## Trees, Shrubs and Vines of Queen's University Biological Station

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Queen's University Biological Station (N44°33′ W76°19′) has a wide diversity of terrestrial and wetland habitats with floristic influences from the Carolinean south and boreal north. This checklist covers 185 species of the trees, shrubs and vines that have been or are expected to be reported at QUBS. We have focused most of our effort on lands owned by Queen's University but also included in our area are the surrounding environs from Highway 10 in the west to Forfar in east, Newboro in the north and Morton in the south. We expect this list to be useful as a reference for the whole area but it is intended to focus on the station properties themselves.



Introduced Tartarian honeysuckle (*Lonicera tatarica*) can be a valuable nectar source for native species like the snowberry clearwing (*Hemaris diffinis*). Photo: Philina English.

The definition of tree, shrub or vine is inconsistent throughout the literature because growth forms vary within species based on genetic and environmental factors. For simplicity, we have included species on this list if they are found in Farrar (1995; *Trees in Canada*) or Soper and

Heimburger (1982; Shrubs of Ontario), with the exception of several vines which we have included but are not found in those publications. Scientific and common names on the checklist generally follow these references, but deviate in some cases to correspond with recent nomenclatural changes.

For each species we give a status based on extensive vegetation sampling at QUBS in 2008 and 2009 (Conboy, unpublished data). In addition Crowder et al



Characteristic second growth forest conditions at QUBS with an abundance of sugar maple (*Acer saccharum*) and ironwood (*Ostrya virginiana*). Photo: Mark Andrew Conboy

(1996; *Plants of the Kingston Region: 1996*) and Crowder (2008; *Update of Plants of the Kingston Region: 1996*) have provided valuable information for assigning a status to some species that were not adequately sampled in field work.

**Abundant** – extremely numerous, nearly impossible to miss even to the casual observer. **Common** – observed regularly and in good numbers.

Uncommon – requires some effort to locate and may be missed on some outings.

Rare – either of very local distribution at QUBS or represented by limited observations.

- **Undetermined** status is unclear because data is deficient. Species in this category may be part of a complex of difficult to identify species (i.e. *Salix* or *Crataegus*) and have not received the proper attention of botanists at QUBS. Reports of any species in this category would be helpful in determining its true status at QUBS (see below).
- **Hypothetical** to our knowledge this species has not been reported at QUBS but it may occur. Much of QUBS land has received very little careful botanical study and it is possible that hypothetical species will be found. Please report any species in this category (see below).
- **Extirpated** thought to have once been native to QUBS but no longer occurs. However, it can be difficult to confirm historical occurrences of species.

The Fowler Herbarium at Queen's University has an extensive collection of local plants. We did not search the herbarium records thoroughly for additional species records at QUBS. A comprehensive search of the collection would greatly aid our knowledge of the status and

distribution of all trees, shrubs and vines at the station.

In addition to status we have included some notes about each species' distribution, habitat and indigenousness at QUBS. We have been intentionally vague about the locations of rarer species because of past problems with unscrupulous collectors and the sensitivity of some habitats to human intrusion (i.e. bogs).

Please report errors, omission, sightings information (especially of rare and hypothetical



Swamps that are inundated with water in spring and early summer but dry up in late summer are home to a wide array of tree species including red maple (*Acer rubrum*), bur oak (*Quercus macrocarpa*) and blue-beech (*Carpinus caroliniana*).

species) and suggested status changes to Mark Andrew Conboy (7mc19@queenssu.ca).

Scientific Name	Common Name	Status at QUBS	Comments
Тахасеае			
Taxus canadensis	Canada Yew	Hypothetical	Not recorded at QUBS but is expected to occur
Pinaceae			
Abies balsamea	Balsam Fir	Uncommon	Wetlands and forests; often early successional
Larix decidua	European Larch	Rare	Introduced. Planted at QUBS Point and in towns
Larix laricina	Tamarack	Uncommon	Bogs and marshes
Picea glauca	White Spruce	Uncommon	Individuals interspersed in forests; can occur in good numbers in some wetlands; also in plantations
Picea mariana	Black Spruce	Rare	Bogs and other wetlands
Picea abies	Norway Spruce	Uncommon	Introduced. Planted on farms, in plantations and towns (i.e. Elgin)
Pinus banksiana	Jack Pine	Rare	Possibly introduced to QUBS area. Planted in plantations; lone individuals were probably also planted
Pinus resinosa	Red Pine	Common	Some natural specimens in forests but most are in plantations
Pinus rigida	Pitch Pine	Hypothetical	Small colonies on granite barrens near Jones Falls; unlikely to be found at QUBS but should be looked for
Pinus strobus	Eastern White Pine	Abundant	Most abundant conifer at QUBS; also used in plantations
Pinus sylvestris	Scotch Pine	Rare	Introduced. Planted in towns and around farms; may be found near abandoned farms at QUBS
Tsuga canadensis	Eastern Hemlock	Common	Widespread; mainly second growth; old trees seem relatively scarce
Cupressaceae			
Juniperus communis	Common Juniper	Abundant	Ridge-tops, old fields and barren ground
Juniperus virginana	Eastern Redcedar	Abundant	Ridge-tops, old pastures and fields; some in forests
Thuja occidentalis	Eastern White Cedar	Abundant	Forests, wetlands and slopes; can form pure stands
Smilacaceae			
Smilax herbacea	Carrion Flower	Rare	Forests and edges
Smilax hispida	Prickly Greenbrier	Rare	Forests, edges and swamps

Salicaceae	Millio De else	Davis	
Populus alba	White Poplar	Rare	Introduced. Planted near settlements, roads and at Bracken Tract
Populus balsamifera	Balsam Poplar	Uncommon	Forest and edges
Populus deltoides	Eastern Cottonwood	Uncommon	Early successional situations and forest; sometimes very large specimens (i.e. at QUBS Point and Bracken Tract)
Populus grandidentata	Large-toothed Aspen	Common	Widespread in forests
Populus nigra	Lombardy Poplar	Rare	Introduced. Planted on farms and in towns
Populus tremuloides	Trembling Aspen	Common	Forests and edges; some pure stands (i.e. Bracken Tract
Salix alba	White Willow	Rare	Introduced. Planted at farms and along roadsides
Salix amygdaloides	Peachleaf Willow	Hypothetical	May be tree- or shrub-sized
Salix bebbiana	Bebb's Willow	Common	Wetlands and edges of water bodies
Salix candida	Hoary Willow	Hypothetical	Wetlands
Salix discolor	Pussy Willow	Common	Wetlands, wet fields and below power lines
Salix fragilis	Crack Willow	Rare	Adjacent to wetlands; sometimes planted
Salix humilis	Upland Willow	Hypothetical	Wet or dry locations
Salix lucida	Shining Willow	Undetermined	Wet locations
Salix nigra	Black Willow	Undetermined	Wet locations
Salix pedicellaris	Bog Willow	Hypothetical	Bogs and <i>Thuja</i> swamps
Salix petiolaris	Slender Willow	Common	Wet fields and other wet locations
Myricaceae			
Comptonia peregrina	Sweetfern	Rare	Local at wetland edges on the Massassauga Tract
Myrica gale	Sweetgale	Common	Wetland interiors and edges
Juglandaceae			
Carya cordiformis	Bitternut Hickory	Abundant	Moist to dry forests
Carya ovata	Shagbark Hickory	Common	Dry forest and ridge tops
Juglans cinerea	Butternut	Uncommon	Forests and edges. Provincially and nationally endangered. Almost all specimens at QUBS are infected with butternut canker ( <i>Sirococcus clavigignenti- juglandacearum</i> ). Please report all butternuts with GPS coordinates if possible.
Juglans nigra	Black Walnut	Rare	Probably introduced to the QUBS area. In plantations at QUBS Point, some local farms and in towns. There may

Alnus incana	Speckled Alder	Common	Wetlands, ponds and swales
Betula alleghaniensis	Yellow Birch	Common	Moist to wet forest; swamps
Betula papyrifera	White Birch	Common	An early successional species in forest clearings; older specimens in some mature forests
Carpinus caroliniana	Blue-Beech	Common	Moist to wet places in forests
Corylus americana	American Hazelnut	Uncommon	Forests; thick stands or individuals
Corylus cornuta	Beaked Hazelnut	Common	Forests; thick stands or individuals
Ostrya virginiana	Ironwood	Abundant	Primarily in understory and an important early successional species; One of the most abundant species at QUBS
Fagaceae			
Fagus grandifolia	American Beech	Locally common	Individual trees or nearly pure stands
Castanea dentata	American Chestnut	Possibly extirpated	Drastic declines in Canada due to chestnut blight ( <i>Cryphonectria parasitica</i> ). We do not know whether chestnut occurred at QUBS but lumber from this species has been found in a barn near Forfar; it is unknown if the wood is from a local source (pers comm Croskery 2009)
Quercus alba	Common White Oak	Abundant	Forests, fencerows, ridge-tops; dry sites
Quercus bicolor	Swamp White Oak	Hypothetical	May occur in swamps, but requires confirmation (Forsyth fide pers comm Connor 2009)
Quercus macrocarpa	Bur Oak	Common	Forests, fencerows and ridge-tops; wet or dry sites
Quercus muehlenbergii	Common Chinquapin Oak	Rare	Isolated trees and small stands in Pangman and Hughson Tracts; should be looked for elsewhere
Quercus rubra	Northern Red Oak	Abundant	Forests and ridge-tops
Ulmaceae			
Celtis occidentalis	Common Hackberry	Hypothetical	Occurs near Smith's Falls; should be looked for near QUBS, but is unlikely to occur
Ulmus americana	White Elm	Abundant	Forest and edge
Ulmus rubra	Slippery Elm	Uncommon	Forest and ridge tops

Ulmus thomasii	Rock Elm	Common	Forest and ridge tops
Ranunculaceae			
Clematis virginica	Virgin's-bower	Uncommon	Locally distributed
Berberidaceae			
Berberis vulgaris	Common Barberry	Rare	Introduced. Planted around abandoned farms and at towns; mainly on Bracken Tract
Menispermaceae			
Menispermum canadense	Moonseed	Hypothetical	Should be looked for growing on basic soils
Fumariaceae			
Adlumia fungosa	Climbing Fumitory	Uncommon	Locally distributed at QUBS; known from Cape-Sauriol Tract, and formerly QUBS Point (pers comm Connor 2009) and Bonwill Tract (pers comm Pringle 2009)
Grossulariaceae			
Ribes americanum	Wild Black Currant	Common	Moist sites and rocky outcrops
Ribes cynosbati	Pasture Gooseberry	Common	Moist or dry sites and rocky outcrops
Ribes glandulosum	Skunk Currant	Common	Moist sites and rocky outcrops
Ribes hirtellum	Wild Gooseberry	Uncommon	Moist and wet sites; clearings
Hamamelidaceae			
Hamamelis virginiana	Common Witch-Hazel	Hypothetical	Isolated populations may occur near QUBS but requires confirmation
Rosaceae			
Amelanchier alnifolia	Saskatoon	Hypothetical	Not yet recorded at QUBS but is expected to occur
Amelanchier arborea	Downy Serviceberry	Common	Edges and ridge tops
Amelanchier laevis	Smooth Serviceberry	Common	Edges and ridge tops
Amelanchier spicata	Dwarf Serviceberry	Common	Ridge tops
Amelanchier sanguinea	Roundleaf Serviceberry	Common	Ridge tops
Aronia melanocarpa	Chokeberry	Undetermined	Wetlands and ridge tops
Crataegus chrysocarpa	Fireberry Hawthorn	Hypothetical	Apparently rare in Ontario
Crataegus crusgalli	Cockspur	Undetermined	Old fields; native to Ontario but probably previously planted in area

Crataegus punctata	Dotted Hawthorn	Undetermined	Old fields
Crataegus succulenta	Fleshy Hawthorn	Undetermined	Old fields
Malus coronaria	Wild Crabapple	Hypothetical	May be planted in the area; requires confirmation
Malus pumila	Common Apple	Locally common	Introduced. Planted at numerous locations and found in early successional situations
Physocarpus opulifolius	Eastern Ninebark	Hypothetical	Should be looked for on ridges
Potentilla fruticosa	Shrubby Cinquefoil	Undetermined	Wetlands and over limestone bedrock
Prunus americana	American Plum	Hypothetical	So far unknown at QUBS
Prunus avium	Sweet Cherry	Hypothetical	Introduced. Planted specimens may be found, but its occurrence has not yet been confirmed
Prunus nigra	Canada Plum	Rare	Hedgerows; has been found at Bracken Tract and a few other locations
Prunus pensylvanica	Pin Cherry	Abundant	Widespread; ridge-tops and sometimes in thickets
Prunus pumila	Sand Cherry	Hypothetical	Rare in Ontario
Prunus serotina	Black Cherry	Common	Forest or edge
Prunus virginiana	Choke Cherry	Common	Ridge-tops and sometimes in thickets
Pyrus communis	Pear	Uncommon	Introduced. Found in towns and at farms and may be located at QUBS near abandoned farmsteads
Rosa acicularis	Prickly Wild Rose	Common	Edges and clearings
Rosa blanda	Smooth Rose	Uncommon	Old fields and forest edges
Rosa canina	Dog Rose	Hypothetical	Introduced. Should be looked for at abandoned farmsteads
Rosa carolina	Pasture Rose	Hypothetical	Should be looked for in old fields
Rosa palustris	Swamp Rose	Common	Narrow wetlands next to lakes
Rubus allegheniensis	Allegheny Blackberry	Common	Edges and old fields
Rubus canadensis	Smooth Blackberry	Uncommon	Edges and old fields
Rubus flagellaris	Northern Dewberry	Undetermined	Dry locations
Rubus hispidus	Bristly Dewberry	Undetermined	Wet locations
Rubus idaeus	Wild Red Raspberry	Common	Introduced and naturalized. Old fields, edges of forests and roadsides
Rubus occidentalis	Black Raspberry	Undetermined	Old fields and roadsides
Rubus odoratus	Purple Flowering Raspberry	Common	Edges and in forests
Rubus pubescens	Dwarf Red Raspberry	Uncommon	Wet woodlands; sometimes wet fields
Sorbus americana	American Mountain-Ash	Rare	Reported in the Boston Wildlands (Kristensen)
Spiraea alba	Narrow-leaved Meadowsweet	Abundant	Old fields and wetland margins
Spiraea tomentosa	Steeple Bush	Common	Wet locations

Gleditsia triacanthos	Honey-Locust	Hypothetical	Introduced. May be planted near towns
Robinia pseudoacacia	Black Locust	Rare	Introduced. Restricted to certain localities (QUBS Point Chaffey's Lock and along Opinicon Road)
Rutaceae			
Zanthoxylum americanum	Northern Prickly-Ash	Abundant	Openings, edges and sometimes in forests
Anacardiaceae			
Rhus aromatica	Fragrant Sumac	Uncommon	Ridges
Rhus copallina	Dwarf Sumac	Hypothetical	Rare in Ontario
Rhus glabra	Smooth Sumac	Rare	Old fields and roadsides
Rhus radicans	Poison-Ivy	Abundant	Trails, ridges, roadsides and in forests
Rhus typhina	Staghorn Sumac	Abundant	Old fields, roadsides and sometimes in forests
Rhus vernix	Poison-Sumac	Rare	Boston Wildlands (Kristensen) and Opinicon Road Bog (pers comm Connor)
Aquifoliaceae			
llex verticillata	Winterberry	Common	Wetlands
Nemopanthus mucronatus	Mountain Holly	Rare	Wetland margins
Celastraceae			
Celastrus scandens	Climbing Bittersweet	Common	Forests, thickets and old fields
Staphyleaceae			
Staphylea trifolia	American Bladdernut	Uncommon	Moist forests
Aceraceae			
Acer platanoides	Norway Maple	Rare	Introduced. Planted in towns
Acer japonicum	Japanese Maple	Rare	Introduced. Planted in Chaffey's Lock
Acer negundo	Manitoba Maple	Uncommon	Probably introduced. Found around abandoned farmsteads and disturbed areas (i.e. Bracken Tract) as well as towns
Acer pensylvanicum	Striped Maple	Uncommon	Forests
Acer rubrum	Red Maple	Abundant	Forests and adjacent to water bodies

Acer saccharinum	Silver Maple	Common	Swamps and lakeshores; sometimes in nearly pure
A	Curren Manda	6 h	stands (i.e. Silver Maple Swamp)
Acer saccharum	Sugar Maple	Abundant	Widespread; most common tree at QUBS
Acer nigrum	Black Maple	Rare	So far only found on the Bonwill Tract
Acer spicatum	Mountain Maple	Uncommon	Forests; very local
Hippocastanaceae			
Aesculus hippocastanum	Common Horse-Chestnut	Rare	Introduced. Planted on farms and in towns
Rhamnaceae			
Ceanothus americanus	New Jersey Tea	Undetermined	Adjacent to bodies of water; also ridge tops
Rhamnus alnifolia	Alder-leaved Buckthorn	Undetermined	Wetlands
Rhamnus cathartica	Common Buckthorn	Common	Introduced and naturalized. Forests and old fields
Rhamnus frangula	Glossy Buckthorn	Hypothetical	Not yet confirmed at QUBS
Vitaceae			
Parthenocissus inserta	Virignia Creeper	Abundant	Forests, edges and roadsides
Vitis riparia	River Grape	Abundant	Edges and roadsides
Tiliaceae			
Tilia americana	American Basswood	Abundant	Forests
Thymelaeceae			
Dirca palustris	Leatherwood	Uncommon	Local occurrences near forest edges on the Hughson
			Tract
Elaeagnaceae			
Elaeagnaceae Shepherdia canadensis	Buffaloberry	Uncommon	Edges and ridges
	Buffaloberry	Uncommon	Edges and ridges
Shepherdia canadensis	Buffaloberry Alternative-leaved Dogwood	Uncommon Uncommon	Edges and ridges Wetlands and forests
Shepherdia canadensis Cornaceae	·		
Shepherdia canadensis Cornaceae Cornus alternifolia	Alternative-leaved Dogwood	Uncommon	Wetlands and forests
Shepherdia canadensis Cornaceae Cornus alternifolia Cornus amomum	Alternative-leaved Dogwood Silky Dogwood	Uncommon Common	Wetlands and forests Fields and clearings

Cornus stolonifera	Red Osier Dogwood	Abundant	Wetlands, forests and edges
Pyrolaceae			
Chimaphila umbellata	Pipsissewa	Uncommon	Moist forests
Ericaceae			
Andromeda polifolia	Bog Rosemary	Rare	Local in bogs
Arctostaphylos uvaursi	Bearberry	Rare	Local on ridge tops
Chamaedaphne calyculata	Leatherleaf	Rare	Very local on ridge tops and in bogs and other wetlands
Epigaea repens	Trailing Arbutus	Hypothetical	Should be looked for on sandy soils
Gaultheria hispidula	Creeping Snowberry	Rare	Bogs
Gaultheria procumbens	Wintergreen	Common	Forests
Gaylussacia baccata	Black Huckleberry	Uncommon	Bogs
Kalmia angustifolia	Sheep Laurel	Undetermined	Bogs
Kalmia polifolia	Bog Laurel	Undetermined	Bogs
Ledum groenlandicum	Labrador-Tea	Uncommon	Wetlands
Vaccinium angustifolium	Late Low Blueberry	Abundant	Rocky woods and ridge tops
Vaccinium corymbosum	Highbush Blueberry	Uncommon	Rocky woods and adjacent to wetlands
Vaccinium macrocarpa	Large Cranberry	Undetermined	Bogs
Vaccinium myrtilloides	Velvet-leaf Blueberry	Undetermined	Rocky woods and adjacent to wetlands
Vaccinium oxycoccos	Small Cranberry	Rare	Bogs; locally common
Oleaceae			
Fraxinus americana	White Ash	Abundant	Widespread; one of the major forest trees at QUBS
Fraxinus nigra	Black Ash	Common	Wetlands and creek beds
Fraxinus pennsylvanica	Red Ash	Common	Forests and early successional habitats
Syringa vulgaris	Common Lilac	Common	Introduced and naturalized. Planted in old fields, on farms and in towns
Bignoniaceae			
Catalpa speciosa	Northern Catalpa	Rare	Introduced. Near settlements (i.e. Chaffey's Lock and Elgin)

Asc	lepiadaceae	2

Asciepiadaceae			
Cynachum nigrum	Dog-strangling Vine	Locally Abundant	Introduced and naturalized. Roadsides and fields where it can be locally abundant, but is generally uncommon. Appears to be spreading rapidly near Chaffey's Lock
Convolvulaceae			
Cuscuta gronovii	Common Dodder	Rare	Locally in swamps, marshes and along shorelines where it is parasitic on <i>Decodon, Lycopus, Vitis,</i> and several other genera
Solanaceae			
Solanum dulcamara	Deadly Nightshade	Common	Introduced and naturalized. Chiefly around towns and farms
Rubiaceae			
Cephalanthus occidentalis	Buttonbush	Common	Wetlands
Mitchella repens	Partridgeberry	Common	Often growing below Pinus
Caprifoliaceae			
Diervilla lonicera	Bush Honeysuckle	Common	Forests and clearings
Linnaea borealis	Twinflower	Rare	Wet forests and bogs
Lonicera canadensis	Fly Honeysuckle	Undetermined	Forests and edges
Lonicera dioica	Climbing Honeysuckle	Common	Forests and sometimes clearings
Lonicera hirsuta	Hairy Honeysuckle	Common	Forests, wetland margins and clearings
Lonicera tatarica	Tartarian Honeysuckle	Common	Introduced and probably naturalized. Old fields, roadsides, towns and farms; especially at Bracken Tract
Sambucus canadensis	Common Elderberry	Common	Forests and sometimes clearings
Sambucus racemosa	Red Elderberry	Common	Forests and sometimes clearings
Symphoricarpos albus	Snowberry	Uncommon	Introduced and naturalized. Ridges and edges
Viburnum acerifolium	Maple-leaved Viburnum	Common	Forests and sometimes ridge tops
Viburnum cassinoides	Wild Rasin	Uncommon	Wetlands
Viburnum lantanoides	Hobblebush	Uncommon	Wetland margins
Viburnum lentago	Nannyberry	Common	Early successional habitats and edges
Viburnum rafinesquianum	Downy Arrowwood	Common	Edges, ridge tops and clearings
Viburnum trilobum	Highbush Cranberry	Uncommon	Wetland margins