Rosaceae
rose family

Within this family's numerous (>3000 species of trees, shrubs and herbs) are the most important temperate fruits including apples and pears, peaches, plums, apricots, almonds, strawberries and raspberries. The family's namesake, *Rosa*, contains many economically important hybrids and species roses. Rose cultivars are numerous and among our most prestigious ornamentals.

Typically the leaves are alternate and stipulate, and may be simple or compound. Flowers are conspicuous and often showy, regular and perfect. Calyx is usually of five sepals united at the base to form a hypanthium. Petals usually five and the stamens usually number five or or five-merous, both attached to the margin of the hypanthium. Ovary is generally superior, except in the Pomoidea. Fruits are variable, with achenes, drupes, follicles or pomes, or even aggregated as in raspberries.

Key to Genera

A. Leaves simple — B
- B. Herbs — C
  - C. Petals absent; stamens 4. — *Alchemilla*
  - cc. Petals present; stamens numerous. — *Rubus*, in part
- bb. Trees, shrubs or woody vines — D
  - D. Ovary 1. — E
    - E. Style 1; ovary superior; fruit a drupe, with a single seed. — *Prunus*
    - ee. Styles 2–5; ovary inferior; fruit a pome, or other small fruit with inferior ovary. — F
      - F. Flowers in racemes or numbering 4 or fewer; ovary and fruit with 10 locules; plants not armed with prickles nor thorns. — *Amelanchier*
      - ff. Flowers not in racemes; ovary and fruit with 2–5 locules; plants often armed. — G
        - G. Thorny trees or shrubs; carpels hard and seedlike. — *Crataegus*
        - gg. Thorny trees or unarmed shrubs; carpels leathery or papery, enclosing seeds. — H
          - H. Arboriform; fruit >1cm wide; thorny but not prickly; leaves without glands on midrib — I
            - I. Flowers pinkish; styles connate at the base; fruit not gritty. — *Malus*
            - ii. Flowers white; styles separate; fruit gritty. — *Pyrus*
          - hh. Shrubs; fruit <1cm wide, unarmed; upper surfaces of leaves with red glands on midrib. — *Photinia*
  - dd. Ovaries 2–many. — J
    - J. Ovaries <5; fruit a follicle; shrubs unarmed. — *Spiraea*
    - jj. Ovaries >5; fruit compound fleshy drupes, prickly or unarmed. — *Rubus*

aa. Leaves compound, dissected or lobed, with finer divisions. K
K. Leaves palmately compound. L
L. Styles filiform and persistent, elongated after flowering; cauline leaves differing from basal ones. *Geum*
ll. Styles not filiform nor so elongating; leaves of similar shape, but of variable size. M
M. Plants prickly; fruit compound drupelets; bractlets absent. *Rubus*
mm. Plants not prickly; fruit achenes; bractlets present alternating with the sepals. *N*
N. Receptacle dry. O
O. Flowers yellow; teeth of leaflets >5 and not terminal. *Potentilla*
oo. Flowers white; leaflets with 3 (to 5) terminal teeth.. *Sibbaldiopsis*
nn. Receptacle fleshy. *Fragaria*
kk. Leaves pinnately compound or dissected. P
P. Herbs. Q
Q. Petals absent; sepals 4; inflorescence a dense head or spike.
qq. Petals and sepals 5; flowers of inflorescence so not clustered. R
R. Hypanthium conical, with hooked prickles. *Agrimonia*
rr. Hypanthium not conical, unarmed. S
S. Pistils 5–15, ripening into a whorl of achenes. *Filipendula*
ss. Pistils still more numerous, ripening into a head of achenes. T
T. Styles inserted; straight. U
tt. Styles exerted, jointed or feathery. *Geum*
U. Leaflets 5; flowers in raceme, red. *Comarum*
uu. Leaflets many (>9); flowers solitary, yellow. *Argentina*
pp. Woody plants, including woody vines. V
V. Carpels 2–5. W
W. Carpels distinct, 5; ovary superior, dry and dehiscent in fruit. *Sorbaria*
ww. Carpels 2–4, joined below; ovary partly inferior; fruit fleshy (pome). *Sorbus*
vv. Carpels >5. X
X. Unarmed shrub with crowded yellow flowers *Dasiphora*
xx. Shrub prickly, flowers not yellow (except in garden roses). Y
Y. Ovaries, achenes hidden inside round hypanthium. *Rosa*
yy. Hypanthium flat or convex, ovaries are fleshy on flat-convex hypanthium. *Rubus*, in part

Agrimonia
agrimony

Northern in distribution, Nova Scotia has two native species and one European adventive. Inflorescence is a long interrupted spikelike raceme, subtended by a ragged bract. Pedicels are very short and subtended by trilobed bracts. Hypanthium is variable, conical to flat, but armed with hooked bristles. Sepals are spreading at flowering, later forming a beak on the fruit. Flowers are yellow, with 5–15 stamens and a pair of ovaries. Leaves are generally compound with three leaflets interspersed with small entire leaflets. Stipules are present, leaflike and dentate. Fruit is an achene. Key character in native species is the presence/absence of glandular hairs.

A. Hypanthium strongly hirsute; introduced. *Agrimonia eupatoria*
aa. Hypanthium smooth, glandular or puberulent only in the hypanthium furrows; native. B
- B. Axis of the inflorescence glandular, +/- pubescent. *A. gryposepala*
- bb. Axis of the inflorescence not glandular; densely pubescent, the hairs appressed. *A. striata*

Agrimonia eupatoria L.
aigremoine eupatoire

Leaves are strongly villous on the lower surfaces, including the veins.

Found as an adventive in waste areas and on disturbed soils.

Local, as at Upper Sackville, Halifax Co.

Local in NS; MA to OH, MN and IA; WY and CA. European.

Agrimonia gryposepala Wallr.
aigremoine à sépales crochus

Photo by Sean Blaney

A tall perennial to 1.5m, it is sparingly branched. The greenish burr-like fruits and long interrupted spikes are distinctive. The axis of the inflorescence is usually glandular-pubescent. The outer furrows of the fruit are smooth, although there may be tiny sessile glands. Several rows of bristles are positioned at the top of the hypanthium.

Flowers July and August.

Thickets, streamsides, slopes, intervales, generally in shade.

Digby and Cumberland counties to northern Cape Breton. Uncommon on the Atlantic side.

Ranges from NS to MB, south to WY, KS, LA and FL; BC to CA and NM.

***Agrimonia striata* Michx.**
Agrimony; aigremoine striée


Photo by Martin Thomas

Another tall perennial, differing from the other native species in having only appressed pubescence on the axis of the inflorescence but no glands. The furrows on the fruit are hirsute. Hooked bristles may be more stiffly ascending.

Also flowers July and August.

Roadsides, thickets and cleared woodlands. Wider tolerance for sun,

Common throughout, except in the Atlantic region, one record, in Queens Co.

Ranges across Canada, variously south to AZ, OK, and GA.

Alchemilla L.
Lady's-mantle

A genus of about 100 species, they are widespread in distribution and probably all introduced from Europe. Plants are weedy and apomictic (producing seed without fertilization). Leaves are 8–10cm wide, lobed and serrate, round in outline. Flowers are arranged in cymes, each greenish yellow flower is apetalous. The hypanthium encloses the achenes; stamens are inserted on its margin.

Key (McNeill, 1996)

A. Bractlets on the calyx as long or longer than the hypanthium and equal to the sepals. — *Alchemilla venosa*

aa. Bractlets on the calyx shorter than the hypanthium and sepals. — B

B. Primary inflorescence branches glabrous. — *A. filicaulis*

bb. Primary inflorescence branches sparsely to densely pubescent. — C

C. Upper leaf surfaces glabrous, may be pubescent on a few folds. — *A. xanthochlora*

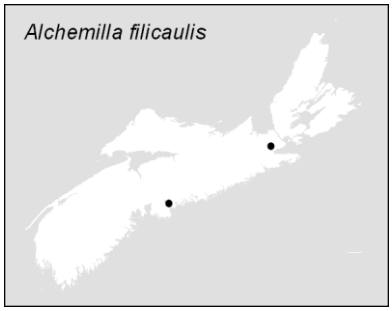
cc. Upper leaf surfaces densely pubescent. D

D. Hypanthium attenuate at base, glabrous; stipules reddish, sometimes brownish; distal half of stem glabrous or lightly pubescent. *A. gracilis*

dd. Hypanthium rounded at the base, sparsely pubescent; stipules brown; distal half of the stem densely pubescent. *A. monticola*

Alchemilla arvensis (L.) Scop. is now included in *Aphanes* but its occurrence in NS considered historic.

Alchemilla filicaulis Buser



Leaves of this species are triangular in outline and divided into 7–10 serrated lobes. Leaf sinuses are open. Upper surfaces of the leaves are covered with dense, appressed pubescence. Ours is ssp. *vestita* (Buser) ME Bradshaw. It has both leaf surfaces densely pubescent as well as the flowers, while the pedicels are glabrous.

Tiny flowers bloom June to August.

Found on roadsides and pastures along the coast.

Occasionally reported. Older extant collections from Guysborough and Halifax counties.

Local from NF to QC, south to NS and MA. Adventive from Europe.

Alchemilla gracilis Opiz

A slender species, its stems are sparsely to densely pubescent with spreading hairs. They may be sometimes glabrous terminally. Stipules are reddish. Flat leaf blades are often reniform, occasionally orbiculate, sometimes undulate, and divided into 7–9 lobes. Lower surfaces are pubescent and the upper surfaces densely pubescent throughout. The primary branches of the inflorescence are often sparsely hairy, sometimes densely so. The epicalyx bractlets are at least half the length of the sepals and always narrower. Hypanthia are glabrous.

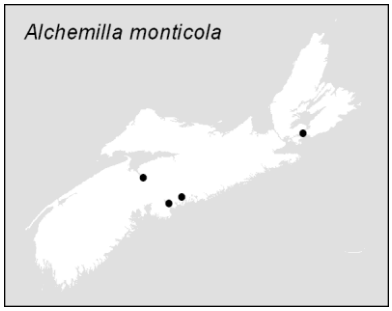
Flowering late May through to Sep.

Grows in moist meadows and open sandy soils.

An examination of NS material is required to ascertain its exact distribution.

Introduced to NS and QC; ME. Native to Europe.

Alchemilla monticola Opiz
alchémille des montagnes



Resembles *A. filicaulis* but for its smooth flowers. Leaf sinuses are nearly closed by the overlapping proximal lobes. Both the upper and lower surfaces are pubescent. Arising from glabrous pedicels, the tiny flowers, only 10–15mm tall, are finely pubescent.

Flowers from June to September.

Grows in grassy areas.

Very local: St. Peter's, Richmond Co., Windsor and Halifax.

NF to ON south to WI and NY; AK.

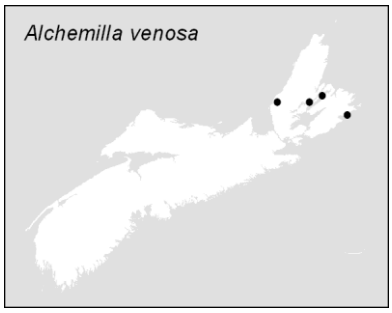
Alchemilla venosa Jus.
alchémille veinée

Photo by Martin Thomas

Smaller in stature, it only reaches 30cm in height. Its leaves appear peltate, although a sinus is present. Surfaces are glabrous and the margins are lobed and serrate. Flowers are 3mm wide and bright yellow when expanded.

Flowers June to August.

Photo by Martin Thomas



Waste soils in dooryards and roadsides.

Escaped from cultivation in Inverness, Victoria and Cape Breton counties. Not yet reported from mainland NS.

NS and NF where it has been introduced from Europe.

Alchemilla xanthochlora Roth.
alchémille vert jaunâtre

Photo by Marian Munro

Perennial to 35 cm tall, its leaves are divided into seven serrate lobes. Most of the leaves are basal although several smaller cauline leaves may be present. Sinuses wide. Upper surfaces are smooth and do not wet. Water beads in the cup. Flowers are tiny, only 2–3mm wide.

Flowers throughout the summer until frost.

Moist soils near the coast in a variety of habitats.

Abundant from Digby around to Shelburne counties and scattered eastward near the coast.

Ranges from NS to New England and NY. Introduced.

Amelanchier Medicos
serviceberries

There are about 20 species of these north-temperate trees or shrubs. Hybrids are common, making identification to species difficult. Many triploids are even fertile. Leaves are simple and alternate, margins serrate. Flowers are arranged in racemes, terminal on the current year's branches, appearing

just before or simultaneous with leaf-out. Petals, sepals and styles are five-merous. Stamens are inserted and usually 20 in number. Fruit is a pome, with 10 seeds. Local names for these plants include Indian Pear, Shadbush, Serviceberry, Juneberry. Saskatoonberry (*Amelanchier alnifolia*), a western species is cultivated for its tart fruit. Several of our wild species are choice edibles, but we enjoy stiff competition from the avian set.

Fruit production is often spoiled by infection by *Gymnosporangium* species, which cause orange rusts on fruits.

Key to species

A. Flowers 1–4 on long pedicels in leafy clusters; ovary summit tomentose, tapering into the styles; leaves overlapping in bud. — *Amelanchier bartramiana*

aa. Flowers several to many in racemes; ovary convex to flat on top, smooth or pubescent; leaves folded together lengthwise in bud — B

B. Petals 3–6 (–7)mm long; sometimes pollen-bearing; plants colonial, with many close stems up to 2(–3) m tall. — *A. nantucketensis*

bb. Petals (6–)7–22mm long, not bearing pollen; plants colonial or not, 0.3–13m tall. — C

C. Ovary tomentose at summit, tomentum may persist. — D

D. Leaves tomentose beneath at flowering. — *A. stolonifera*

dd. Leaves glabrous or nearly so at flowering. — *A. sanguinea*

cc. Ovary glabrous or nearly so, at summit. — E

E. Petals short, to 12mm racemes erect or ascending; sepals at fruiting spreading to reflexed. — *A. canadensis*

ee. Petals >12mm long; racemes often drooping; sepals in fruit tightly reflexed — F

F. Leaves at flowering much less than half-expanded, tomentose beneath; fruit dryish and tasteless. — *A. arborea*

ff. Leaves about half-expanded at flowering; glabrous beneath with coppery colour; fruit juicy and sweet. — *A. laevis*

***Amelanchier arborea* (Michx. F.) Fern.**
Shadbush; Bilberry; Wild Pear; amélanchier arbre

Photo by Sean Blaney

Growing as a low shrub or a small tree, this species is one of our familiar flora roadside. Leaves are scarcely unfolded when the flowers emerge. They are tomentose beneath. On the flowering branches, the leaves tend to be finely serrate, with 5–10 teeth per cm. The open racemes of flowers are silky pubescent with the pedicels on the lower flowers 25mm long. White petals reach 10–20mm in length. Ovary is pubescent and the fruit is mealy, subtended by reflexed sepals.

Flowers in May.

Frequents edge habitats of fields and forests.

Common throughout.

Ranges from NS to ON south to TX and FL.

Hybrids are frequent: *A.* X *grandiflora* Rehd. is a hybrid between this and *A. laevis,* with lightly tomentose purplish leaves, when young. Its fruit are more succulent. *A* x*wiegandii* Spach has the leaves on the flower branches with fewer serrations, 2–5 per cm.

***Amelanchier bartramiana* (Tausch) Roem.**

Mountain Serviceberry; amélanchier de Bartram

Photo by Sean Blaney

A shrub, it may reach several m in height. Serrate leaves are ovate to elliptic and glabrous; their bases are wedge-shaped. They are short-petiolate. Flowers are axillary, with 1–4 individuals per cluster. Petals are 6–9mm long. Ovaries are tomentose at the summit. Dark purple succulent fruit is oblong.

Flowers late May.

Associated with acidic poorly-drained soils as in thickets and bogs. Reported from Yarmouth and Digby counties and common from Kings and Cumberland counties to northern Cape Breton.

Ranges from NL to ON, south to MN and WVA.

Elsewhere forms a hybrid with *A. laevis*, named *A*. x*quinti-martii* Lalonde.

***Amelanchier canadensis* (L.) Medik**
(=*A. lucida* Fern.)
Shadbush; Wild Pear

Photo by Martin Thomas

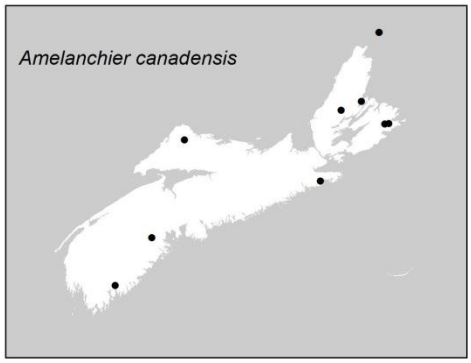


Photo by Martin Thomas

A tall erect shrub, this species superficially resembles alder. Young leaves are densely tomentose. Flowers are borne in compact racemes, ascending or erect. Lower pedicels are 10–20mm long. Petals are short, <10mm long and at maturity, the sepals are also erect.

Flowers also in May.

A plant of edge habitat: forests, wetlands and barrens.

Uncommon from Yarmouth to Halifax and Cumberland counties, east to Cape Breton Co.

Ranges from NS to ON, south to MS and GA.

May form a hybrid with *A. arborea*, named *A*. X *intermedia*, to be expected where both parents are found.

***Amelanchier laevis* Wieg.**
(=*A. arborea,* var. *laevis* (Wieg.) Ahles)
Smooth Serviceberry; amélanchier glabre


Photo by Martin Thomas

A tree or small shrub, the leaves are partially expanded at flowering, glabrous and reddish as they emerge. Flowers are arranged in open racemes, the lower pedicels may reach 5cm in length. Flowers have the petals 15mm long. Fruit is globose, subtended by reflexed sepals. One of our most common and conspicuous serviceberries.

Flowers in May.

Edges of forests and fields.

Common throughout the province.

Ranges from NL to ON, south to GA.

***Amelanchier nantucketensis* Bickn.**
Nantucket Shadbush

This coastal plain species is a leafy, freely branching colonial species.. The leaves are entire or lobed but not divided into leaflets. Margins are serrate. Stems are spindly and do not exceed 3m in height. Flowers arranged 7–10 per inflorescence and are off-white. They have short spatulate petals, sometimes bearing pollen directly on the petal margins (andropetaly), 5–7mm in length. The dark reddish purple fruit are juicy and edible.

Found in disturbed habitats such as roadsides, fields, sand

Photos by Martin Thomas

plains, riparian meadows and barrens.

Its NS distribution is limited to Cumberland, Shelburne and Halifax counties. (No collection for the Halifax Co. locality.

Elsewhere it is limited to the Atlantic coastal plain, from NS; south to New England and Maryland.

STATUS: Orange-listed.

***Amelanchier sanguinea* (Pursh) DC**
(=*A. fernaldii* Wieg.; *A. gaspensis* (Wieg.) Fern.)
St. Lawrence Serviceberry; amélanchier sanguin

Photo by Sean Blaney

A dwarf shrub, it sometimes reaches 1m in height. The leaves are glabrous, ovate to widely lanceolate in outline. Their veins extend to the serrate margin. The inflorescence is also glabrous, the flowers carried on short pedicels to 3cm long. Flowers are subtended by reflexed or erect sepals. The ovary is smooth at the summit, forming succulent purplish black fruit.

Later flowering, early June to August.

Mainly calcareous areas, in bogs and barrens.

Known from Shelburne, Lunenburg and Cumberland counties east to Guysborough and Cape Breton, including Saint Paul Island.

Ranges from NF to ON, south to AL and GA.

***Amelanchier stolonifera* Wirg.**
(=*A. spicata* (Lam.) K. Koch)
Dwarf Serviceberry; Bilberry; amélanchier en épis

Photo by Martin Thomas

Similar to the preceding species, it is a dwarf, stoloniferous shrub, rarely reaching 1m. Leaves are more oblong, round and may be acute terminally. They are distinguished by being white-tomentose while young, soon becoming glabrous. Margins are finely serrate, the veins rejoining before reaching the margins. Flowers are paniculate, erect on pedicels of 1cm in length. Large black succulent fruit, should separate this species from small *A. arborea* individuals.

Flowers in early June, later than *A. canadensis*.

Frequents sandy, stony areas as on barrens and in boggy depressions.

Scattered in southwestern counties. Common across Annapolis and Kings counties and possibly northern Cape Breton.

Elsewhere NL to ON, south to SD, AL and GA.

Argentina Hill.
silverweed

This small genus was recently removed from *Potentilla* and includes three or more species. Typically, the plants spread by creeping stems, rooting at the nodes. Unlike *Potentilla*, the flowers are solitary, axillary or terminal, but not in cymes. Ours have pinnately divided leaves, silvery tomentose beneath.

Key to species

Leaflets flat, pubescence extending over the margins and loose; pedicels and petioles also pubescent.	*Argentina anserina*
Leaflets revolute, pubescence not extending over the margins; hairs tightly appressed; pedicels and petioles glabrous or nearly so.	*A. egedii*

Argentina anserina (L.) Rydb.
(=*Potentilla anserina* L.)
Silverweed; potentille ansérine

Photo by Sean Blaney

A trailing, colonial species, the leaves are borne erect, 10–20cm long. There are 5–10 leaflets on each side of the axis increasing in size terminally. Sharply serrate on the margins, their undersurfaces are white-woolly or silvery. Flowers are borne on long peduncles arising from leaf axils, 1–2 bright yellow flowers. Achenes are distinctly furrowed.

Flowers from June to August.

Coastal species, on sandy beaches, dunes and marshes. May appear weedy about wharves.

Common around the entire coast. Infrequent inland.

Ranges across Canada to AK, south CA, NM and TN; Eurasia.

***Argentina egedii* (Wormskj.) Rydb.**
(includes *P. anserina* var. *lanata* Boivin, var. *rolandii* Boivin)
potentille d'Egede

Photo by Sean Blaney

It is very similar to the previous species, but for the revolute leaf margins. Silvery tomentum is tightly appressed on the lower leaf surfaces. The pedicels and petioles are only glabrescent. Ours is ssp. *groenlandica* (Tratt.) A. Löve.

Coastal sandy habitats.

Found from Seal Island, Yarmouth Co. north to Digby; Kings to Inverness counties.

Arctic Canada and Greenland, south to NY and MB.

Comarum L.

A small and possibly monotypic genus, similarly separated from *Potentilla*. Differentiated by its freshwater marsh habitat and its woody decumbent stems. Striking purple flowers, produce an aggregate fleshy fruit.

***Comarum palustre* L.**
(=*Potentilla palustris* (L.) Scop.)
Marsh Five-finger;
comaret des marais

Photo by Ross Hall

Photo by Ross Hall

Purple flowers form a compound fruit. Plants grow to 40cm producing robust stems with sheaths.

Flowers in July.

Muddy soils along streams and on terraces and marshes.

Not common in southwestern NS, scattered throughout central counties becoming more frequent northward.

Found from NL to AK, south to NJ, CO and CA; Eurasia.

Crataegus L.
hawthorn

Shrubs and small trees, the hawthorns total about 100 species of the Andean and north-temperate habitats. Hybrids are frequent. Typically they have stiff spines on the twigs and branches. Twigs are lustrous and slender; pith is small. Buds may be solitary, sessile and round, or ovate with about six scales. Leaves are simple and petiolate, toothed and usually lobed. Those on the flowering branches are usually less divided and of a different outline. Flowers are white or pink, in cymes. Calyx and corolla are five-merous with 5–25 stamens. Ovary is inferior, with 1–5 carpels. Fruits are small pomes, with 1–3 bony nutlets.

A difficult genus to ascertain species.

Key to species

A. Veins of the leaves extending to the sinuses and points of lobes; flowers <12mm wide, nutlet 1. *Crataegus monogyna*

aa. Veins only to the points of the lobe or larger teeth; flowers >13mm wide; nutlets >1. B

B. Nutlets rounded on the ends, deeply pitted on either side. *C. succulenta*

bb. Nutlets not pitted, or with 2–5 grooves, pointed. C

C. Floral leaves tapering at the base and sometimes lobed. D

D. Floral leaves without lobes or nearly so; obovate or oblong. — E

E. Leaves glossy above; nutlets 1–2 (3); fruit remaining hard and dry, 6–10mm in dia.; young branches reddish or brownish. — *C. crus-galli*

ee. Leaves dull above; nutlets 3–5; fruit becoming succulent, 10–15mm in dia., young branches pale ashy-gray. — *C. punctata*

dd. Floral leaves ovate or elliptic, lobed. — F

F. Leaves rounded to obtuse; nutlets not pitted. — *C. chrysocarpa*

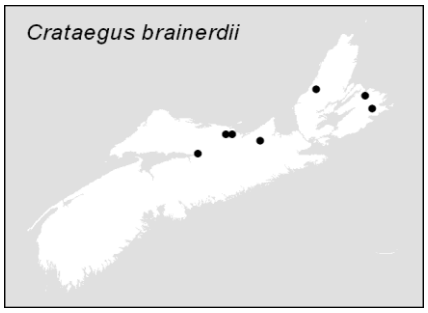
ff. Leaves acuminate; nutlets shallowly pitted on inner surface. — *C. brainerdii*

cc. Floral leaves broad or rounded at the base, usually lobed or cleft. — G

G. Plants strongly pubescent; fruit pubescent at least at the ends; mature leaves pubescent beneath, at least along the veins; inflorescence tomentose. — *C. mollis*

gg. Plants glabrous or glabrescent; fruit smooth; inflorescence may be villous. — *C. flabellata*

Crataegus brainerdii Sarg.
aubépine de Brainerd; go'gominaqsi



This shrub is tall and thorny. Leaves are generally elliptic with shallow lobes, distally and finely serrate. The branches and hypanthia are pubescent and the sepals glandular. Stamens number 8–10, yellow. Similar to *C. chrysocarpa* but it has fewer, stouter thorns and is usually taller.

Flowers in June.

Generally edges of fallow fields.

Very common from Truro to Pictou and scattered to Cape Breton.

Eastern from NS to ON, south to NC.

***Crataegus chrysocarpa* Ashe**
(=*C. coccinea* L.)
aubépine dorée

Noticeably thorny, the spines may be 6cm long and slightly curved. Leaves are elliptic to nearly round with acute triangular lobes. Bases are wedge-shaped. Flowers arranged in cymes, pubescent. Sepals are glandular. Yellow stamens usually 10.

Flowers in June.

Edges of fields and early-successional forest.

Most common hawthorn in central NS and northward to Cape Breton.

Ranges from NS to AB, south to NM and VA.

***Crataegus crus-galli* L.**
Cockspur Hawthorn; aubépine ergot-de-coq

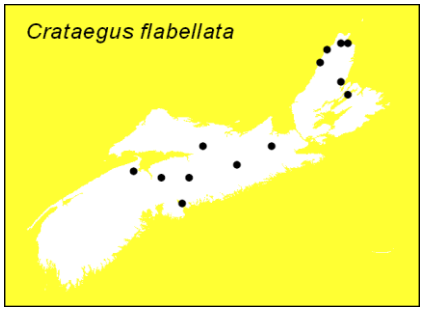
Generally arboriform, its canopy is rounded or with a depressed crown. Its branches are widely divergent. Twigs and leaves are mostly glabrous, their upper surfaces glossy dark-green. Fruit dry, red or green.

Dry and rocky soils on disturbed or successional sites.

A single known site, from Sydney area. Introduced to Nova Scotia.

Ranges from NS to ON south to TX and FL.

Crataegus flabellata (Bosc.) K. Koch
***(=C. x. densiflora* Sarg.)**
Gray's Hawthorn; Fan-leaf Hawthorn; aubépine flabelliforme



A tree or shrub, this hawthorn is distinctive for its wide, deltate leaves. They are cuneate at the base and pubescent on the upper surface. Thorns range from 3–5 cm long. Stamens number 10 or fewer and have pink or red anthers.. a character which distinguishes it from *C. chrysocarpa*. The oblong fruit has 3–5 nutlets. Sepals are sometimes serrate.

Grows in thickets or at the edge of fields.

Found in Kings and Hants Cos. and in northern Cape Breton.

Ranges from NS to ON, south to NY.

Photo by Martin Thomas

***Crataegus mollis* Scheele**
(=*C. submollis* Sarg.)
Downy Hawthorn

A tree (shrub) that may reach 10m in height, it bears a few thorns of 6cm length. Leaves are elliptic or round and 5–6cm wide, softly pubescent. The inflorescence is large and loosely branched, its pedicels, sepals and axis also softly pubescent. Stamens 8–10 with yellow or reddish anthers. Red fruit ripens early, and puberulent at the base.

Flowers a bit later than most hawthorns, in June.

Generally an inhabitant of edges such as along fields and thickets.

Collected from Antigonish to Lunenburg Co. and in Cape Breton.

Ranges from NS to ON, variously south to TX and GA.

***Crataegus monogyna* Jacq.**
English Hawthorn; aubépine monogyne

Photo by Martin Thomas

Photo by Martin Thomas

These plants are small trees, bearing deeply lobed and irregularly toothed leaves only 1.2–4cm long. Recurved thorns arm the twigs and leaf axils, rarely longer than 1cm. Up to 12 flowers are arranged in a short cyme. Each flower is less than 12mm wide and with 20 stamens crowned by pink anthers. The inferior ovary bears an undivided style. Fruit is oblong and reddish.

This May-flowering tree lent its vernacular name to the Pilgrim ship the 'Mayflower'. In England where this tree frequently grows as a hedgerow shrub, it flowers in May and is called the Mayflower.

Our trees flower in June.

An escape from cultivation.

Frequently encountered in the Annapolis Valley and about towns such as Truro and Windsor. Scattered localities south and eastward.

Introduced from Eurasia and found from NS to ON, variously south to AR and VA and western North America.

Crataegus punctata **Jacq.**
aubépine ponctuée

A thorny shrub, the prickles are 4–6cm long. Obovate leaves are only slightly lobed and taper towards the petiole. Veins are deeply impressed on the upper surfaces. Flowers have 20 stamens and are subtended by glandular sepals. The inflorescence is densely pubescent.

Flowers in June.

Open successional land. Known from Glen Margaret, Halifax Co.

NS; QC to MB, south to OK and GA.

Crataegus succulenta **Schrader**
aubépine succulente

Tall in stature, this thorny shrub has thick ovate or elliptic

Photo by Martin Thomas

leaves, finely serrate around their margins. Sometimes lobed distally. Their veins are strongly impressed on the upper surfaces. Inflorescence is smooth or puberulent. Flowers are cupped by a glandular calyx with serrated sepals. Stamens number 20; their anthers are pink. Fruit may be puberulent near the attachment.

June flowering.

A shrub of edges and disturbed soils.

Scattered from Queens and Kings counties, to Cape Breton.

NS to BC, south to AZ and GA; absent from SK.

Dasiphora Raf.

Formerly included in *Potentilla* as a subgenus, the three species are shrubs. Asian in origin, there is one circumpolar species native to North America. All have leaves divided pinnately into five leaflets (3–7).

Dasiphora fruticosa (L.) Rydb.
Shrubby Cinquefoil; potentille frutescente

Photo by Martin Thomas

Freely-branching this shrub bears bright yellow flowers, clustered at the ends of branches. Leaves are leathery and pinnately divided, with usually five or seven leaflets.

Flowers throughout the summer.

Sometimes associated with calcareous soils; savannahs, meadows, bogs.

Found from Yarmouth and Digby counties to Cape Breton.

Elsewhere circumpolar, south to NC, NM and CA.

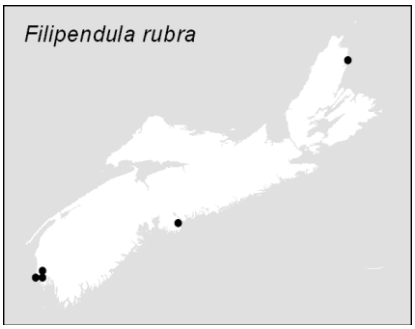
Filipendula Miller
queen

A north-temperate genus, with only three introduced species reaching Nova Scotia. Perennials, all bear a cup-shaped hypanthium in flowers 5–7-merous. Inflorescence is a large panicle, with graceful sweeping

petals, surrounded by reflexed sepals. Stamens 10–40 in longitudinal rows opposite the corolla lobes. Pistils 5–15 in a circle. Fruit is indehiscent. Leaves are pinnately compound.

A. Leaves with 10–25 pairs of lateral leaflets. *Filipendula vulgaris*
aa. Leaves with 2–5 pairs of lateral leaflets. B
B. Lateral leaflets lobed, 3–5; flowers pink; fruit straight. *F. rubra*
bb. Lateral leaflets not lobed, merely serrate; flowers white; fruit twisted. *F. ulmaria*

Filipendula rubra (Hill) BL Robins
Queen-of-the-prairie; filipendule rouge



A woody herb, its height reaches to 1m tall. Smooth and unbranching, it bears a few leaves with deeply cleft leaflets, smooth beneath. The numerous pink flowers are clustered into an irregular panicle, 10–15cm long. Achenes are straight, 5–8mm long.

Flowers in July and August.

Roadsides and disturbed sites; a garden escape.

Several widely separated localities: Yarmouth, Herring Cove, Halifax Co. and Red Head Victoria Co.

Elsewhere circumpolar, south to NC, NM and CA.

Introduced from NF to ON, from further south.

Filipendula ulmaria (L.) Maxim.
Queen-of-the-meadow; reine-des-prés

Colonial, each plant may reach 2m tall. Leaves are divided into three leaflets, the terminal one larger than the lateral leaflets. Lower surfaces are white-tomentose. White flowers are crowded into a panicle, their stamens exerted. Achenes are twisted, 3–4mm long.

July and August flowering.

Oldfields and meadows, roadsides and old gardens.

Commonly found in the western part of Nova Scotia.

NF to ON south KY. From Eurasia.

Filipendula vulgaris Moench
Dropwort; filipendule vulgaire

Low-growing, the leaves are mostly basal. They are narrow and with many pairs of incised leaflets, of equal size. Flowers are pink, becoming white, forming straight densely pubescent follicles.

Flowers June and July.

Also found along roadsides and other disturbed sites.

Limited to the Yarmouth area, where it persists.

NF, NS, ON, south to NY; CA. Introduced from Europe.

Fragaria L.
Strawberries

A genus of perennial herbs, it includes nearly 30 north-temperate and South American species. Spreading freely by runners, these familiar plants have achenes, embedded on the swollen persistent receptacle, – the strawberry.

Leaves are divided into three serrate leaflets. Flowers have five white petals surrounded by five sepals and an equal number of leafy bracts. Hypanthium is saucer shaped.

Key to species

Achenes on the surface of the receptacle; petals <7mm long. *Fragaria vesca*

Achenes in pits on surface of receptacle; petals equal to or >7mm long. *F. virginiana*

Fragaria vesca L.
Woodland Strawberry; fraisier des bois

Photo by Martin Thomas

Slender plants, they extend abundant, long and slender runners. Flowers are white, borne on long scapes exceeding the length of the petioles, both downy. Fruits are ovate. Ours belong to ssp*. americana* (Porter) Staudt.

Flowers in June.

Forming dense patches in shady forests, ravines.

Brier Island to Kings and Cumberland counties, to northern

Cape Breton.

NF to NT and BC south to NE, TN and NC.

A white-berried form of this species persists in a number of locations within the province: White Rock, Wolfville, Grand Pré and Barrington.

Fragaria virginiana Duchesne
Strawberry; fraisier des champs

Photo by Martin Thomas

A low-growing plant spreading by numerous rhizomes. Leaves are firm, on short petioles and comprise three serrate leaflets. Cauline leaves are absent. Flowers are terminally clustered on a scape. Petals are white, receptacle matures red, bearing its achenes in pits and subtended by a persistent calyx. We have two subspecies here: ssp. *virginiana* has the pubescence spreading, while ssp. *glauca* (S. Wats.) Staudt.has arcuate or appressed pubescence.

Flowers earlier in May.

Roadsides, meadows and fallow fields.

Common throughout.

Species is found throughout North America, including the arctic.

HYBRID: Our cultivated strawberry is short-persisting after cultivation. It is a cross with *F. chiloensis* and *F. virginiana* and is named *F.* x *ananassa* (Westone) Duchesne Generally larger in stature, the flowers and fruit also much exceed the size of the wild species.

Geum L.
avens

Another genus of the northern hemisphere, it also extends southward to mountainous South America. Of nearly 50 species, NS hosts six. Inflorescence is generally a corymb. Calyx is a tight spiral of sepals, subtended by a whorl of linear bracts. Petals may be white, yellow or purplish marked by darker nectar guides. Stamens number about 10. Styles are filiform and persistent on the achenes. Basal leaves are compound, vastly different in outline than the cauline leaves.

Key to species

A. Style not jointed, but long and feathery at the base in fruit.	*Geum peckii*	
aa. Styles jointed near the middle, the basal part hooked, terminal portion deciduous.	B	
A. Sepals purple to crimson; flowers nodding; petals erect.	*G. rivale*	
bb. Sepals greenish; flowers erect; petals arcuate.	C	
B. Petals white or yellowish-green.	D	
C. Pedicels puberulent; receptacle densely hispid.	*G. canadense*	
dd. Pedicels hirsute; receptacle nearly smooth.	*G. laciniatum*	
cc. Petals golden yellow.	E	
D. Stipules very broad, reniform or hemispheric.	*G. urbanum*	
ee.Stipules longer than wide, lanceolate or ovate.	F	
E. Leaflets dimorphic; beak of the achene glandular.	*G. macrophyllum*	
ff. Leaflets essentially the same shape; beak of the achene without glands.	*G. aleppicum*	

***Geum aleppicum* Jacq.**
benoîte d'Alep

Photo by Martin Thomas

Plant pubescent and reaching about 1m in stature. Basal and cauline leaves are pinnately divided into leaflets, tapering at the base to the axis. Lateral leaflets about the same size as the terminal ones. Flowers are bright yellow and about equal in length to the sepals. Achenes are hispid, with the styles becoming recurved, deciduous tip.

Flowers in June and July.

Along roadsides, about buildings and in fallow disturbed soil.

Common from Annapolis and Cumberland counties to

northern Cape Breton.

Across Canada, south to CA, NM and GA; Eurasia.

***Geum canadense* Jacq.**
White Avens; benoîte du Canada

Photo by Martin Thomas

A slender branching plant it also may reach a height of 1m. Leafy plants, they have most of the basal leaves divided into three lanceolate leaflets. Flowers are few, with white petals of similar length or slightly longer than the sepals. Pedicels tend to be lightly tomentose. Achenes are arranged in round heads, the receptacle densely pubescent, conspicuous even in flower. It resembles the following species.

Flowers in July.

Fertile soils on wooded intervales.

Uncommon in southwestern counties and along the Atlantic. Scattered from Annapolis to northern Cape Breton.

NS to ON, south to MT, TX and GA.

Photo by Martin Thomas

***Geum laciniatum* Murray**
White Avens; benoîte laciniée

A tall coarse plant, its stems are densely hispid and the

Photo by Martin Thomas

long-petioled basal leaves have deeply incised leaflets. Inflorescence has a few diverging branches and white flowers. Their pedicels are hirsute. Receptacle is smooth although the style is lightly hairy.

The rounded head bears smooth achenes (var. *laciniatum*) or bristly at the summit (var. *trichocarpum* Fern.). The latter variety has been collected from Windsor, Hants Co. and Five Islands, Colchester Co.

Flowers in July.

Deep fertile soil on intervales and in predominantly deciduous forest.

Annapolis Co. to Cape Breton. Infrequent or absent on the Atlantic coast from Queens to eastern Cape Breton

Ranges from NS to northern ON, south to KS, AL and SC.

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Geum macrophyllum Willd.

Photo by Martin Thomas

Of shorter stature than the previous species, it barely reaching 50cm. Leaves are hirsute. Basal leaves produce a larger nearly round terminal leaflet and a number of smaller lateral leaflets. Inflorescence is narrow, becoming more erect as the yellow flowers mature. Basal portion of styles are lightly hirsute but the ovoid receptacle and achene cluster are smooth or merely hispid.

Flowers in June.

Wet soils in meadows, riparian zones, often growing in muck.

A northern species from Annapolis and Cumberland counties, but infrequent along the Atlantic.

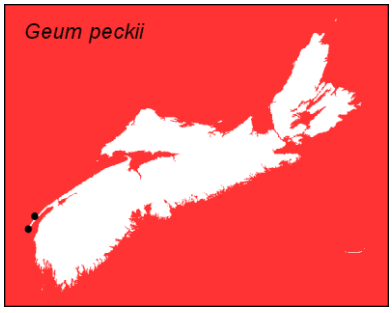
NF to AK, south to CA, NM and NY.

Photo by Martin Thomas

Geum peckii Pursh
Eastern Mountain Avens; benoîte de Peck

Photo by Sean Blaney

Photo by Sean Blaney



A perennial herb, it reaches 50–60cm in height, when in flower. Leaves are mostly basal, with one very large terminal leaflet and two pairs of greatly reduced lateral leaflets. The terminal leaflet is round or kidney-shaped with very shallow lobes and serrate. Flowers number 1–5 and are borne on long scapes. Petals yellow, styles exerted and straight. Plants hispid to hirsute.

Flowers June to September.

Bogs, fens, and shrub swamps.

Brier Island; Digby Neck.

In Canada only known from Nova Scotia. Elsewhere in the White Mountains of New Hampshire.

STATUS: Nationally Endangered (S1); RED-listed in Nova Scotia.

Geum rivale L.
Purple Avens; benoîte des ruisseaux

Photo by Martin Thomas

Photo by Sean Blaney

An unbranched plant, it is nearly 1m tall. Both basal leaves and cauline leaves are present and pinnately divided. Flowers 15–25mm wide, nodding. Pale yellow petals are suffused with purple. Pedicels and hypanthia are glandular pubescent. Styles are long villous basally and terminally.

Flowers in June.

Frequently encountered in ditches, swamps, meadows and even wet fields.

Common throughout the province, especially northern areas.

NF to AK, south to CA, NM and NY.

Across Canada and south to CA, NM and MD; Greenland.

Geum urbanum L.
benoîte commune

Photo Sean Blaney

This recent introduction to NS also produces flowers with yellow petals at least the same length as the sepals. The most noticeable character is the presence of extremely wide stipules, wider than long and notched or lobed.

Flowers in June.

Found roadside amidst a *Rosa rugosa* thicket.

So far known from only a single station, at Sand Beach Yarmouth Co., near Thrum Cap causeway.

NF to AK, south to CA, NM and NY.

Elsewhere it is known from NS; NB to ON, south to IL and PA and WA, OR and UT. Adventive from Europe.

This species has potential to become quite invasive,

particularly in forested campgrounds or in rich soils of other disturbed sites. (Blaney, 2010, pers. comm.)

Malus Mill.
Apple

A genus of trees or shrubs, the apples include from 35–55 species, depending on the treatment. Generally they typically have stout rugose twigs, armed with lateral thornlike spurs along them. Distal ends may also bear tomentum. Buds are solitary with three or four scales. The petiolate leaves are simple, with serrate margins. Pubescence is variable on the lower leaf surfaces. Flowers are white to pink in small cymes, arising from lateral spurs. Five-merous, the hypanthia are urceolate. Inferior ovary bears five carpels, five locules each with two seeds. Styles number five, connate at the base. Fruit is a pome, fleshy and succulent, edible raw or cooked.

Key to species

Leaves and twigs glabrous; sepals deciduous in fruit; fruit <1cm across.	*Malus baccata*
Leaves pubescent beneath, at least along the veins; twigs also pubescent calyx persistent; fruit >2m across.	B
B. Leaves serrate, pubescent on the veins only; hypanthium smooth.	*M. prunifolia*
bb. Leaves crenate or serrate, lower surface pubescent; hypanthium tomentose.	*M. pumila*

Malus baccata (L.) Borkh.
(=*Pyrus b.* L.)
Siberian Crab-apple; pommier de Sibérie

It differs from the following species in having deciduous pedicels and calyx. The fruit are smaller, barely reaching 1cm in diameter, red or yellow in colour.

Near habitation. May persist after cultivation.

Grown for its lovely floral display, this small tree has been reported from Halifax. It is unclear whether it was from wild or planted material.

Ranges from NF to ON, south to MO and KY.

Malus prunifolia (Willd.) Borh.
Plum-leaf Crab-apple; pommier à feuilles de prunier

Unlike apple below, this species is glabrous and the calyx soon becomes smooth. Leaves are serrate. Fruit is 2cm in diameter.

Riparian.

Reported once, from Weymouth, Digby Co.

Elsewhere, it has been mapped from NS and NB, south along the coast to SC, west to Il; MN. Introduced.

Malus pumila **Mill.**
(=*Pyrus malus.* L.)
Apple; pommier commun

Photo Sean Blaney

Generally a small tree, it bears alternate leaves on spurs. Leavesare simple and ovate to elliptic and serrulate. Flowers are showy, white suffused with pink, arranged in short racemes. Stamens are numerous, the anthers yellow. Ovary is inferior becoming a fleshy pome, with a persistent calyx.

Many cultivars are known as varieties. When found wild, the branches become quite thorny.

Flowers late May and early June.

Found in well-drained soils.

Very common in cultivation and scattered as an escape.

NF to AK, south to CA, NM and NY.

Naturalized from Eurasia, throughout all but the central states and provinces in North America.

Photinia **Lindl.**

Colonial shrubs and small trees, 40–60 species, primarily Asian, with Nova Scotian species formerly included in *Aronia*. Leaves are simple and petiolate, elliptic to obovate, their margins finely serrate. A unique character is the row of reddish glands down the upper surface of the midrib. Flowers are arranged in small flat cymes, pinkish or white, five-merous, but for the 15–20 stamens. Ovary is half-inferior, compound with five carpels, producing a small red or black pome.

Key to species

A. Twigs, pedicels, axis and lower leaf surfaces glabrous or nearly so; fruit black; leaves not turning red in autumn. *Photinia melanocarpa*

aa. Twigs, pedicels, lower leaf surfaces and axis at least puberulent. B

B. Fruit red; sepals densely glandular; buds somewhat pubescent. *P. pyrifolia*

bb. Fruit black; sepals eglandular or nearly so; buds soon smooth. *P. floribunda*

***Photinia floribunda* (Lindl.) KR Robertson & Phipps**
(=*Aronia prunifolia* (Marsh.) Rehd.)
Purple Chokeberry; aronie à feuilles de prunier

Photo by David Mazerolle

Photo by Sean Blaney

Very similar to the next species, differing mostly in pubescence and autumn leaf colour. This species is variously puberulent on the lower leaf surfaces and pedicels. Its leaves turn aubergine or bronze in the fall. Shiny black fruit resemble huckleberries.

Flowers in mid-May.

Sandy rocky soils on barrens, thickets and meadows and often lacustrine; bogs.

Distribution is unknown, but probably throughout.

A distinctly eastern species, from NF to ON, south to MS and GA.

***Photinia melanocarpa* (Michx.) KR Robertson & Phipps**
(=*Aronia m*. (Michx.) Ell.)
Black Chokeberry; aronie à fruits noirs

Photo by Sean Blaney

Generally a smooth shrub, several metres tall. Bearing black fruit less than 1cm in diameter, it also has a glandular calyx.

Flowers May to early June.

Photo by Sean Blaney

Prefers poorly-drained soils in bogs and swamps.

Found throughout the Province.

Ranges from NF to ON south to AR and GA.

***Photinia pyrifolia* (Lam.) KR Robertson & Phipps**
(=*Aronia arbutifolia* (L.) Ell.)
Red Chokeberry; aronie à feuilles d'arbousier

Photo by Sean Blaney

This shrub may reach several metres in height, with slender wiry branches. Dark glands on the serration are most noticeable on this species. Leaves are pubescent beneath. Fruit is a small pome less than 6mm in diameter and bright red.

Flowers later in June.

Frequents meadows and thickets, often on lakeshores in wet or rocky soil.

Southwestern Nova Scotia at least to Truro and less frequent eastward.

NS to ON, south along the coastal plain; inland to TX and FL.

Physocarpus Maxim
Ninebark

These shrubs bear peeling bark and large solitary, brownish winter buds. The half-ovate leaf scars are raised on spongy cushions. Petiolate leaves are simple but with three crenate lobes, cordate or cuneate at the base. Tiny white flowers are gathered in a terminal corymb, usually hemispheric in appearance. The petals number 4–5 forming a dehiscent follicle.

Physocarpus opulifolius (L.) Maxim.
Ninebark; physocarpe à feuilles d'obier

Photo by Martin Thomas

A shrub bearing leaves that superficially resemble those of *Viburnum*. The three-lobed leaves are generally dentate and with three main veins. The fruit is a dry follicle, not a succulent drupe.

Flowers in June.

Associated with roadsides, around abandoned dwellings and river sides.

There are several localities on mainland Nova Scotia: Mill Village, Queens Co., at Grand Pré, Pictou and Herring Cove, Halifax Co. It is to be expected elsewhere.

Ranges from QC to MB, south to AR and FL. Introduced to NS and NB.

Potentilla L.
Cinquefoils

A genus of about 200 Holarctic species, with a few reaching the New Guinea highlands. The genus has seen some taxonomic changes with several species now separated from the true cinquefoils. Herbaceous, annual or perennial, all are yellow flowered (in NS species), most with palmately divided leaves. Petals and sepals number five, the sepals alternating with narrow green bracts. Stamens 5–20. Achenes are clustered on the receptacle, forming a dry head.

Key to species

A. Leaves pinnately divided.	*Potentilla pensylvanica*
aa. Leaves palmately divided or ternate.	B

B. Leaves generally with 3 leaflets (4–5 on a few basal leaves). C

C. Cauline leaves sessile, on petioles <5mm long. *P. erecta*

cc. Cauline leaves on petioles >5mm in length. *P. norvegica*

aa. Leaves with number of leaflets >5. D

D. Plant often trailing; flowers axillary or terminal, solitary or few. E

E. Flowers 4-merous. *P. anglica*

ee. Flowers 5-merous. F

F. Stems radiating from a thick taproot; flowers >1.5cm wide. *P. reptans*

ff. Stems from a short rhizome; flowers smaller. G

F. Leaflets toothed only in the distal half; first flower arising from the axil of the first leaf. *P. canadensis*

gg. Leaflets toothed nearly to the base; first flower arising from the axil of the second leaf. *P. simplex*

dd. Plant erect or ascending; flowers in terminal cymes. H

H. Leaves with more than 5 leaflets. *P. recta*

hh. Leaves with 5 leaflets. I

I. Lower surface of leaflets densely tomentose, concealing the undersurface, almost feltlike, white or silver. *P. argentea*

ii. Lower surface of the leaflets thinly tomentose-villous, grayish. *P. intermedia*

***Potentilla anglica* Laicharding**
potentille d'Angleterre

Photo by Sean Blaney

Arising from a stout crown are several slender stems, soon reclining. Leaves are petiolate, usually ternate, each 1–2cm long. Leaflet bases are cuneate and with 5–7 teeth around the margin distally. Solitary yellow flowers arise from the leaf axils, on long slender pedicels Four-merous, their length exceeds that of the sepals.

Flowers June and July.

Scattered localities from Guysborough Co. to Cape Breton. Historically recorded from Yarmouth Co.

Ranges in the east from NF to QC, south to PA; OR to CO and CA. From Eurasia.

***Potentilla argentea* L.**

Silvery Cinquefoil; potentille argentée

Photo by Martin Thomas

Photo by Martin Thomas

A cespitose species, its stems are erect or sprawling, 20–40cm tall. Palmately lobed leaves are finely dissected and silvery tomentose below. Yellow flowers are arranged in a terminal cyme. Petals are nearly equal to the sepals.

Flowers over the summer, from June to August.

Look for this plant near gardens, roadsides and in other disturbed habitats.

Scattered throughout, except for the eastern shore.

Across Canada, south to NC, AZ and OR. Introduced from Europe.

***Potentilla canadensis* L.**
potentille du Canada

Photo by Martin Thomas

Photo by Martin Thomas

This slender species soon reclines and becomes prostrate. There are five leaflets, narrowly cuneate at the base, sharply serrate around the tips. The leaves are silky-villous, the pubescence appressed at flowering. Flowers are borne on long peduncles, arising from the first developed leaf axil on the stem.

Flowers in June.

Found on dry rock barrens and other open areas.

Known from Yarmouth and Shelburne counties and Kings, Halifax and Hants counties.

Ranging from NF to ON, variously south to TX and GA.

***Potentilla erecta* (L.) Rauschel**
potentille tormentille

Bearing solitary flowers, each is four-merous. Cauline leaves are sessile or on very short petioles.

Flowers June to August elsewhere in its range.

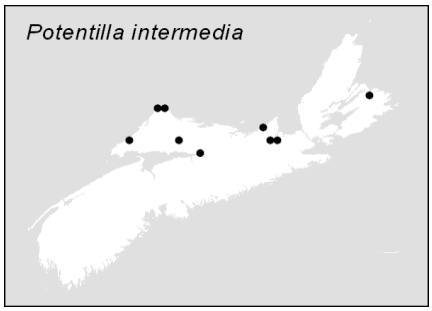
Favours mossy damp woods.

Known only from Cape Breton Co.

Elsewhere from NF, NS and MA after its introduction from Eurasia.

***Potentilla intermedia* L.**
potentille intermédiaire

Photo by Sean Blaney



A low-growing, sprawling plant from a stout basal crown, the stems reaching 40–50cm. The stems and leaves are covered with copious appressed pubescence. Basal leaves are long-petiolate, while the cauline leaves are short-petiolate. Leaves have 4–5 leaflets, dentate on the margins. The inflorescence is freely branching. Flowers are small, about a cm wide, the petals and sepals of equal length.

Flowers in July.

A plant of roadsides and disturbed soils.

Local from Cumberland Co. eastward.

NS to QC, MN to KY and NC; BC. From Europe.

***Potentilla norvegica* L.**

Rough Cinquefoil; Norwegian Cinquefoil; potentille de Norvège

Photo by Ross Hall

A stout plant, growing as a biennial or annual, to 50cm tall. With numerous ternate leaves, the leaflets are obovate and deeply serrate. Freely branching, the plants bear diffuse inflorescences, with numerous small yellow flowers. The petals are of similar length to the sepals.

Flowers in July.

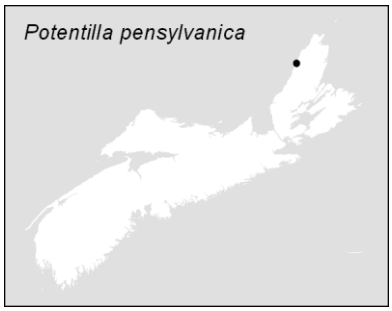
Another species of fallow fields and roadsides.

Scattered throughout the province, rarely common.

Widely introduced from Europe and absent only around the eastern Gulf of Mexico.

***Potentilla pensylvanica* L.**

potentille de Pennsylvanie



A perennial species, with erect or ascending stems to 60cm, from a short crown. Leaves are pinnately divided, usually with 5–7 leaflets. Undersurfaces are tomentose. Leaves are deeply incised, their lobes rounded. Upper leaflets are larger than the proximal leaflets. Styles are deeply inserted, only 1mm long. Ours are referenced as var. *littoralis* (Rydb.) Boivin.

Flowers in June.

Associated here with sandy or gravelly beaches on the coast.

Historically known from north of Cheticamp. Not reported recently.

Known from NF to AK and even into the MacKenzie District, south to CA, NM, and New England.

***Potentilla recta* L.**

Sulphur Cinquefoil; potentille dressée

Photo by Martin Thomas

A perennial herb with unbranching stems, it stands to 60cm tall. Leaves are palmate, with 5–7 oblanceolate leaflets, 2–5cm long. Leaves are villous on both surfaces. Showy flowers arranged in a flat-topped corymb, 10cm wide. Flowers with petals to 1cm long and often notched.

Flowers in July.

Photo by Sean Blaney

Another species of disturbed soils and fields.

Frequently seen throughout.

Throughout North America, but for the arid southwest. Introduced here from the west.

***Potentilla reptans* L.**
potentille rampante

Long-trailing stems root at the nodes, from which the leaves arise. Leaves are palmately split into five ovate or obovate leaflets, serrate on the edges. Yellow flowers are solitary, nearly 2cm across, and borne on long pedicels from the leaf axils.

Flowers in June and July.

Associated with wharves and possibly ballast piles.

From Yarmouth to Halifax, Hants and Annapolis counties.

NS to ON, south around the Great Lakes to VA; FL; CA. After introduction from Europe.

***Potentilla simplex* Michx.**
Cinquefoil; Five-finger; potentille simple

Photo by Martin Thomas

Long-trailing on wiry stems, exhibiting long internodes. Variably pubescent, they are usually hirsute or with a light appressed covering. Leaflets are ovate to elliptic and usually five. They are sharply toothed on the distal half. The yellow flowers arise from the second leaf axil on slender pedicels.

Flowers June and July.

Similar habitat as other species, infertile, leached soils of

Photo by Sean Blaney

disturbed sites.

Common throughout.

Ranges from NS to ON, south to TX and GA.

Poterium L.
Salad-burnet

A genus of 13 herbaceous perennials or shrubs, several of which are Mediterranean endemics. Leaves compound, oddly pinnate with adnate stipules. Pedicels clasping. Flowers arranged in a terminal headlike spike, the flowers bisexual or pistillate. The hypanthium is persistent, wholly enclosing the achenes in fruit. Fruit is angled or winged, otherwise ornamented. Styles are brushlike and branched. North American material is said to belong to a single species, as below.

Poterium sanguisorba L.
(=*Sanguisorba minor* Scop.)
Garden Burnet

A rhizomatous herbaceous plant, sometimes reaching to 80cm in height. It bears both basal and cauline leaves. Leaves are odd-pinnate with 5–15 ovate leaflets, widely spaced and serrate. Flowers are carried in tightly clustered round heads, subtended by greenish sepals. Ours is var. *polygamum* (Waldstein & Kitaibel).

Flowers June and July.

Persisting in fields and on waste ground.

Known from Windsor and Halifax and reported from scattered locations.

NS to ON, south to TN and NC; BC south to CA and NM. Eurasian introduction.

Prunus L.

Nearly 200 species comprise this north-temperate genus; some are familiar to most: almond, plum, cherry, peach and apricot particularly. Woody plants, the bark is conspicuously marked with lenticels. Leaves are usually simple, serrate on the margins. Most species have a pair of very large glands on the

distal end of the petiole. Showy flowers are highly fragrant, arranged in terminal racemes or axillary umbels and occasionally even solitary.

Key to species

A. Plant a small very thorny shrub. *Prunus spinosa*

aa. Plant a tree or shrub, not spiny. B

B. . Flowers in terminal racemes or small clusters subtended by leafy green bracts, or sepals smooth above; stone round or ovate. C

C. Inflorescence a raceme with >20 flowers; pedicels shorter than the axis. D

D. Sepals entire or with subtly glandular margins, persistent in fruit; leaf margins with very short appressed or incurved teeth. *P. serotina*

dd. Sepals soon deciduous, marginal glands conspicuous; leaf teeth ascending, deltate. *P. virginiana*

cc. Inflorescence umbelliferous, <12 flowers on pedicels, exceeding the axis of the inflorescence. E

E. Clusters of flowers without bracts, or subtended only by bud scales. *P. pensylvanica*

ee. Clusters of flowers, with leafy bracts at the base. F

F. Leaves with persistent pubescence below; calyx tube tightly constricted at the summit; calyx lobes entire. *P. avium*

ff. Leaves becoming smooth; calyx tube not constricted; lobes of the calyx toothed. *P. cerasus*

bb. Flowers solitary or in small clusters, not subtended by leafy green bracts; sepals pubescent within; stones flattened. G

G. Flowers 4–5 per cluster; pedicels pubescent; fruit red to yellow; native. *P. nigra*

gg. Flowers solitary or paired; pedicels softly pubescent; fruit dark blue to black; introduced. *P. domestica*

***Prunus avium* L.**

Sweet Cherry; cerisier des oiseaux

Photo by Martin Thomas

Photo by Martin Thomas

A small tree resembling *P. cerasus*, but with large softer leaves, downy on the ribs below. Flowers arranged in corymbs, subtended by enlarged inner bud scales, each flower 2–3cm wide. The calyx tube is tightly constricted at the summit, its lobes smooth. Fruit about 2cm in dia., yellowish to purplish black. There are numerous cultivars from this species.

Flowers in late May.

Grows along edges such as roadside thickets and fields. Barely hardy here.

Limited to Wolfville and Annapolis Royal, with a single collection from Cape Breton, at Sydney.

NS to ON south to TN and SC; BC to CA.

***Prunus cerasus* L.**

Sour Red Cherry; cerisier acide

Photo by Martin Thomas

Photo by Martin Thomas

Another tree, this one has waxy or leathery leaves, whose margins are crenate. Their veins beneath are smooth. Inflorescence of few flowers, arranged in a sessile umbel. Calyx lobes are serrate and the tube is not constricted at the top, both important characters in separating it from *P. avium*. The inner bud scales are erect and not reflexed. Fruit is red and astringent or sour. Several cultivars are also known.

Flowers in May.

A cultivated tree escaping to roadsides and forest edges.

Common in the Annapolis Valley; occasional elsewhere.

Ranges in the east from NS to ON, south to KS and GA and in the west BC to NM sporadically.

***Prunus domestica* L.**
Plum; prunier domestique

A small tree, its branches may be sparsely thorny or spurred. Leaves may reach 10cm long, downy pubescent beneath. Fruit are from 3–4 cm long, and only occasionally bearing pubescent pedicels.

Commonly, ssp. *domestica* is the cultivated plum. Occasionally, especially near Wolfville, collections have been made of ssp. *institia* (L.) CK Schneider.

Flowers from late May into June.

About edges of fields and in fallow orchards, where trees persist after cultivation.

Collections from Kings, Lunenburg and Victoria counties. Generally not escaped, but persisting. European introduction.

Ranges from NS to ON, south to TX and LA; WA variously south to CA.

***Prunus nigra* Ait.**
(=*P. americana*, var. *nigra* Waugh)
Canada-plum; prunier noir

Photo by Sean Blaney

Photo by Sean Blaney

A shrub, often becoming thorny with age. Leaves are folded in bud rather than rolled, their margins crenate. Numerous flowers are carried on dark red pubescent pedicels, three or more per inflorescence. Ranging from white to pink, the fruit is also reddish and oblong. Flowers subtended by a glandular calyx, the sepals serrate.

Flowers early in June.

Another species of edges of both fields and forests.

Collections extant from the Annapolis Valley and Tatamagouche, Colchester Co.

Ranges from NS to MB, south to IL. Formerly used as nursery rootstock, introduced from further south.

***Prunus pensylvanica* L.f.**

Pin-cherry; Bird-cherry; cerisier de Pennsylvanie; masgwe'simanaqsi

Photo by Sean Blaney

Photo by Sean Blaney

A slender tree or shrub, it may reach a height of 10m. The branches are smooth, not thorny. Lanceolate or elliptical leaves are finely serrate, with appressed teeth. Flowers are up to 1.5cm wide, arranged in a corymb. Bracts below the inflorescence are absent. Fruit to 8mm in diameter, soon becoming bright red and producing a globose pit.

Flowers throughout May and into June.

An early-successional species, flourishing at the edges of woods, fields and meadows wherever soils are light.

Common throughout Nova Scotia.

Across Canada variously south to WY and GA.

***Prunus serotina* Ehrh.**

Black Cherry; cerisier tardif

A tree, its trunk is covered with smooth dark bark. The leaves are glossy, serrate with the teeth inturned. The midrib below often with adjacent rusty hairs. Flowers and fruit borne in long drooping racemes, the fruit ripening to a purplish red. The calyx is persistent.

Flowers in June.

Photo by David Mazerolle

Photo by Sean Blaney

Photo by Sean Blaney

A native cherry, of thickets and mixed forests.

Common from Shelburne and Digby counties to Antigonish Co. Less frequent in the centre of the province.

Ranges from NS to ON, south to AZ and FL; BC.

NOTE: hybridizes with P. virginiana. Some of these hybrids may be found at South Berwick.

***Prunus spinosa* L.**
Blackthorn; **prunellier**

This shrub is very spiny. It bears leathery serrulate leaves, 2–4cm long. Its flowers are solitary, producing bluish globose fruit, considered inedible. Occasionally grown as an ornamental.

Flowers in June.

Collections from Wolfville and Halifax. Doubtful if it is escaping, more likely persisting after cultivation.

Ranges from NS, ON, BC and south MD; disjunct in TN and AR; ID and OR.

Prunus virginiana L.

Choke-cherry; cerisier de Virginie

Photo by Martin Thomas

Photo by Sean Blaney

A large shrub, bearing obovate or oblanceolate serrate leaves. Their texture is thinner than those of Black Cherry. Flowers are white, borne in drooping racemes. Calyx is deciduous, its lobes soon dropping. Rusty hairs are absent from the lower leaf surface.

Flowers in June.

Another species of edges: fields, meadows, trails, roads and even intervales.

Common throughout the northern half of the province, becoming less frequent to the southwest.

Ranges across Canada. South to CA, TX and GA.

Pyrus L.

Pear

A genus of north-temperate trees or shrubs of Europe, Asia and North Africa, reaching Nova Scotia only as introductions. Typically the flowers are white, producing a pome. Stamens are inserted. Fruit is enclosed within the fleshy swollen calyx tube, in five carpels. Differs from apple, which has been included here in the past, by the presence of stone cells, which give the characteristic texture to the edible flesh.

***Pyrus communis* L.**

Common pear; poirier commum

Photo by Patrick Foote

Reaching 15m in height, the unpruned trees have a narrowly pyramid crown. Leaves elliptical and crenate. White flowers bear stamens with red anthers.

Flowers in May.

Spreading from cultivation and persisting in thickets, edges of woods.

Primarily collected from the Annapolis Valley and from Sydney area.

Eurasian and thriving in North America across the continent, but for the plains and prairies.

Rosa L.

Rose

A genus of some of the most prized ornamentals of the north-temperate regions and including about 100 species. Hybrids and polyploidy are common. They are typified by the urn-shaped hypanthium, narrowed at the summit. Calyx bears green acute sepals, sometimes persisting in fruit. Large petals form showy flowers, from white through all shades of pink and red and often variegated. Very short stamens inserted near the constricted opening of the hypanthium. Styles barely exerted. Fruit an achene, enclosed by the fleshy hypanthium, called a hip. Leaves pinnately divided and with adnate stipules. Plants generally armed with thorns or bristles.

Key to species

A. Styles connate, exerted; flowers small (2–4cm wide). white. *Rosa multiflora*

aa. Styles distinct, only stigmata exerted; flowers >4cm across from white to deep pink. B

B. Flowers solitary at terminal ends of branches; pedicels not subtended by bracts; introduced. *R. gallica*

bb. Flowers solitary or in corymbs, if solitary, then pedicels bracted; native and introduced. C

C. Sepals unequal in size and shape, the outer pinnate with several lanceolate segments; the hypanthium opening only 1mm D

wide.

D. Lower leaf surfaces smooth or nearly so. *R. canina*

dd. Lower leaf surfaces glandular. E

E. Styles pubescent; sepals erect, persistent in fruit. *R. eglanteria*

ee. Styles glabrous; sepals deciduous. *R. micrantha*

cc.Sepals entire, or some with 1–4 linear branches arising from the base, opening of the hypanthium >2mm wide. F

F. Current season's wood tomentose; petals 3–5cm. *R. rugosa*

ff. Current season's wood glabrous or puberulent; petals mostly <3cm. G

G. Hypanthia and pedicels glandular; sepals arcuate or reflexed after flowering, deciduous. H

H. Leaves finely toothed. I

I. Prickles on nodes broad-based and reflexed, few or none on the internodes. *R. palustris*

ii. Prickles on nodes and internodes all straight and narrow. *R. nitida*

hh. Leaves coarsely toothed. J

J. Prickles mostly at nodes, reflexed and compressed. *R. virginiana*

jj. Prickles slender, straight,numerous on the internodes. *R. carolina*

gg.Hypanthia and pedicels glabrous; sepals long-persistent, usually erect after flowering. K

K. Thorns on nodes; flowers often double *R. cinnamomea*

kk. Thorns absent from nodes, or stems evenly armed. L

L. Floral bract and upper stipules glandular; stems densely bristly on most of the internodes. *R. acicularis*

ll. Floral bracts and upper stipules glabrous or pubescent; stems unarmed or with slender thorns only on the lower internodes. *R. blanda*

***Rosa acicularis* Lindl.**

It is a densely armed upright shrub forming dense thickets from rhizomatous branches. Leaves are coarsely divided into 5–7 serrate leaflets. Flowers sometimes borne in corymbs, more often solitary, deep pink. Ours is ssp. *sayi* (Schwein.) WH Lewis.

Flowers mid-June to July.

Found in thickets and rocky shaded slopes on acidic soil.

Reported only from Beaverbank, Halifax Co.

Species is circumpolar. Ranges from NF to AK and variously south to NM and WVA.

***Rosa blanda* Aiton**
rosier inerme

Photo by Sean Blaney

A smooth shrub, rarely bearing thorns. If they are present, they are sparse and limited to the base of the plant. Sepals are erect at anthesis and persistent in fruit. Ours is var. *glabra* Crép.

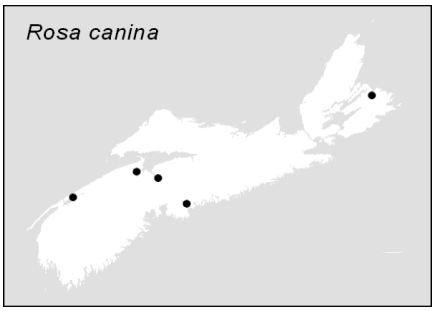
Flowers from June to early August.

Grows in neutral or calcareous soils in rocky areas, as on talus or slopes.

So far known only from the Sydney region in Cape Breton.

Ranges from NS to NT, variously south to MS.

***Rosa canina* L.**
Dog Rose; rosier des chiens



Growing as a tall shrub, this import bears stout reflexed thorns. The leaves are glabrous or glabrescent, the serrate margins glandless. Flowers white to pink, about 4cm across. Sepals pinnately divided and early-deciduous in fruit.

Flowers throughout July.

Formerly used as rootstock in horticultural trade and to be expected on roadside and near old gardens.

Collected from Kentville, Annapolis Royal, Windsor, Halifax

and Sydney.

Ranges across Canada, south to VA and AL; BC to CA, upon introduction from Europe.

***Rosa carolina* L.**
(incl. var. *grandiflora* (Baker) Rehd.)
Wild Rose

Photo by Martin Thomas

A slender shrub, short in stature, rarely greater than 1m tall. Generally not prickly, but slender, straight bristles are scattered the length of the plant. Leaves glabrous on the lower surface. Flowers pink, solitary at the tips of the current year's wood. It is separated from *Rosa virginiana* on the flower position, straight bristles and weak growth.

Flowers from late June into July.

Roadsides, fields, pastures where the soil is sandy and light.

Scattered throughout, becoming more common in the western half.

NS to ON, south to TX and FL.

***Rosa cinnamomea* L.**
Cinnamon Rose; rosier cannelle

Photo by Martin Thomas

Clusters of double flowers arise on short pedicels from very thorny reddish branches. Flowers measure 3–5cm across and are reddish pink. The hypanthia are glabrous. Calyx is downy, with acuminate sepals. Shrubs to 2m, often growing in dense patches. Leaves densely pubescent below.

Flowers from late June into July.

Roadsides and fence-rows around old houses and gardens.

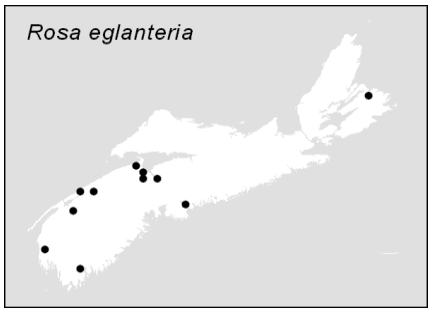
Photo by Martin Thomas

Formerly planted.

Historically reported from throughout NS; now mainly Annapolis Valley.

Ranges from NS to ON, south to VA; Eurasian.

***Rosa eglanteria* L.**
Sweetbrier; Eglantine Rose



Stems to 3m in height, bearing flattened reflexed thorns interspersed with bristles. Leaves are pinnately divided into 5–7 leaflets, softly pubescent below. Their margins are doubly-serrate and glandular. Flowers are usually pink, arising singly or in small corymbs. Styles are densely villous; glandular sepals persistent.

Flowers from late June into July.

Old gardens, roadsides, fallow fields and even open forest. Formerly planted and now persisting.

Found in most communities, from Yarmouth to Sydney.

Ranges from NF to ON and southward; BC to TX and CA. European.

***Rosa gallica* L.**
French Rose; rosier de France

Colonial in habit, this erect shrub is very bristly and armed with stout hooked thorns, even on the leaf rachis. Leaflets are rugose above and pubescent below. Flowers deep rose-pink and often double.

Flowers in June and July.

Thickets roadside.

Historically known from Sydney only.

Records from NS and NB; ME to WI south to LA and GA; naturalized from Europe.

***Rosa micrantha* Borrer ex Sm.**
Small-flowered Sweetbriar; rosier à petites fleurs

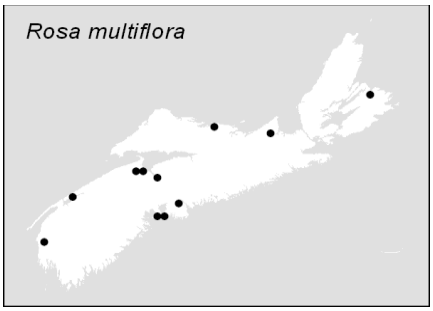
Resembles *R. eglanteria* but without the bristles. Styles are glabrous and sepals deciduous as fruit matures.

Flowers June and July.

Also found in thickets, roadsides and edges of fields. Also used historically as a rootsock.
Collected from Digby Co. to northern Cape Breton.
NS to ON, variously south to TX and NC; WA and OR.

***Rosa multiflora* Thunb.**
Multiflora Rose; rosier multiflore

Photo by Sean Blaney



A sprawling shrub with tall arcuate canes, which may climb over supports or other shrubs. Branches are armed with recurving thorns. Stipules have glandular, pectinate margins. Flowers are white, carried in a loosely flowered inflorescence, each 2–4cm wide. Sepals are acuminate. Styles are united to form a stout column, exerted but hidden by the stamens.

Also flowers in June and July.

Occasionally planted and aggressively spreading from cultivation into edges of roads, forests and fields. It is a serious threat to native habitat.

Throughout due to horticulture.

NS to ON and south to TX and FL; west coast.

Note: this species is considered a noxious weed in several jurisdictions and is banned. Hybrids with *Rosa virginiana* colonize fields and abandoned railway lines.

Photo by Martin Thomas

Rosa nitida Willd.
Swamp Rose; rosier brillant

Photo by Sean Blaney

Photo by Sean Blaney

A slender shrub, it is less than 1m in height. It is profusely armed with fine straight bristles. Leaves are divided into 7–9 pinnate leaflets, each 1–2cm long and finely serrate. Pink flowers are borne singly, each 4–6cm wide and with stalked glands on the pedicels.

Flowers in July.

Wetlands: bogs, swamps and thickets, especially near the coast.

Scattered throughout Nova Scotia.

Ranges from NF to ON, south to OH and NY.

Rosa palustris Marsh.
Swamp Rose; rosier palustre

Photo by Martin Thomas

Another stout freely branching shrub, it may reach 2m in height. Leaves are commonly divided into seven leaflets which are minutely-pubescent beneath and finely serrate. Stipules have stout flattened reflexed thorns at the base. Flowers are solitary or in small corymbs, each 4–5cm wide. Stalked glands are present on the flowers, pedicels and the hypanthia.

Flowers in July.

Wet soils as in swamps and on lakeshores.

So far as known, from Yarmouth to South Maitland, Hants

Co. and Upper Stewiacke, Colchester Co.

From NS to ON south to LA and FL.

***Rosa rugosa* Thunb.**

Rugose Rose; rosier rugueux

Photo by Martin Thomas

Photo by Marian Munro

A stout and strongly bristly shrub, it reaches 1–2m in height, forming dense colonies. Young stems are finely pubescent. Leaves are divided into 5–9 leaflets, each rugose on the upper surface. Flowers range from white to purplish, 5–10cm wide and may even be double forms. The hips are 1.5–2cm in diameter have long persistent sepals. Distinctive due to the size of the fruits and flowers.

Flowers from June to September.

Roadside, thickets, coastal headlands.

Invasive on shoreline communities throughout.

Ranges from NF to ON, south to MO and VA; AK and WA. Introduced from eastern Asia.

***Rosa virginiana* Mill.**

Common Wild Rose; rosier de Virginie

Photo by Martin Thomas

Another coarse, prickly shrub to 2m in height. Stout, broad-based thorns are usually present at the nodes; the internodes may be smooth. Leaves are smooth, with 5–7 leaflets. Pink flowers arise from glandular pedicels, subtended by glandular sepals. Inflorescence is a corymb, 5–7cm wide. Vegetative canes may be bristly, but only at the base. A common native rose, its flowers are almost

Photo by Martin Thomas

always borne on older wood.

Flowers in July.

Old fields, pastures, thickets and the head of saltmarshes.

Common throughout.

From NF to ON, south to MO and AL.

HYBRIDS: with *Rosa nitida* and *R. carolina* are occasionally seen.

Rubus L.
Brambles

Cosmopolitan in distribution the brambles number about 200 species. Hybridization is common, confounding identification to species amongst the blackberries. Recognition of the putative hybrid state of much NS material meant that several formerly recognized species were dropped from the flora. Apomixis is common.

Biennial stems arise from perennial rootstocks. In the first year, the primocanes are simple and vegetative. In the subsequent year, they form branches, ending in an inflorescence, during which time they are referred to as floricanes. Plants bear a few simplified leaves on the floricanes, while the primocanes are palmately compound. Brambles are considered successional species, often the first to colonize after major disturbances of forests.

Flowers are five-merous in the calyx and corolla. Bractlets are absent. Pistils and stamens are numerous. Receptacle is cone shaped, elongating in fruit. Ovules number two, with one soon aborting. Fruit is an aggregate of drupelets, falling intact. Most are thorny shrubs; a few are perennial herbs.

Key to species

A. Plants unarmed.	B
B. Flowering stems herbaceous.	C
C. Plants dioecious; flowers unisexual.	*Rubus chamaemorus*
cc.Flowers bisexual.	D
D. Stipules free; filaments filiform.	*R. dalibarda*
dd. Stipules connate; filaments laminar.	*R. pubescens*
bb. Flowering stems woody.	E
E. Leaves compound; petals white; styles long and slender; fruit remaining attached to receptacle at fruit-drop	*R. canadensis*, in part

ee. Leaves simple, merely lobed; petals magenta; styles clavate; fruit separating free from receptacle. *R. odoratus*

aa. Plants armed with thorns or bristles. F

F. Fruit separating without receptacle attached (raspberries); drupes coherent or falling singly. G

G. Floricane leaves pinnately divided, 5–9 leaflets. *R. illecebrosus*

gg. Floricane leaves simple or trifoliate. *R. idaeus*

ff. Fruit separating with receptacle attached (blackberries, dewberries). H

H. Plants creeping, mounding, remaining low. I

I. Plants armed with sharp bristles only, hispid. *R. hispidus*

ii. Plants never bristly, only with thorns. *R. flagellaris*, in part

hh. Plants arching to erect. J

J. Plants covered in many narrow and sharp bristles. *R. setosus*

jj. Plants unarmed, or with broad-based thorns. K

K. Inflorescence and midveins of leaves densely stipitate glandular, glands flat or cupulate. *R. allegheniensis*

kk. Inflorescence and midveins without glands, or if glandular, the glands are rounded. L

L. Stems smooth or nearly so; primocane leaflet apices long-attenuate or caudate. *R. canadensis*, in part

ll. Stems armed; primocane leaflet apices acute or short-attenuate. M

M. Stems arching soon creeping; inflorescence with <5 flowers. *R. flagellaris*, in part

mm. Stems only arching; inflorescence with >5 flowers. *R. pensilvanicus*

***Rubus allegheniensis* Porter**

(*R. pugnax* LH Bailey; var. *neoscotica* (Fern.) Bailey are now included here.)

Common Blackberry; ronce des Alléghanys

Photo by Martin Thomas

Photo by Sean Blaney

An erect shrub, it reaches 3m, armed with scattered broad-based thorns. Stems may be glandular and bristly as well. Leaflets number five, petiolate and palmate; they are velutinous below. White flowers are borne in an inflorescence with abundant stipitate glands on the peduncles and axis. Fruit are large, shiny black and delicious to eat.

Sandy soils of old fields, clearings and in open woodland.

Very common from Yarmouth Co., east to Cape Breton.

NS to ON, south to OK and GA; BC; CA.

Hybrids: numerous hybrids are known. Several have been collected.

***Rubus canadensis* L.**

Smooth Blackberry; ronce du Canada

Photo by Martin Thomas

Photo by Sean Blaney

Bearing tall stout canes, this species is most distinctive for its absence of thorns, only a few straight prickles. Leaves are divided into five leaflets, the terminal one long-petiolate, glabrous on both surfaces. Texture is hard and dry, noticeable in the field. Flowers are showy, 10–20 per inflorescence, their petals about 2cm long. Fruit are generally not of superior quality.

Flowers June and July.

Clearings, roadsides and thickets.

Especially common in southwestern counties to central NS, infrequent to northern NS.

NF to ON, south to GA and TN.

***Rubus chamaemorus* L.**

Bakeapple; Cloudberry; Jonesberry (Brier Island); **chicouté**

Photo by Sean Blaney

Photo by Martin Thomas

Extending from extensive creeping rootstocks, the short branches are often buried in moss, the leaves extending above, 10–30cm tall. Leaves are long-petiolate, their blades nearly round, divided into several rounded crenulate lobes. Flowers are unisexual, white and solitary arise on long pedicels. Fruit soft, watery orange and delicious to eat.

Flowers June and July.

Most often grows in acidic soils in cool coastal bogs, swamps and headlands.

Common around the coast, except along the Northumberland Strait and the inner Bay of Fundy. Rare inland.

Ranges from Greenland to AK, south to NY and BC.

***Rubus dalibarda* L.**

(*Dalibarda repens* L.)

False Violet; dalibarde rampante

Photo by Alain Belliveau

Long trailing herbaceous perennial, plants arise from slender stems. They may root from the nodes or the tips. Leaves are simple, lightly pubescent and glandular, nearly round and deeply cordate at the base. Their margins are crenate. Stipules are free. White flowers are solitary, when petals present, on slender pedicels, villous to stipitate glandular. Ovaries are densely pubescent, producing dry drupelets when mature. Styles are glabrous.

Flowers in August.

Open moist woodland. Local; more frequent in southwestern counties, less so east to Hants Co.

NS to ON, south to MN and NC.

***Rubus flagellaris* Willd.**
(=*R. recurvicaulis* Blanch.)
ronce à flagelles

A variable species in armature and pubescence, but generally with small but stout, reflexed thorns. Primocanes emerge prostrate, rooting from the tip.

Flowers early, during May and June.

Dry fields, openings and edge of forests and fields.

Collected from Canso.

NS to ON, south to TX and FL.

***Rubus hispidus* L.**
Dewberry; Swamp Dewberry; ronce hispide


Photo by Sean Blaney

A long-trailing plant it has only scattered bristles. Small leaves, 3–6cm wide, have three leaflets, each of which is round on the apex and glossy on the top surface. Evergreen throughout the winter. Flowers are small, forming late-maturing fruit, sour and unpalatable. True thorns absent.

Flowers in July.

Found throughout open peatlands, but also seen roadside, on barrens and in damp hollows.

Ranges NF to ON, south to KS and NC; LA.

Hybrids form with several species and *R*. X *trifrons* has been collected here.

***Rubus idaeus* L.**
Red Raspberry;
framboisier d'Europe; gmu'jmin

Photo by Sean Blaney

Rising on erect canes, 1–2m, plants are sparsely armed with a few broad-based thorns. This species exhibits a range of armature from densely hirsute to nearly smooth. Leaves are pinnately divided, 3–5 leaflets, white tomentose below. Their margins are coarsely serrate. Primocanes are covered with stipitate glands, especially on the floricanes in the inflorescence. Flowers are tightly clustered, petals greenish white and shorter than the calyx. The red fruits fall intact from the receptacle, easily crumbling when handled.

Both subspecies are present in NS:

A. Bristles and glands absent.	ssp. *idaeus*
aa. Bristles and glands present.	ssp. *strigosus* (Michx.) Focke

Flowers in July.

ssp. *idaeus* is an escape from cultivation. NS material may have to be further examined to determine the ranges of each subspecies. The species is common throughout.

Ranges from NF to AK and south to CA and NC Introduced from Europe, in part.

***Rubus illecebrosus* Focke**
Strawberry-raspberry; framboisier fraisier

Canes are slender and sparsely thorny. Its leaves are pinnately divided into 3-4 pairs of serrate leaflets. Flowers are 4–5cm wide with conspicuous ovate petals, borne in the axils of leaves. Fruit is a strawberry like red fruit, 2–3cm wide.

Flowers July to September.

Around old garden sites or on roadsides as an escape.

To date no collections have been submitted from the Annapolis Royal site.

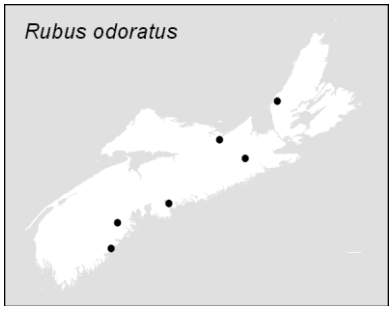
NS; ME; NY to NC; MN; OR. Originally from Japan and cultivated here.

Rubus odoratus L.

Flowering Raspberry; ronce odorante

Photo by Martin Thomas

Photo by Martin Thomas



Freely branching, this species reaches 2m. It is densely glandular on the upper stem and leaf surfaces. Leaves are deeply lobed, sometimes to 20cm wide, acutely tipped and serrated on the edges. Velutinous upper and lower surfaces, have black glands on the ribs beneath. Flowers are showy, rose-purple to magenta. 3–6cm wide, producing inspid fruit 1cm in diameter.

Flowers June and July.

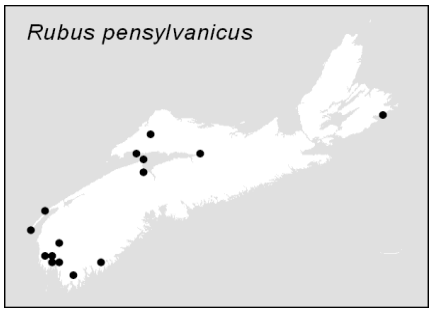
Roadsides and old garden sites.

Queens Co. to Cape Breton, with scattered reports elsewhere.

A native of southeastern US, introduced to NS; to ON; WA.

Rubus pensilvanicus Poir.

Pennsylvanian Blackberry; ronce de Pennsylvanie



A colonial species, it may reach 3m in height. Primocanes bear a scattered covering of straight thorns. Doubly serrate leaves are velutinous below. Inflorescence is of showy flowers, their pedicels and the axis pubescent. Bractlets are sometimes present, if so they are eglandular. Fruit is succulent and flavourful. Distinguished from *R. allegheniensis* on the basis of glandless inflorescence and

Photo by Sean Blaney

smoother leaves.

Flowers in June.

Frequents thickets and edges.

Common in the western counties, scattered elsewhere.

NF to ON, south to NC and TN.

***Rubus pubescens* Raf.**
(var. *scius* Bailey is now included)
Dwarf Raspberry; ronce pubescente

Photo by Sean Blaney

A long-trailing herbaceous species, it is armed with a few weak bristles, forming mats over the mossy ground. Leaves are cleft into threes and the white flowers are scattered in small clusters. Red fruit is edible, though sparse. Drupelets remain attached to the receptacle.

Flowers in June.

Low-lying waterlogged and mossy soils, especially in semi-shade.

Common from Yarmouth to northern Cape Breton, but less frequent along the Atlantic side, including offshore islands.

Across Canada and south to CO and WVA.

***Rubus setosus* Bigel.**

Bristly Blackberry; ronce sétuleuse

Photo by Sean Blaney

An erect shrub, neither arching nor rooting at the tips. Primocanes bear many soft bristles. Leaves divided into 3–5 leaflets, the terminal leaflet petiolate. Leaves glabrous beneath, except for the veins. Floricanes are also bristly. The flowers are carried on glandular pedicels, petals 7–10mm long. Fruit is dryish and poorly flavoured.

Flowers in June.

Frequents low-lying ground with poorly drained soils in clearings.

Scattered in central counties, less frequent to the south.

NF to ON, south to IL and MD; LA.

Hybrids are common with *R. allegheniensis*, *R. flagellaris* and *R. canadensis.*

Sanguisorba L.

Burnet

Asia and North America host about 25 species of burnet. Nova Scotia has two. Ours are perennial herbs arising from a thick rhizome. Hypanthium is urn-shaped, constricted at the summit and with four smooth angles, a character separating them from *Agrimonia*. Petals are absent; sepals are petal-like. There are 1–2 pistils; stamens number four or more. Fruit is an achene.

Key to species

Spikes 3–12cm long; stamens exerted from the white sepals.	*Sanguisorba canadensis*
Spikes in rounded heads 1-3cm long; stamens equalling the length of purple sepals.	*S. officinalis*

***Sanguisorba canadensis* L.**

Canadian Burnet; sanguisorbe du Canada

Photo by Martin Thomas

Photo by Martin Thomas

A perennial herb, it stands less than 1m tall. It has pinnately divided leaves with about 13 serrate leaflets. White flowers are arranged in a cylindrical spike 10–12cm tall on long peduncles.

Noticeable in flower, July to September.

Wet soils of bogs, swamps and meadows.

Common in northern, Cape Breton and with scattered stations elsewhere, as at Pubnico, Liverpool, Port Mouton and Scots Bay, near the coast. Scattered to common in its habitat.

NL to QC; MB, south to GA; AK to OR and ID.

***Sanguisorba officinalis* L.**

Great Burnet; sanguisorbe officinale

Leaves resemble those of the previous species. Inflorescence comprises deep red or purple flowers tightly clustered in a short head. The stamens are shorter than or equal to the length of the sepals.

Flowers July to September.

Low-lying soils.

A cultivated species well-established at a site upstream from Sherbrooke, Guysborough Co. Introduced to North America from Eurasia. AK to CA and scattered eastern locations.

Sibbaldiopsis Rydb.

A monotypic genus represented by a shrubby perennial formerly included in *Potentilla*. It is characterized by evergreen leaves, divided into three leaflets, each bearing three teeth at their apices. Shiny green above and lightly pubescent below, the hairs lie appressed. The flowers are white, arranged in a branching cyme. Sepals, capsules and achenes are all densely pubescent.

Sibbaldiopsis tridentata (Aiton)
Shrubby Fivefingers; potentille tridentée

Photo by Martin Thomas

A perennial, as above, arising from extensive creeping rootstocks.

Flowers during June and July.

Exposed locations on bare rock or soil near the coast; rocky outcrops inland.

Common around the coast.

Greenland to MacKenzie River, south to GA and SD.

Sorbaria (Ser.) A. Braun

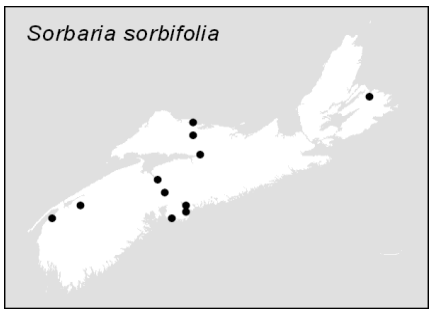
Asian and North American in range, only one species reaches Nova Scotia. Leaves are pinnately divided and bear stipules. The inflorescence is a large panicle of tiny white flowers, five-merous in arrangement. The hypanthium is cup-shaped and the flowers bear numerous stamens. Carpels are also in fives with long clavate styles. Fruits are follicles dehiscent along two sutures.

Sorbaria sorbifolia (L.) A. Braun
False Spiraea; sorbaire à feuilles de sorbier

A finely branched shrub, it may reach 2m in height. The alternate leaves are divided into 13–21 leaflets, marked with straight veins, long acuminate. Petals are 6mm in length. Stamens are borne on long filaments and the ovary is mostly superior. Follicles are thin-walled. Shrubs resemble *Spiraea* but for the compound leaves.

Flowers early July.

Photo by Marian Munro



Formerly a common ornamental, now persisting and escaping to roadsides.

Common in the Annapolis Valley but scattered Yarmouth to Cape Breton.

NF to AB, south to PA. Introduced from southeast Asia.

Sorbus L.
Mountain-ash

Both trees and shrubs comprise this north-temperate genus of about 100 species. Typically the leaves are pinnately divided, with an odd number of leaflets. White flowers are arranged in compact clusters, in branched, flat-topped or round inflorescences. Fruit is a small pome, distinctive upon ripening due to their crimson or orange-red display. Flowers are five-merous, except for the pistils, 2–4. Stamens are a multiple of five, 15–20.

Key to species

A. Twigs, lower leaf surfaces, pedicels, winter buds and hypanthia white-villous; winter buds not sticky; introduced. *Sorbus aucuparia*

aa. Twigs, leaves, pedicels, hypanthium glabrous or glabrescent; winter buds sticky; native. B

B. Leaves long-acuminate, 3–5 times longer than wide; fruit 4–7mm thick. *S. americana*

bb. Leaves acute, 2–3 times longer than wide, fruit >7mm thick. *S. decora*

***Sorbus americana* Marsh.**

Mountain-ash; Dogberry; sorbier d'Amérique; epsmusi

Photo by Alain Belliveau

Photo by Alain Belliveau

A small tree with smooth winter buds. Leaves are sharply serrate, 5–10cm long with long-acuminate tips. Flowers are small and numerous, with the stamens inserted. Sepals and the hypanthium are smooth. Fruits are bright red. This is our most common species.

Flowers late June into July.

Open woods and edges.

Frequent, from Yarmouth to Cape Breton.

Ranges from NF to ON, variously south to IL and GA.

***Sorbus aucuparia* L.**

European Mountain-ash; Rowan; sorbier des oiseleurs

This species is another small tree, with white villous winter buds. Leaves have 7–8 pairs of leaflets, typically oblong and rounded at the apex. Inflorescence is a cyme of foul-smelling flowers. Petals are about 3mm long. Hypanthia and smaller cyme branches are densely white-villous at least at first. The fruit is somewhat large, exceeding 7mm in diameter. Vile-tasting.

Flowers in June.

Ornamental and scattered as an escape near towns and at the periphery.

Scattered in the central counties, from Annapolis to Antigonish.

Widely naturalized after its introduction from Europe.

Sorbus decora (Sarg.) CK Schneid.

American Mountain-ash; sorbier plaisant

Photo by Sean Blaney

Photo by Sean Blaney

Another small tree, it has smooth winter buds. Twigs are also smooth. Leaflets number 9–15, each 5–7cm long and 1.5–2.5cm wide. They are short-acuminate at the apex. Leaves, inflorescence and hypanthia are glabrous or at least glabrescent. Fruit is bright red, 7–10mm in diameter. Resembles our other native tree, but has larger fruit and wider shorter leaves.

Flowers in late June through early July.

Wooded areas, slopes and shores, rocky sites.

Typical coastal. Common in northern Cape Breton. Scattered elsewhere as along the North Mountain coast.

Ranges from Greenland to SK, south IA, IL and PA.

Spiraea L.

Mostly shrubs, there are about 70 species in the northern hemisphere. Two are native to Nova Scotia and several ornamental varieties are planted and expected as escapes. Flowers may be terminal or lateral and range from white to pink and purple. Sepals and petals are five-merous and there are 15 or more stamens. Fruit is a firm dehiscent follicle.

Key to species

Leaves glabrous on both surfaces; sepals spreading.	*Spiraea alba*
Leaves densely rusty-tomentose below; sepals reflexed.	*S. tomentosa*

Not included in the key but noteworthy are the cultivated species *Spiraea japonica, S. vanhouttei* and *S. prunifolia* all of which have been collected from escaped plants in Wolfville. The first especially should be monitored. It is reported to be invasive in areas of North America.

***Spiraea alba* Duroi**
(*S. latifolia* (Ait.) Borkh.)
Meadow-sweet; Hardhack; spirée à larges feuilles

Photo by Sean Blaney

A small shrub, it has wiry branches and simple dentate leaves. Inflorescence is an open triangular panicle of pinkish-white flowers with tiny rounded petals. Pistils number five forming five follicles, persisting on the plants into winter. Stamens are numerous, on long filiform filaments. Ours is var. *latifolia* (Aiton) Dippel.

Flowers in July and August.

Ditches, swamps, meadows.

One of our most common shrubs, throughout.

Ranges from NF to MB, variously south to GA.

***Spiraea tomentosa* L.**

Steeplebush; spirée tomenteuse

Photo by Sean Blaney

A lower more compact shrub than the first, it is generally unbranching. Leaves are crenate and ovate, dark green above and rusty tomentose below. The inflorescence is a narrow panicle of rosy pink flowers. The branches of the panicle and the pedicels are also woolly. Follicles inconspicuous in fruit.

Flowers in August.

Acidic poorly drained soils.

Common in central NS, becoming infrequent east to Cape Breton.

NS to ON, south to KS, LA and GA.