatcher is found in open woodlands and other places where scattered trees remain after cutting or fire in forested regions. Found throughout the Maritimes, but not abundantly.

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<i>Vireo philadelphicus</i>	Philadelphia Vireo				S2?B	This Philadelphia vireo is found mainly in broad-leaved trees, in pure or mixed woods, but it sings and forages more often in young stands and in the sub-canopy. Breeding has never been proven in Nova Scotia.
<i>Pinicola enucleator</i>	Pine Grosbeak				S2S3B, SN5	In the Maritimes, the pine grosbeak approaches the southern limit of its range, they are found generally in Nova Scotia. In general, they avoid warmer, hardwood-dominated regions.
<i>Carduelis pinus</i>	Pine Siskin				S2S3	The pine siskin is primarily found in open coniferous forests. Also breeds in ornamental conifers in parks, cemeteries, and the like, and in mixed coniferous-deciduous and even deciduous tree associations. May forage in trees, shrubs, and grassy areas.
<i>Setophaga pinus</i>	Pine Warbler				S1B	Pine Warblers spend most of their time in pine trees. This can be in pine forests or in deciduous woods with pine mixed in. They are found in similar habitats in winter, but also visit backyards and come to bird feeders to eat seeds and suet.
<i>Haemorhous purpureus</i>	Purple Finch				S4S5B, S3S4N	Purple finches are mostly found in moist, cool conifer forests. They are also found in mixed forests along streams and in tree-lined suburbs.
<i>Loxia curvirostra</i>	Red Crossbill				S3S4	Red Crossbills are found in mature coniferous forests.
<i>Sitta canadensis</i>	Red-breasted Nuthatch				S3	Red-breasted nuthatches live mainly in deciduous woods and in coniferous forests.
<i>Pheucticus ludovicianus</i>	Rose-breasted Grosbeak				S2S3B	Rose-breasted grosbeaks use a wide variety of habitats, including deciduous and mixed wooded uplands and lowlands; often at shrubby ecotones at the edge of woods at streams, ponds, marshes, roads, or pastures. Also commonly uses second-growth woodlands and well-vegetated suburban areas, parks, gardens, and orchards. Exhibits a preference for mesic woodlands, swamp forests, riparian corridors; avoids dry oak ( <i>Quercus</i> spp.) woodlands. Uses a wide variety of habitats during spring and fall migration.

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<i>Regulus calendula</i>	Ruby-crowned Kinglet				S3S4B	Ruby-crowned Kinglets prefer spruce-fir forests, however they also live in mixed wood forests, isolated trees in meadows, coniferous and deciduous forests, mountain-shrub habitat, and floodplain forests of oak, pine, spruce or aspen.
<i>Euphagus carolinus</i>	Rusty Blackbird	SC	SC	Endangered	S2B	Rusty blackbirds use wet coniferous and mixed forests from northern edge of tundra southward to beginning of deciduous forests and grasslands. Frequents fens, alder ( <i>Alnus</i> )–willow ( <i>Salix</i> ) bogs, muskegs, beaver ponds, and other openings in the forest such as swampy shores along lakes and streams. Exceptionally, on Cape Breton Island, Nova Scotia, drier sites such as pasture edges are used. During spring and fall migration, it forages in stubble, pasture, plowed fields, and edges of swamps. Fall migrants also frequent wooded areas, particularly for roosting. Occasionally roosts on the ground in open fields.
<i>Asio flammeus</i>	Short-eared Owl	SC	SC		S1S2B	In the Maritimes, the short-eared owl has bred in dyked wet meadows and marshes, and in coastal bogs and grasslands. Also known to nest in agricultural areas. They are associated with open country supporting cyclic small mammals (i.e. voles and lemmings).
<i>Catharus ustulatus</i>	Swainson's Thrush				S3S4B	Swainson's Thrush are predominantly found in closed-canopy forests. Breeding habitat includes deciduous and coniferous forests.
<i>Vermivora peregrina</i>	Tennessee Warbler				S3S4B	In its breeding range, the Tennessee warbler is associated with Boreal zone in deciduous, mixed, and coniferous forests from near sea level to 450 m. Associated with open areas that contain grasses, dense shrubs, and scattered clumps of young deciduous trees.
<i>Catharus fuscescens</i>	Veery				S3S4B	Veeries breed in rich deciduous woodland and forest with well-developed understory across northern North America.
<i>Vireo gilvus</i>	Warbling Vireo				S1B	Throughout range, shows a strong association with mature mixed deciduous woodlands especially along streams, ponds, marshes, and lakes but sometimes in upland areas away from





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						water. Also found in young deciduous stands that emerge after a clear-cut. Other habitats include urban parks and gardens, orchards, farm fencerows, campgrounds, deciduous patches in pine forests, mixed hardwood forests, and, rarely, pure coniferous forests. During spring and fall migration, it appears to use a wide variety of forested (similar to breeding) and shrubby habitats and can be found in trees of urban areas.
<i>Empidonax traillii</i>	Willow Flycatcher				S2B	In general, the willow flycatcher prefers moist, shrubby areas, often with standing or running water. During spring and fall migration, it uses areas similar to its breeding habitat.
<i>Gallinago delicata</i>	Wilson's Snipe				S3B	The Wilson's snipe breeds in sedge bogs, fens, willow ( <i>Salix</i> spp.) and alder ( <i>Alnus</i> spp.) swamps, and marshy edges of ponds, rivers, and brooks. Requires soft organic soil rich in food organisms just below surface, with clumps of vegetation offering both cover and good view of approaching predators. Avoids marshes with tall, dense vegetation (cattails [ <i>Typha</i> ], reeds [ <i>Phragmites</i> ], etc.). In Canada, they use four primary types of breeding habitat: sedge bogs, fens, swamps, and pond and river edges. During spring and fall migration, they use marshes (including cattails), swamps, wet meadows, wet pastures, wet fallow fields, and marshy edges of streams and ditches. As during the breeding season, they require wet organic soils rich in food with clumps of cover.
<i>Wilsonia pusilla</i>	Wilson's Warbler				S3B	Western montane, northern, and northeastern populations of Wilson's warbler are restricted to mesic shrub thickets of riparian habitats, edges of beaver ponds, lakes, bogs, and overgrown clear-cuts of montane and boreal zone; may reach into alpine zone. During spring and fall migration, occurs in most deciduous shrub habitats, but primarily riparian shrub understory. Also found in most other woodlands, suburban habitats, agricultural areas, desert scrub, and montane forests.

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<i>Hylocichla mustelina</i>	Wood Thrush	Th	Th		SUB	The wood thrush breeds in the interior and edges of deciduous and mixed forests, especially well-developed, upland, mesic ones. Key elements of breeding sites include: trees >16 m in height, high variety of deciduous tree species, moderate subcanopy and shrub density, shade, fairly open forest floor, moist soil, and decaying leaf litter. Habitat use during spring and fall migration is poorly documented, in fall probably uses second-growth and forest-edge habitats with fruit. No data for spring transients to suggest deviation from breeding season habitats.
<i>Empidonax flaviventris</i>	Yellow-bellied Flycatcher				S3S4B	The yellow-bellied flycatcher is a characteristic breeding bird of Canadian boreal conifer forests and peatlands. It nests in typically cool, moist conifer or mixed forests, bogs, swamps, and muskegs; landscapes often flat or poorly drained. Breeding habitat is usually well stratified, with open canopy, saplings and seedlings, shrubs, and abundant, thick moss cover. Shade is provided by conifer trees and saplings, as well as layers of shrubs, ferns, and herbs; undergrowth is usually dense.
Other Vertebrates						
<i>Perimyotis subflavus</i>	Tri-colored Bat (formerly known as Eastern Pipistrelle)	E	E	Endangered	S1	Prefers partly open country with large trees and woodland edges. Avoids deep woods and open fields. Probably roosts in the summer in tree foliage and occasionally in buildings; may use cave as night roost between foraging forays. Usually hibernates in caves and mines with high humidity. Generally, maternity colonies utilize manmade structures or tree cavities; often in open sites that would not be tolerated by most other bats
<i>Lasiurus borealis</i>	Eastern Red Bat				S1S2B, S1M	The red bat lives in forests, forest edges and hedgerows. It roosts among foliage, usually in deciduous trees, but it will sometimes roost in coniferous trees.



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<i>Hemidactylum scutatum</i>	Four-toed Salamander				S3	The habitat of the four-toed salamander is moist mossy woods, particularly in peat moss. Peat bogs or mossy areas bordering streams are good breeding sites. Adults lay eggs deep between the moss plants. The little larvae live in the water for a short while, then move to live on land. The four-toed salamander is the least common salamander species in Nova Scotia, and most reports are from the south central part of the province.
<i>Pekania pennants</i>	Fisher				S3	Fishers inhabit upland and lowland forests, including coniferous, mixed, and deciduous forests. They occur primarily in dense coniferous or mixed forests, including early successional forest with dense overhead cover. Fishers commonly use hardwood stands in summer but prefer coniferous or mixed forests in winter. They generally avoid areas with little forest cover or significant human disturbance.
<i>Lasiurus cinereus</i>	Hoary Bat				S1S2B, S1M	Hoary bats are thought to be rare in Nova Scotia. Insectivorous, migratory. Poorly known. Authorities disagree as to the bat's preference for coniferous versus broadleaf trees. Hoary bats are thought to prefer trees at the edge of clearings, but have been found in trees in heavy forests, open wooded glades, and shade trees along urban streets and in city parks.
<i>Myotis lucifugus</i>	Little Brown Myotis	E	E	Endangered	S1	For <i>Myotis lucifugus</i> , the maternity colonies often exist in warm sites that facilitate pup growth rates, such as attics of buildings and under bridges, in rock crevices, or in cavities of canopy trees in forests. Males roost during daytime in a wide variety of structures, including buildings and bridges (mainly <i>M. lucifugus</i> ), rock crevices, behind flaking bark, and within tree cavities, often at many different sites during the summer. <i>Myotis</i> species generally roost in tall, large-diameter snags that are in the early to middle stages of decay and



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						located in open areas within mature-over mature forest. <i>Myotis lucifugus</i> congregates in caves and abandoned mines used for hibernation through the winter. About 16 hibernation sites are known in Nova Scotia.
<i>Sorex maritimensis</i>	Maritime Shrew				S3	The maritime shrew is most often found in marshes and wet meadows. It is only found in two provinces in Canada: New Brunswick and Nova Scotia.
<i>Alces americana</i>	Moose			Endangered	S1	Moose are herbivores who live in boreal and mixed-wood forests. They are often found where there is an abundance of food (twigs, stems, and foliage of young deciduous trees and shrubs). In spring, islands and peninsulas are often used by cows when giving birth. In summer, access to wetlands (and aquatic vegetation) is important.
<i>Myotis septentrionalis</i>	Northern Long-eared Myotis	E	E	Endangered	S1	The Northern Long-eared Bat ( <i>Myotis septentrionalis</i> ) is found in many regions of Canada. Although there are numerous records of its presence in eastern Canada and the United States, it has only been recorded sporadically in the west. This particular type of bat has two habitats: a winter hibernation habitat as well as a summer roosting and foraging habitat. The Northern Long-eared Bat hibernates in caves or abandoned mines during the cold winter months. During the summer months the Bats commonly use crevices behind peeling bark or cavities in partially-decayed trees as summer day roosts. Within thick forests, summer activity may be focused along watercourses and small ponds
<i>Microtus chrotorrhinus</i>	Rock Vole				S2	Optimal habitat for the rock vole is ferns/mossy debris near flowing water in coniferous forests. It also occupies deciduous forest/spruce clear cuts (mainly recent cuts), forest ecotones, grassy balds near forest, and sterile-looking rocky road fills. Occupies shallow burrows and runways. Nests probably are placed under logs or in similar protected sites. They are made of moss with a lining of grass



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						and have multiple entrance tunnels. Breeding season is from March to mid-October.
<i>Lasionycteris noctivagans</i>	Silver-haired Bat				SUB, S1M	Scarce in eastern Canada. During the summer months, silver-haired bats are found in forested habitats, particularly coniferous woodlands, adjacent to aquatic habitats like ponds, lakes and streams. Both sexes fly south between the middle of August and early October.
<i>Chelydra serpentina</i>	Snapping Turtle	SC	SC	Vulnerable	S3	southern New Brunswick and parts of mainland Nova Scotia in ponds, lakes, slow-moving streams and sometimes in brackish water if these water bodies have soft mud bottoms and abundant aquatic vegetation
<i>Glyptemys insculpta</i>	Wood Turtle	T	T	Threatened	S2	Habitat destruction and fragmentation due to intense development and accompanying stream alterations are serious problems in the southeastern portion of the Wood Turtle's range. protection of wooded stream corridors, nesting, feeding, basking, and overwintering sites, and an upland buffer would be necessary to include in preserve design Lives along permanent streams during much of each year, but in summer may roam widely overland and can be found in a variety of terrestrial habitats adjacent to streams, from deciduous woods, cultivated fields, and woodland bogs, to marshy pastures. Use of woodland bogs and marshy fields is most common in the northern part of the range
<b>Fish</b>						
<i>Anguilla rostrata</i>	American Eel		T		S2	American Eels move from salt water into fresh water when quite young and spend their adult life in fresh water returning to spawn in tropical oceans up to several decades later. Widely distributed in freshwaters, estuaries and coastal marine waters connected to the Atlantic Ocean. Although small streams may be critical to the persistence of eels in a watershed, they may use these streams only once or

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						twice a year, while moving to and from more preferred habitats.
<i>Salmo salar</i>	Atlantic Salmon – Southern Uplands Population		E		S1	Found in freshwater rivers and streams that are clear, cool, and well oxygenated, with gravel, cobble, or boulder bottoms.
<i>Salvelinus fontinalis</i>	Brook Trout				S3	Brook Trout prefer cool, slow-moving water.
<i>Culaea inconstans</i>	Brook Stickleback				S3	This species generally occupies cool, clear, heavily weeded, spring-fed creeks, small rivers, lakes, and ponds, usually in shallow, quiet to flowing pools and backwaters over sand or mud. Sometimes it burrows into soft bottoms. Occasionally this fish can be found in brackish water. In a lake in Manitoba, adults were most abundant at the outer margin of emergent vegetation (Moodie 1986). Eggs are deposited in a nest made of plant material by the male just above the bottom in shallow water
<i>Margariscus margarita</i>	Pearl Dace				S3	Prefers small cool streams, either clear or turbid. They spawn in clear water at depths of 1-2 feet over a gravel-sand bottom.
Vascular Plants						
<i>Isoetes acadiensis</i>	Acadian Quillwort				S3	In water up to depth of 1m, bordering lakes, ponds or along rivers, infrequent but scattered through province.
<i>Rhamnus alnifolia</i>	Alder-leaved Buckthorn				S3	Grows in wooded swamps or bogs, meadows or alluvial soils in the alkaline regions, in Hants, Cumberland and Inverness Counties.
<i>Vaccinium uliginosum</i>	Alpine Bilberry				S3	Wide tolerance of moisture and fertility, but generally acidic soils in Halifax, Digby & Cape Breton
<i>Viola sagittata</i>	Arrow-Leaved Violet				S3S4	Sterile woods, clearing and fields, common from Yarmouth to Halifax and Hants Counties.
<i>Viola sagittata var. ovata</i>	Arrow-Leaved Violet				S3S4	Sterile woods, clearing and fields, common from Yarmouth to Halifax and Hants Counties
<i>Salix serissima</i>	Autumn Willow				S1	Fens (calcium-rich wetlands), meadows and fields, swamps

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<i>Fraxinus nigra</i>	Black Ash			Threatened	S1S2	Typical habitat includes poorly drained soils and swampy woods
<i>Verbena hastata</i> <i>var. hastata</i>	Blue Vervain				S3	Limited to mucky fertile soils, as along floodplains.
<i>Carex tribuloides</i> <i>var. tribuloides</i>	Blunt Broom Sedge				S3	Found in wet forest soils and swales.
<i>Galium obtusum</i> <i>ssp. obtusum</i>	Blunt-leaved Bedstraw				S2S3	swamps, swampy grounds, wet areas of prairies, wet woods and thickets, roadside ditches.
<i>Potamogeton obtusifolius</i>	Blunt-leaved Pondweed				S3	Ponds, pools, lakes and sluggish streams often over deep mucky substrate. Northern from Cumberland Co., to northern Cape Breton.
<i>Betula pumila</i> <i>var. renifolia</i>	Bog Birch				S1?	Bogs and meadows amongst alders
<i>Betula pumila</i> <i>var. pumila</i>	Bog Birch				S3	Bogs and meadows amongst alders
<i>Salix pedicellaris</i>	Bog Willow				S2	Grows in acidic substrate as in bogs; nutrient-rich marshes and in sphagnous lacustrine habitats.
<i>Bromus latiglumis</i>	Broad-Glumed Brome				S1	Floodplain (river or stream floodplains), forests, shores of rivers or lakes.
<i>Lilium canadense</i> <i>ssp. canadense</i>	Canada Lily				S2	Meadows, floodplains and streamsides.
<i>Polygonum careyi</i>	Carey's Smartweed				S1	Anthropogenic (man-made or disturbed habitats), meadows and fields, shores of rivers or lakes.
<i>Galium aparine</i>	Common Bedstraw				S2S3	Pastures, fields, ditches and streamsides. Very common throughout.
<i>Pinguicula vulgaris</i>	Common Butterwort				S1	Grows in moist habitats as on rock ledges and streamsides, especially of basic rocks.
<i>Humulus lupulus</i> <i>var. lupuloides</i>	Common Hop				S1?	Anthropogenic (man-made or disturbed habitats), floodplain (river or stream floodplains), forests, shrublands or thickets.
<i>Equisetum hyemale</i>	Common Scouring-rush				S3S4	Grows in sandy, gravelly soil, on banks or in low areas; often in calcareous regions. Scattered, mostly from Digby County, through the Annapolis Valley, northward to Cape Breton.

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<i>Equisetum hyemale</i> var. <i>affine</i>	Common Scouring-rush				S3S4	Grows in sandy, gravelly soil, on banks or in low areas; often in calcareous regions. Scattered, mostly from Digby County, through the Annapolis Valley, northward to Cape Breton.
<i>Cardamine pratensis</i> var. <i>angustifolia</i>	Cuckoo Flower				S1	Moist soil as in meadows, damp fields and other low ground. Scattered in the province, frequent along the Annapolis River and even spreading into roadsides ditches, north to Cape Breton.
<i>Rudbeckia laciniata</i>	Cut-Leaved Coneflower				S1S2	Floodplain (river or stream floodplains), forests, shores of rivers or lakes, swamps, wetland margins (edges of wetlands).
<i>Rudbeckia laciniata</i> var. <i>gaspereauensis</i>	Cut-Leaved Coneflower				S1S2	Floodplain (river or stream floodplains), forests, shores of rivers or lakes, swamps, wetland margins (edges of wetlands).
<i>Epilobium strictum</i>	Downy Willowherb				S3	Bogs and other peatlands; Scattered throughout Cape Breton, infrequent elsewhere.
<i>Goodyera pubescens</i>	Downy Rattlesnake-Plantain				S2	Forms large colonies in woodlands and thickets; Only recently discovered in Nova Scotia (1963) and so far known from Queens, Kings, Annapolis, Hants and Halifax counties.
<i>Solidago latissimifolia</i>	Elliott's Goldenrod				S3S4	Clearings, thickets and bogs, swales and lakeshores. Common in Yarmouth Co., east to Halifax Co.
<i>Stellaira crassifolia</i> and var. <i>crassifolia</i>	Fleshy Stitchwort				S1	Frequents pond edges and wet seepy slopes.
<i>Panicum dichotomiflorum</i> var. <i>puritanorum</i>	Fall Panic Grass				S1?	Anthropogenic (man-made or disturbed habitats), shores of rivers or lakes.
<i>Potamogeton zosteriformis</i>	Flat-stemmed Pondweed				S3	Lacustrine (in lakes or ponds), riverine (in rivers or streams).
<i>Carex alopecoidea</i>	Foxtail Sedge				S1	Anthropogenic (man-made or disturbed habitats), floodplain (river or stream floodplains), forests, marshes.
<i>Zizia aurea</i>	Golden Alexanders				S1	Meadows, shores, thickets and even wooded swamps. Occasionally reported: Pomquet and South River, Antigonish Co., Upper Musqhodoit, Halifax Co.
<i>Lycopodium sabinifolium</i>	Ground-Fir				S3?	Alpine or subalpine zones, anthropogenic (man-made or disturbed habitats), meadows and fields.



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<i>Carex haydenii</i>	Hayden's Sedge				S1	Marshes, meadows and fields, shores of rivers or lakes
<i>Platanthera hookeri</i>	Hooker's Orchid				S3	Grows in open dry forests of mixed conifers. Scattered in most of the province, local in the southwestern counties. So far absent from the eastern shore.
<i>Carex grisea</i>	Inflated Narrow-leaved Sedge				S1	Floodplain (river or stream floodplains), forests.
<i>Botrychium lanceolatum</i> var. <i>angustisegmentum</i>	Lance-Leaf Grape-Fern				S2S3	Fertile soils on woodland hillsides.
<i>Carex lapponica</i>	Lapland Sedge				S1?	Sphagnum bogs, wet, nutrient-poor areas, mostly lowlands
<i>Hypericum majus</i>	Large St John's-wort				S2	Wet or dry open soil. Widely scattered locations. Until recently, only known from Halifax area and Big Baddeck, Victoria County, and thought to be historic.
<i>Carex granularis</i>	Limestone Meadow Sedge				S1	Anthropogenic (man-made or disturbed habitats), meadows and fields, shores of rivers or lakes, wetland margins (edges of wetlands).
<i>Schizaea pusilla</i>	Little Curlygrass Fern				S3S4	Sphagnum wet areas, upper peaty lakeshores and undrained depressions. Scattered throughout the Atlantic counties and frequent in the northern plateau of Cape Breton.
<i>Liparis loeselii</i>	Loesel's Twayblade				S3S4	Anthropogenic (man-made or disturbed habitats), fens (calcium-rich wetlands), lacustrine (in lakes or ponds), meadows and fields, shores of rivers or lakes.
<i>Equisetum palustre</i>	Marsh Horsetail				S1	Of wetlands, marshes and swamps. A single collection each from Kings County and Halifax Co.
<i>Hordeum brachyantherum</i>	Meadow Barley				S1	Anthropogenic (man-made or disturbed habitats).
<i>Hordeum brachyantherum</i> ssp. <i>brachyantherum</i>	Meadow Barley				S1	Anthropogenic (man-made or disturbed habitats).
<i>Allium burdickii</i>	Narrow-Leaved Wild Leek				S1?	rich deciduous woodlands, wooded bluffs, wooded areas along rivers and streams, and cemetery prairies

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<i>Ophioglossum pusillum</i>	Northern Adder's-tongue				S2S3	Sterile soils, swamps and sandy or cobbly lakeshores. Known from Yarmouth and Digby Counties; scattered east to Halifax and Amherst; a single Cape Breton record from George River.
<i>Betula borealis</i>	Northern Birch				S2	Bogs and wooded swamps.
<i>Viola nephrophylla</i>	Northern Bog Violet				S2	Cool, mossy sites: bogs, streamsides and wet woods. Rare in Shelburne Co., Colchester and Cumberland counties northward. Generally, a northern ranging species within NS.
<i>Geocaulon lividum</i>	Northern Comandra				S3	Damp sands and other sterile soils, especially in acid or peaty sites. Disjunct sites in Halifax, Kings and Cumberland counties; widespread but local in Cape Breton.
<i>Spiraea septentrionalis</i>	Northern Meadowsweet				S1?	open, moist areas
<i>Eleocharis ovata</i>	Ovate Spikerush				S2?	Grows on muddy streamsides, streambeds and lakeshores, often in subsiding water.
<i>Torreyochloa pallida</i> var. <i>pallida</i>	Pale False Manna Grass				S1	Lacustrine (in lakes or ponds), riverine (in rivers or streams), swamps.
<i>Platanthera flava</i> var. <i>herbiola</i>	Pale Green Orchid				S2	Anthropogenic (man-made or disturbed habitats), floodplain (river or stream floodplains), forest edges, forests, fresh tidal marshes or flats, grassland, meadows and fields, riverine (in rivers or streams), shrublands or thickets, swamps, wetland margins (edges of wetlands), woodlands.
<i>Carex plantaginea</i>	Plantain-Leaved Sedge				S1	Forests
<i>Carex wiegandii</i>	Wiegand's Sedge				S3	Treed bogs, bogs, conifer and alder thickets
<i>Carex argyrantha</i>	Silvery Flowered Sedge				S3S4	Sandy soils in thickets and clearings. Dryish forests
<i>Lachnanthes caroliniana</i>	Redroot		SC	Vulnerable	S2	Shores of rivers or lakes.
<i>Eleocharis erythropoda</i>	Red-stemmed Spikerush				S1	Fens (calcium-rich wetlands), marshes, shores of rivers or lakes, wetland margins (edges of wetlands).
<i>Antennaria rosea</i> and <i>ssp. arida</i>	Rosy Pussytoes				S1	Dry, open places, meadows, and open woods. It has very recently been confirmed at Cape d'Or.

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<i>Eriophorum gracile</i>	Slender Cottongrass				S2S3	wet peat and inundated shores. Scattered eastward from Annapolis and Halifax counties.
<i>Eriophorum gracile</i> <i>var. gracile</i>	Slender Cottongrass				S2S3	wet peat and inundated shores. Scattered eastward from Annapolis and Halifax counties.
<i>Cypripedium reginae</i>	Showy Lady's-Slipper				S2	bog, swamp. Widely scattered localities in province
<i>Silene antirrhina</i>	Sleepy Catchfly				S1	roadsides, railways, pastures, fields wastegrounds, alluvial woods. Recently found in CFB Greenwood.
<i>Agalinis paupercula</i>	Small-flowered Agalinis				S1	meadows and fields, shores of rivers or lakes, wetland margins
<i>Neottia bifolia</i>	Southern Twayblade				S3	Bog, mixed wood forest, swamps. Scattered from Shelburne, to Halifax, to Kings to Cape Breton counties
<i>Halenia deflexa</i> <i>ssp. brentoniana</i>	Spurred Gentian				S1?	forest edge, forests, meadows and fields
<i>Potamogeton pulcher</i>	Spotted Pondweed			Vulnerable	S2S3	aquatic perennial herb that grows in standing water. Yarmouth, Queens and Halifax Counties, reported in Digby Co.
<i>Panicum tuckermanii</i>	Tuckerman's Panic Grass				S3S4	meadows and fields, shores of rivers and lakes
<i>Equisetum variegatum</i>	Variiegated Horsetail				S3	wetlands or wet seeps. Wide ranging in NS, with disjunct localities: Halifax County, Cumberland Co., Victoria Co.
<i>Equisetum variegatum</i> <i>var. variegatum</i>	Variiegated Horsetail				S3	wetlands or wet seeps. Wide ranging in NS, with disjunct localities: Halifax County, Cumberland Co., Victoria Co.
<i>Carex peckii</i>	White-Tinged Sedge				S2?	Dry or mesic slopes, mixed deciduous forests, rocky outcrops, old quarries. King's Co., Rhodes Co., Lunenburg Co. Halifax and the Pennants area.
<i>Lysimachia quadrifolia</i>	Whorled Yellow Loosestrife				S1	Disturbed habitat, grassland, woodlands

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<i>Vallisneria americana</i>	Wild Celery				S2	Ponds, lakes, and quiet streams at depths of 1 to 4 m. Colchester Co., Halifax Co., Cumberland Co., Reported from Northern Cape Breton
<i>Allium schoenoprasum</i>	Wild Chives				S2	disturbed habitats, floodplain, meadows and fields, ridges or ledges, shores of rivers and lakes.
<i>Allium schoenoprasum var. sibiricum</i>	Wild Chives				S2	disturbed habitats, floodplain, meadows and fields, ridges or ledges, shores of rivers and lakes.
<i>Allium tricoccum</i>	Wild Leek				S1	hardwood forest, intervale
<i>Juncus subcaudatus</i>	Woods-Rush				S3	Conifer woods and spruce swamps, where substrate is soggy. Yarmouth to Kings and Halifax Counties. Richmond County
<i>Juncus subcaudatus var. planisepalus</i>	Woods-Rush				S3	Conifer woods and spruce swamps, where substrate is soggy. Yarmouth to Kings and Halifax Counties. Richmond County
<i>Bartonia virginica</i>	Yellow Bartonia				S3	Dry barrens, sandy or peaty soils, bogs, lakeshores. Common in southwestern counties becoming scarcer east to Annapolis and Halifax; St. Peter's area of Cape Breton
Lichens						
<i>Anzia colpodes</i>	Black-foam Lichen	No Status	Th	Threatened	S3	This species occurs on the bark of hardwoods, and more rarely conifers, in humid forested habitats throughout temperate eastern North America.
<i>Cladina stygia</i>	Black-footed Reindeer Lichen				S3?	Most frequent in peatlands, particularly treeless bogs
<i>Leptogium corticola</i>	Blistered Jellyskin Lichen				S3	This lichen species is widespread and grows on the bases of hardwoods and occasionally on rocks in moist woods.
<i>Collema furfuraceum</i>	Blistered Tarpaper Lichen				S3	On bark of hardwood and sometimes coniferous trees, especially in old forests.
<i>Degelia plumbea</i>	Blue Felt Lichen	SC	SC	Vulnerable	S3	Mature forests within varying moisture regimes. Typically located in hardwood stands, with Red maple, Sugar maple, or Yellow Birch.

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<i>Erioderma pedicellatum</i> (Atlantic pop.)	Boreal Felt Lichen - Atlantic pop.	E	E	Endangered	S1	Mature to over mature Balsam Fir trees in open softwood forests with little to no regenerating understory. Typically, though not necessarily found in or near wetlands or wetland margins
<i>Physconia detersa</i>	Bottlebrush Frost Lichen				S3S4	On bark and wood; occasionally on rock.
<i>Pseudevernia consocians</i>	Common Antler Lichen				S1?	Grows on conifers in forest.
<i>Sclerophora peronella</i> (Nova Scotia pop.)	Frosted Glass-whiskers Lichen - Nova Scotia pop.	SC	SC		S1?	Tiny lichen stubble lichen, wood and bark of older trees in old growth forests. Stable humidity, minimal temperature fluctuations, and intermediate light.
<i>Erioderma mollissimum</i>	Graceful Felt Lichen (Vole Ears Lichen)	E	E	Endangered	S1S2	Mature to over mature Balsam Fir trees in open softwood forests with little to no regenerating understory. Typically, though not necessarily found in or near wetlands or wetland margins
<i>Psoroma hypnorum</i>	Green moss-shingle Lichen				S1	Among mosses on soil, wood, peat, rock and sometimes bark.
<i>Parmeliopsis ambigua</i>	Green Starburst Lichen				S2S3	Grows on conifer stumps, logs and bark in full sun.
<i>Fuscopannaria praetermissa</i>	Moss Shingles Lichen				S1	On mossy tree bases, occasionally on moist soil or damp rocks
<i>Nephroma bellum</i>	Naked Kidney Lichen				S3	On branches and twigs of trees especially conifers, and also on mossy rocks in humid forests.
<i>Sticta fuliginosa</i>	Peppered Moon Lichen				S3	Grows on mossy bark
<i>Sticta limbata</i>	Powdered Moon Lichen				S1S2	Grows on bark or over mosses on trees. Grows on Fagus in high-elevation deciduous forests; also rare at lower elevations
<i>Everniastrum catawbiense</i>	Powder-tipped Antler Lichen				S2S3	Found on branches and twigs of deciduous shrubs and conifer trees
<i>Fuscopannaria leucosticta</i>	Rimmed Shingles Lichen				S2S3	Found on bark or occasionally rocks often among mosses



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<i>Massalonia carnosa</i>	Rockmoss Rosette Lichen				S1S2	Grows on mosses or mossy rocks.
<i>Heterodermia squamulosa</i>	Scaly Fringe Lichen				S3	Found on trees, especially mossy tree bases in hardwood forests
<i>Leptogium lichenoides</i>	Tattered Jellyskin Lichen				S3	Grows on mossy rock
<i>Peltigera collina</i>	Tree Pelt Lichen				S2?	Most common on tree trunks and branches, especially among mosses, less frequently on mossy rocks, rarely on soil.
<i>Pannaria lurida</i>	Veined Shingle Lichen (Wrinkled Shingle Lichen)	No Status	Th	Threatened	S1S2	May be found on bark and the bases of trees in the open woods and roadsides
Invertebrates						
<i>Euphydryas phaeton &amp; Euphydryas phaeton phaeton</i>	Baltimore Checkerspot				S2S3	Found in fresh-water marshes, wet roadsides and meadows. Larvae found feeding on Turtlehead ( <i>Chelone glabra</i> ) and has been reported to feed on beardtongue ( <i>Penstemon digitalis</i> ).
<i>Neurocordulia michaeli</i>	Broadtailed Shadowdragon				S1	Clean medium to large forested rivers.
<i>Alasmidonta varicosa</i>	Brook Floater	SC	SC	Threatened	S1S2	Flowing rivers of creeks with stable sand or gravel substrate. Confirmed in the following watersheds: Salmon (Guysborough County), St. Marys, Wallace, French River (Mattatall Lake), Gays, Annapolis and LaHave Rivers.
<i>Ophiogomphus aspersus</i>	Brook Snaketail				S2S3	Brook Snaketails need undisturbed fields and wooded uplands adjacent to breeding waters. It is here that critical foraging and breeding occurs. This species inhabits clean, relatively quiet or slow moving streams with an abundance of sandy sediments.
<i>Somatochlora tenebrosa</i>	Clamp-Tipped Emerald				S3	River- breeding dragonfly.
<i>Amblyscirtes vialis</i>	Common Roadside-Skipper				S3S4	Found in trails, roads in wooded areas and often near streams. Larvae are found feeding off of a variety of grass species.



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<i>Strophitus undulatus</i>	Creeper				S1	This species is a habitat generalist, with a wide distribution. It is usually found in streams and rivers in a range of flow conditions (rarely in high-gradient streams of mountainous regions) but can tolerate lakes and ponds, particularly in outlets.
<i>Lampsilis radiata</i>	Eastern Lampmussel				S3S4	This species inhabits a variety of aquatic habitats, including small streams, large rivers, ponds, and lakes. It is found on a wide variety of substrate types, but prefers sand or gravel.
<i>Margaritifera margaritifera</i>	Eastern Pearlshell				S2	Found in streams and small rivers that support trout or salmon populations and exists in a variety of substrate. Wallace River, Salmon River (Guysborough County), North and East Branch St. Mary's River.
<i>Erora laeta</i>	Early Hairstreak				S1	Habitats are always in hardwood forests or hardwood-northern conifer mixed forests, although like most hairstreaks a few adults sometimes turn up on flowers away from the woods--at least southward. Beech-maple forests seem most typical, but more mixed types can also have populations. Most habitats contain a lot of beech, but collections have been reported where beech was not present in the immediate area (Sullivan, 1971, Allen, 1997), often single individuals on flowers. Nearly all records are from hilly or mountainous regions.
<i>Williamsonia fletcheri</i>	Ebony Boghaunter				S2	Lentic. Habitat is bogs and fens. The microhabitat (sub-EO) is water-suspended or water-saturated Sphagnum ("quaking bog" and "moss lawn") whether or not associated with open water.
<i>Gomphaeschna fuscillata</i>	Harlequin Darner				S3	Pond breeding
<i>Gomphus desertus</i>	Harpoon Clubtail				S2S3	River breeding
<i>Polygonia gracilis</i>	Hoary Comma				SU	A boreal forest species. Eastward most likely where currants ( <i>Ribes</i> ) are common and not south of (or below) regions



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						where spruce and fir are common. Westward apparently mostly montane coniferous forests often near streams. At least in the west adults wander to other habitats.
<i>Ophiogomphus mainensis</i>	Maine Snaketail				S2S3	Streams and small rivers.
<i>Danaus plexippus</i>	Monarch	SC	Endangered	Endangered	S2B	Almost anywhere during the spring (northward) migration; near the larval foodplants during the breeding season; in the fall commonly near the coast, often in large numbers, all heading south. Larvae are found feeding on the following Milkweed species: Common Milkweed ( <i>Asclepias syriaca</i> ) and Swamp Milkweed ( <i>A. incarnata</i> ), neither of which are abundant plants in Nova Scotia. Butterfly surveys for monarchs should be conducted in areas with potential to support milkweed species in mid to late summer and should be conducted by someone familiar with milkweed species.
<i>Somatochlora septentrionalis</i>	Muskeg Emerald				S2	Pond breeding.
<i>Thorybes pylades</i>	Northern Cloudywing				S2S3	A variety of brushy or wooded habitats with legumes, including some non-native ones. Not as limited to dry sites as <i>T. bathyllus</i> but they often co-occur
<i>Lanthis parvulus</i>	Northern Pygmy Clubtail				S3S4	Lotic. Overall habitat is clear streams and brooks with strong current over clean gravel, cobbles or bedrock, on comparatively unproductive soils ("trout stream"). Landform required to promote a strong current in small running waters generally has moderate to considerable relief, from hills to mountains. The microhabitat (sub-EO) is areas proximal to surface-breaking structure such as cobbles, boulders or deadwood in full current and proximal to sun-lit marginal vegetation.
<i>Boyeria grafiana</i>	Ocellated Darner				S3	Prefers swiftly flowing rocky forest streams and rivers; also rocky-shored lakes.
<i>Amblyscirtes hegon</i>	Pepper and Salt Skipper				S2S3	Found on the edges of forests and streams. Larvae found feeding on a variety of grass species.



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<i>Epithea princeps</i>	Prince Baskettail				S2	Pond breeding
<i>Somatochlora brevicincta</i>	Quebec Emerald				S1	Pools in sphagnum bogs.
<i>Polygonia interrogationis</i>	Question Mark				S3B	Usually found near woodland linear disturbances such as trail and roads as well as in wood city parks. Larvae found feeding off of Nettles ( <i>Urtica sp.</i> ), Elms and Hops ( <i>Humulus sp.</i> ).
<i>Somatochlora albicincta</i>	Ringed Emerald				S2S3	Pond breeding.
<i>Ophiogomphus rupinsulensis</i>	Rusty Snaketail				S1S2	Inhabits flowing clear streams and rivers in the northeastern third of the U.S., and parts of southeast Canada.
<i>Polygonia satyrus</i>	Satyr Comma				S1?	Apparently much like <i>P.comma</i> generally near trees but probably can breed in almost any setting with nettles. It is primarily a boreal forest and woodland species often near streams
<i>Gomphus ventricosus</i>	Skillet Clubtail	E	E		S1	In the Northeast, the larvae inhabit large rivers where they burrow in the soft mud of deep pools
<i>Satyrium liparops and var. strigosum</i>	Striped Hairstreak				S2S3	Found in deciduous forest edges, gardens and roadsides. Larvae found feeding off of members of the Rosaceae family such as plum and cherries ( <i>Prunus spp.</i> ). Occurrences with Oak ( <i>Quercus spp.</i> ), Willow ( <i>Salix spp.</i> ) and Blueberry ( <i>Vaccinium spp.</i> ).
<i>Alasmidonta undulata</i>	Triangle Floater				S2S3	Frequently found in stream and rivers in sand and gravel substrates.
<i>Somatochlora williamsoni</i>	Williamson's Emerald				S2	Pond breeding.
<i>Stylurus scudderi</i>	Zebra Clubtail				S1S2	Clean rivers and streams with sand or sand and cobble bottoms and moderate current in wooded landscape; usually much gravel and at least scattered rocks.

<sup>i</sup> Government of Canada. 2015. Species at Risk Public Registry. Accessed online, 15 February 2018. <https://www.registrelep-sararegistry.gc.ca/default.asp?lang=En&n=24F7211B-1>

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<sup>ii</sup> Government of Canada. 2015. Committee on the Status of Endangered Wildlife in Canada. Accessed online, 15 February 2018.

[http://www.cosewic.gc.ca/eng/sct5/index\\_e.cfm](http://www.cosewic.gc.ca/eng/sct5/index_e.cfm)

<sup>iii</sup> Province of Nova Scotia. 2017. Categorized List of Species at Risk made under Section 12 of the *Endangered Species Act* S.N.S. 1998, c. 11, N.S. Reg. 146/2017 (April 12, 2017). Accessed online, 15 February 2018. <https://www.novascotia.ca/just/regulations/regs/eslist.htm>

<sup>iv</sup> Atlantic Canada Conservation Data Centre. 2017. Status Ranks. Accessed online, 15 February 2018. <http://accdc.com/en/ranks.html>