Fabaceae
pea family

A large family, it includes about 440 genera and 12,000 species worldwide. Leaves are alternate, compound and subtended by stipules. Flowers are showy, perfect and variously arranged. They are bilaterally symmetric. Sepals number five, joined to form a calyx tube, with lobes. Corolla comprises five petals. The uppermost petal forms a hood over the other four, called the standard. The two lateral wings may be adnate to the keel, comprising the lower two petals. The keel is connate distally enfolding the stamens and single pistil. Ten stamens are sometimes connate to form a column. The fruit is dry, a legume containing large seeds, sometimes dehiscent. The fruit is also called a pod.

Key to genera

A. Trees or shrubs. B
B. Large trees, armed with thorns or spines; leaves pinnate; flowers white, green or pink. C
C. Flowers small, green; spines long and branched. *Gleditsia*
cc. Flowers showy, white to pink; thorns only on stipules. *Robinia*
bb. Low shrubs less than 1m; leaves simple; not armed; flowers yellow. D
D. Leaves simple; stems round; calyx merely bilabiate. *Genista*
dd. Leaves simple or with 3 leaflets; stem angled; calyx bilabiate, both lips shallowly toothed. *Cytisus*
aa. Herbs. E
E. Leaves pinnately compound. F
F. Terminal leaflet absent, or if present, modified into a tendril. G
G. Leaflets less than 2cm long; wing petals adnate to keel. *Vicia*
gg. Leaflets more than 2cm long; wing petals free or nearly so. *Lathyrus*
ff.Terminal leaflet present and similar to others. H
H. Leaflets 1–7, common plants of forests and fields. I
I. Leaflets 1–3; flowers small, rose-purple; roadside plantings. *Securigera*
ii. Leaflets 5–7; flowers yellow or brownish purple. J
J. Plant long-trailing; flowers brownish purple; native species. *Apios*
jj. Plant erect, many stems; flowers yellow or reddish; *Lotus*

escaped field crop.

hh. Leaflets >9; rare plants of arctic-alpine habitats. K

K. Leaves basal; flowers 15–20mm long; leaflets more than 15. *Oxytropis*

kk. Leaves cauline; leaflets 9–17; flowers 1cm long. *Astragalus*

ee. Leaves palmately compound. L

L. Leaflets numerous. *Lupinus*

ll. Leaflets 3. M

M. Plant very slender and long trailing; a vine. *Amphicarpaea*

mm. Plant not as above. N

N. Leaflets not toothed; flowers purple; forest species. *Desmodium*

nn. Leaflets serrate or or merely toothed; flowers not purple; plants of open, disturbed habitats. O

O. Flowers in dense heads; petals turning brown and persistent; fruit straight and membranous. *Trifolium*

oo. Flowers in short spikes or long racemes; petals deciduous. P

P. Tall plants >1m, freely branched; flowers in long racemes; pods straight. *Melilotus*

pp.Plants <1m tall; flowers in short spikes; pods coiled or twisted. *Medicago*

Amphicarpaea Elliott
hogpeanut

Three species comprise this widespread genus, in North America, Africa and Asia. Ours is a vining herb. Leaflets arranged in threes, their axes bearing slender clusters of showy white to lilac flowers. In addition, cleistogamous flowers are sometimes produced, developing into the single-seeded subterranean peanuts.

Amphicarpaea bracteata (L.) Fern.
Hogpeanut; amphicarpe bractéolée

Photo by Sean Blaney

Photo by Sean Blaney

A very slender and delicate vine, the three leaflets are ovate in outline and rounded at the base. The showy flowers produce pods bearing three seeds. Cleistogamous flowers arise from the base of the plant and produce single-seeded pods at or below the soil surface. Often mat-forming.

Flowers in August.

In herbaceous communities along streams.

Locally common, from Shelburne and Cumberland counties to Antigonish. In Cape Breton known only from Southwest Margaree area in Inverness County.

Elsewhere NS to MB, MT south to the Gulf of Mexico.

Apios Fabr.
groundnut

A genus of only 10 species, they are found in eastern Asia and eastern North America. Perennial vines, they arise from slender rhizomes. Calyx is rounded with the upper lobes barely visible, the lowermost deltate and about equal in length to the calyx-tube. Keel is strongly curved, with the wings curled below it. Fruit is dehiscent, the pods coiling. Rarely produces seeds. Produces a series of edible tubers prized by aboriginal people.

Apios americana Medic.
Groundnut; apios d'Amérique

Photo by Martin Thomas

Photo by Sean Blaney

Trailing along the ground or clambering over other plants, this species has from 3–7 lanceolate and acuminate leaflets. Axillary flowers are borne in densely-flowered racemes of purplish brown flowers. More robust than *Amphicarpaea* and with more leaflets.

Flowers late July and August.

Lakeshores, clambering over shrubs.

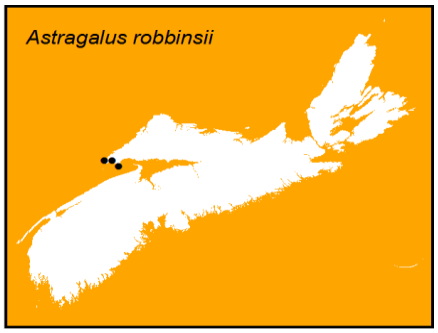
Common in the southwest and scattered to Cumberland and Antigonish counties. Absent along the Atlantic coast.

Ranges from NS to ON, south to CO, and to the Gulf of Mexico.

Astragalus L.
milk-vetches

One of the largest genera of the Fabaceae, it totals more than 1500 species. A single arctic-alpine perennial reaches Nova Scotia in very limited habitats. Generally plants have numerous pinnate leaflets and white or blue flowers arising from the leaf axils in racemes. The standard petal exceeds the others in length. Keel is unbeaked.

Astragalus robbinsii **Oake**
Milk-vetch



It is a low cespitose species, freely branching to 50cm. Leaves are few, each with 9–17 leaflets. Short and densely flowered racemes arise from long peduncles. Flowers are each about 1cm long. Pods reach 15mm in length, are covered with crisped black pubescence.

Ours is var. *minor* (Hook.) Barneby

Flowers in June.

Exposed cliffs on headlands.

Cape d'Or and West Advocate, Cumberland Co.

Found from NL to QC, south to NH and VT; absent in NB in the east. Western range from AK to NM.

Cytisus L.
broom

A genus of Eurasian shrubs, with about 33 species. One was formerly introduced to the province for use in the pharmaceutical trade. Flowers are yellow, with the leaves simple or divided only into three leaflets. Usually the calyx is cupiform, the lobes shallow. Wings are oblong, lobed on one side

Cytisus scoparius **(L.) Link**
Scotch Broom; genêt à balais

Photo by Jamie Ellison

A stiffly erect shrub, it is freely branching and cespitose. Slender ascending branches are longitudinally grooved. Bright yellow flowers arise from the upper leaf axils, borne on slender pedicels. Dehiscent pods 4–5cm long, are villous on the sutures.

Flowers in June and July.

Sandy sterile soils, as on roadsides and fallow fields and even open woodland.

Long known only from Shelburne County, now actively spreading throughout. Somewhat invasive.

NS, PEI, south along the coast to AL; west coast; from Europe.

Desmodium Desv.
Tick-trefoils

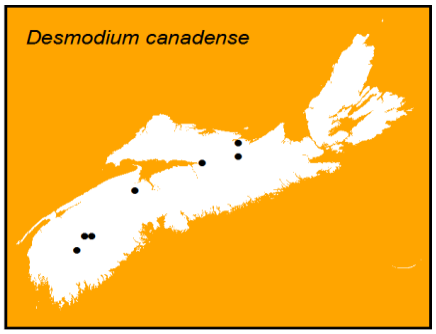
Mainly of warm regions, *Desmodium* totals more than 300 species. Our two perennials have three leaflets and racemes or panicles of white to purple flowers. Calyx is divided into two lobes, the upper nearly entire, while the lower lobes are further cleft in three segments. Standard petal is oblong, constricted at the base. The keel is nearly straight. Fruits are indehiscent with septa present between seeds.

Calyx lobes <half the length of the tube; upper suture along the fruit smooth; stamens connate forming a closed column. — *Desmodium glutinosum*

Calyx lobes >half the length of the tube; upper suture pubescent, the hairs hooked; stamens forming an open sheath. — *D. canadense*

***Desmodium canadense* (L.) DC**
Canada Tick-trefoil; desmodie du Canada

Photos by Sean Blaney



An erect plant, 30–60cm tall, it may branch at the summit. Leaflets are narrowly lanceolate, leathery in texture and thick. Their margins are ciliate, and with blunt apices. Inflorescence is terminal, branching, with many rose-purple flowers. Pods are jointed, 3–5 sections.

Flowers in late July.

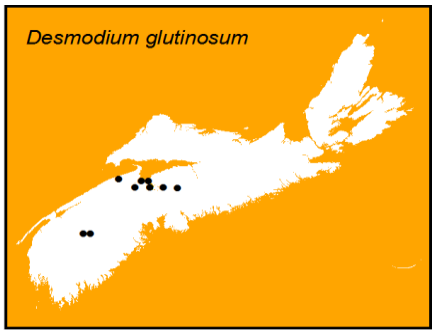
Riparian, open forests.

Kejimkujik Park to the Pictou County rivers. Rare from Annapolis to Colchester Co.

Elsewhere from NS to MB, south to TX and VA.

Desmodium glutinosum (Willd. ex Muhl.) Wood
Tick-trefoil; desmodie glutineuse

Photos by Sean Blaney



Arising from a solitary erect stem, plants bear several long-stemmed leaves towards the summit. Leaflets are obovate and acuminate. Purplish flowers are carried in a long-pedunculate terminal raceme. Pod is jointed 2–3 times.

Flowers earlier in June and July.

Fertile soils beneath deciduous forest or on intervales.

Rare and local: Halfway and Herbert Rivers, Hants Co., Gaspereau River, Kings Co. and Kejimkujik National Park, Annapolis and Queens counties.

From NS to ON, south to FL and TX.

Genista L.

Fifty species comprise this Eurasian genus; a single species is introduced to Nova Scotia. Ours is a small shrub with simple leaves. Flowers are arranged in terminal racemes. Calyx is divided into two lobes, the upper bears two teeth and the lower has three. Standard petals are ovoid; the keel and wings are oblong.

Genista tinctoria L.
Dyers' Greenwood; genêt des teinturiers

Less than 1m tall, this shrub bears no thorns. The erect branches are marked with longitudinal striations. The simple leaves are lanceolate. Flowers are bright yellow, borne in short ascending racemes.

Flowers in late July.

Disturbed soils where it tends to be invasive.

Formerly known only from the Sydney are. More recently documented from several locations on the Cabot Trail.

Introduced and spreading NS; QC and ON, variously south to MS; WA.

Gleditsia L.
Honey-locust

With 14 species of trees, this genus is widespread. A single species has been planted as an ornamental in central Nova Scotia and this tree may persist about old home sites. The leaves may be once or even twice pinnate on pubescent petioles. Twigs are armed with branching thorns. Flowers are carried on spurs, amongst the leaves.

Gleditsia triacanthos L.
Honey-locust; févier épineux

As above bearing yellowish-green flowers producing dark brown pods to 40cm long.

Flowers in June.

Old gardens, parks and may even be found roadside.

Lunenburg, Kings and Colchester counties. Some trees still cultivated in Halifax.

Introduced from further south, it is a popular ornamental. Native in ON; ME to ID, south to CA and FL.

Lathyrus L.
peas

Wild peas or vetchlings include 150 species. Very similar to *Vicia* in leaf arrangement, they are more robust and the styles are bent at the tip and bearded. Peas bear large stipules and oft-winged stems. Flowers are variable in colour and often variegated, borne in racemes.

Key to species

A. Leaflets in 2 or more pairs; native species.		B
	B. Stipules symmetric, attached at the base, with 2 lobes, 10–20mm broad.	*Lathyrus japonicus*
	bb. Stipules distinctly asymmetric, laterally attached, single lobe, <7mm broad.	*L. palustris*
aa. Leaflets a single pair; introduced species.		C

C. Stem wingless. *L. pratensis*
cc. Stem winged, with stripes of green tissue. *L. latifolius*

***Lathyrus japonicus* Willd.**
(=*L. maritimus* Bigel.)
Beach Pea; gesse maritime

Photos by Martin Thomas

Glaucous green and entirely smooth, Beach Pea forms sprawling mats of leafy stems. Leaflets are ovate, 10–25mm wide. Terminal leaflets are modified into tendrils. Racemes of pink to purple flowers arise from the leaf axils on long, slender peduncles. Veined pods are 3–5cm long. As described here, is var. *maritimus* (L.) Kartesz and Gandhi. Var *pellitus* Fernald is covered with a pubescence of fine short hairs. Both varieties are found together throughout.

Flowers from July to September.

Coastal, on strand lines, sand beaches, roadsides.

Found throughout.

Greenland to ON, south to NJ; Arctic Canada west to AK and south along the coast to CA; Eurasia.

***Lathyrus latifolius* L.**

Perennial Pea; Everlasting Pea; gesse à feuilles larges

Photos by Martin Thomas

A climber or trailer, this robust species may reach 2m in length. Stems and petioles have broad wings. There is a single pair of leaflets. Racemes of 4–8 showy purple flowers are borne on long peduncles. Calyx lobes are unequal. Corollas are each 15–25mm long.

Flowers from July to September.

Cultivated and escaping to roadsides and in old gardens, where it persists.

A couple of localities are on record: one each in Shelburne and Kings counties.

Absent only from the arctic and the Canadian prairies. Introduction from Europe.

***Lathyrus palustris* L.**

Wild Pea; Marsh pea; gesse des marais

Photos by Martin Thomas

A slender trailing or climbing species, plants reach to 1m in length. Leaves are divided into 4–6 leaflets, each linear or narrowly lanceolate. Stipules are lanceolate, acute at either end and attached in pairs on either side of the stem. Inflorescence is made up of pairs or clusters of purple flowers, less than 2cm long from long slender peduncles. A variable species, although separating varieties is no longer accepted.

Flowers July to September.

Coastal marshes, headlands, meadows and adjoining dyked land.

Common throughout.

NF to AK south to GA and CA in coastal regions.

***Lathyrus pratensis* L.**

Yellow Vetchling; Meadow Pea; gesse des prés

Photos by Sean Blaney

Another slender species, reaching 80cm in length. Stems are not winged. There is but a single pair of leaflets. The flowers are lemon-yellow, arranged in short racemes on a stalk or peduncle.

Flowers in July.

Grows on grassy areas roadside, fields, etc.

Occasional. Scattered in NS. More frequently encountered along the Northumberland shore, from Wallace to Merigomish.

From NF to ON and south to IL and VA; AK south to WA. Eurasian.

Lotus L.

trefoils

Mostly herbs or half-shrubs, there are 100 species across the north-temperate regions. Nova Scotia has two introduced species. The flowers are solitary or arranged in umbels, their calyces campanulate and toothed. Petals are clawed with those of the standard with thick imbricate margins. Dehiscent pods contain several seeds and are variable in cross-section, round or flattened, even angled. Leaves are pinnate.

Key to species

Flowers in an umbel. *Lotus corniculatus*

Flowers in a head. *L. uliginosus*

***Lotus corniculatus* L.**
Birdsfoot-trefoil; lotier corniculé

Photos by Sean Blaney

Freely-branching and perennial, this plant may reach 60cm tall. Leaves are sessile, with five leaflets, the lower two like stipules, while the terminal leaflet is sessile. Long-stalked umbels with bright yellow flowers (2–7) produce dehiscent pods, which soon twist after dispersal.

Flowers from July to September.

Roadsides, old fields, meadows provide suitable habitat for this introduced forage crop.

Becoming frequent on mainland Nova Scotia; uncommon in Cape Breton.

Eurasian introduction throughout most of temperate North America.

Lotus uliginosus
***(=L. pedunculatus* Cav.)**
Tick Trefoil; lotier des marais

A stoloniferous species, otherwise resembling the previous species. Flowers, 5–12(15), are clustered in a terminal head, on a long peduncle.

Flowers in June and July.

Fallow fields and disturbed soils or grassy streamsides.

Reported only from Dartmouth to date.

NS to MB; BC to CA; other jurisdictions. Introduced.

Lupinus L.
lupines

A widespread genus of 200 species, two western plants have been introduced to Nova Scotia. These are attractive herbaceous perennials with palmately divided leaves. Flowers are borne in tall spikes or

racemes of white, blue, pink, yellow shades and hues. Calyx is bilobed with the lobes toothed. Wings are connate near their summit; the keel is convex and beaked. Stamens number 10 within a hollow tube. Pods contain at least a pair of seeds and are grey-villous at maturity. Plants are reported to be toxic to livestock and people.

Key to species

Plants densely pubescent, less than 70cm tall. *Lupinus nootkatensis*

Plants smooth, usually exceeding 1m. *L. polyphyllus*

***Lupinus nootkatensis* Donn**

Lupine, Lupin; lupin de Nootka

Ranging in height from 40–70cm, this species is readily separated from the next by its dense pubescence on all but the upper leaf surfaces. Leaf has 6–9 oblanceolate leaflets, round at their apices and velutinous below. Inflorescence is a narrow raceme, each flower about 2cm long, mauve to purple.

Flowers during June and July.

Roadsides and old gardens.

Naturalized in Yarmouth County, where it probably forms hybrids with the next species.

Ranges from AK to Vancouver Island and introduced to NF and NS.

***Lupinus polyphyllus* Lindl.**

Garden Lupine, Lupin; lupin polyphylle

Photos by Andy Dean

A stout, robust perennial, its leaflets are cleft into many leaflets. Flowers are usually blue arranged in a tall, narrow raceme. Each flower is 1–1.5cm long. Multiple colours appear amongst the blue ones, possibly indicating mixed ancestry of garden plants.

Flowers during late June and July.

A frequent ornamentals with a tendency to spread into roadsides, meadows and fallow fields.

Common throughout.

NF to ON, south to MN and NY; MD; west coast.

Medicago L.

There are about 80 species of these Eurasian species; two have been introduced to Nova Scotia. Blue or yellow flowers are clustered into short racemes or heads arising on peduncles from the leaf axils. Pollen is explosively released via a trip mechanism. Pods are usually coiled although some may be straight, and dehiscent. Leaves are finely serrated and compound, with three leaflets, the terminal leaflet stalked.

Key to species

Plants tap-rooted, perennial; flowers yellow or blue, 6-12mm. *Medicago sativa*

Plants annual or biennial; flowers yellow, 2-4mm long. *M. lupulina*

***Medicago lupulina* L.**
Black Medick; luzerne lupuline

Photos by Sean Blaney

A low mat-forming reclining plant, its stems may reach 50cm in length. Leaflets three, tapering at the base from a round or notched apex. Tiny yellow or blue flowers are tightly clustered into a spikelike raceme. Pods are coiled, to 2cm long soon turning black. Resembling *Trifolium*, it may be distinguished on the basis of having puberulent petioles and the teeth of the leaflets are not bristly. Terminal leflet with a mucronate tip.

Flowers June through September.

Dry fields, roadsides and lawns, fallow land.

Common throughout, but especially in the Annapolis Valley.

Throughout North America.

***Medicago sativa* L.**
Alfalfa; Lucerne; Luzerne cultivée

Photos by David Mazerolle

An erect perennial, it reaches 1m in height. Leaflets are widely lanceolate, round distally and serrate. Purple flowers are arranged in a short raceme on peduncles 2–3cm long. Pods are loosely coiled. It is a superior forage crop.

Two subspecies are recognized; both are present. ssp. *falcata* (L.) Arcang.has looser fruit and yellow flowers, compared to the typical variety. It has been collected from Hants and Kings counties. A white form is also known from Truro.

Flowers throughout June to August.

Persistent in fallow fields and escaping to nearby roadsides. Also found in damp acidic habitats.

Digby and Lunenburg counties spreading north and eastward.

NS to AK; south through US. Asian.

Melilotus Miller
sweet clover

Twenty species comprise this genus of annual or biennial herbs. Leaves usually divided into three serrate leaflets. Inflorescences are axillary from the upper leaves, long and narrow. Flowers are numerous. Calyx is campanulate and deciduous. Petals are separate, the standard longer than the others. Pods are round or oval and flattened, with 1–4 seeds.

Key to species

Pods smooth.	*M. officinalis*
Pods sparsely puberulent.	*M. altissimus*

Melilotus altissimus Thuill.
mélilot élevé

Resembles the following species in many respects. However its larger pods, 5–6mm long, develop early. They are also finely hairy and only weakly veined. It is probably often overlooked due to its similarities.

Flowers during July and August.

Disturbed soils.

Common around Windsor; scattered elsewhere in central Nova Scotia. Sydney.

NS to ON, south to IL and NJ. From Eurasia.

***Melilotus officinalis* (L.) Lam.**
(now includes *M. alba* Medik.)
Yellow Sweet Clover; mélilot élevé

Photos by Martin Thomas

A tall freely-branching plant, it reaches 1–3m in height. Leaflets are obovate to oblanceolate, finely serrate. Flowers are white or yellow, less than 6mm long on short pedicels and clustered into long narrow racemes, covering the top of the plant. Pods are glabrous and only 2.5–3.5mm long. Conspicuous in flower due to its height.

Flowers in July and August.

Disturbed fallow soils and roadsides, especially in gypsum areas.

Widespread from Annapolis and Lunenburg counties to Cape Breton.

Across the continent; from Eurasia.

Oxytropis DC

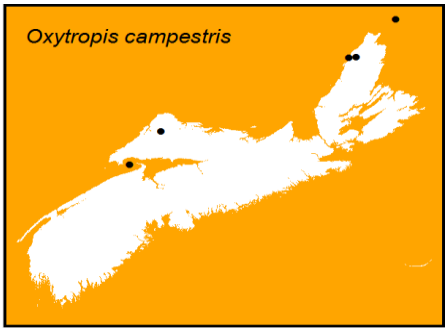
Similar to *Astragalus* and north-temperate in distribution, the genus comprises 300 species. A single species reaches Nova Scotia in limited distribution. Distinguished from *Astragalus* on the shape of the keel petal. Purple flowers of *Oxytropis* have the keel ending in a short beak, not sharply pointed. Oval fruits sessile. Leaves are basal and with the flowers, arise from a caudex.

***Oxytropis campestris* (L.) DC**

Photos by Sean Blaney

A tufted perennial, 10–30cm tall, densely pubescent, especially when young. Leaves are basal, short-petiolate and the 15–31 leaflets are lanceolate. Purple flowers are arranged in short spikes, their scapes extending above the leaves. Corolla to 2cm. Pods are strongly ascending and prominently beaked. Resembles *Astragalus*, but for the strongly ascending pods, beaked keel and more copious leaves.

Flowers in June to July.



Grows in subarctic-alpine habitats as exposed cliffs, rocky outcrops, scree.

In NS, northern; coastal Inverness County and Cape d"Or, Cumberland Co.

Ranges from western NL to AK, south to UT.

Robinia **L.**

locusts

A genus of small trees or shrubs, it is limited to North America. Three may be found in Nova Scotia as ornamentals or escapes from cultivation. Flowers are showy, white to purple in colour, their corollas are relatively large. The wing and keels are long-clawed, the keel also has a rounded lobe. Flat pods are elongated and contain numerous seeds and aborted ovules. Seeds and inner bark are poisonous to humans if consumed. Leaves are divided into an odd number of leaflets. Stipules may be modified into spines.

Key to species

A. Flowers white; ovary and fruit glabrous; twigs smooth.	*Robinia pseudoacacia*
aa. Flowers pink or rose; twigs, ovary and fruit hispid or glandular.	B
B. Twigs with sticky glands; leaflets 13–25.	*R. viscosa*
bb. Twigs hispid or bristly; leaflets 7–13.	*R. hispida*

Robinia hispida **L.**

3-39 Fabaceae

Bristly Locust; Rose Acacia; robinier hispide

A shrub to 3m in height, it bears short racemes of rose-purple flowers. Stoloniferous, it is generally not sticky, merely hispid. The pedicels and calyces are also bristly, the hispid pubescence is 2–5mm long.

Flowers in June and July.

Long-persistent on fallow land.

In Nova Scotia persisting near the former college dump, University Avenue, Wolfville.

Introduced to NS and ON; ME to MN south to TX and FL; western. Introduced here from further south.

***Robinia pseudoacacia* L.**
Black Locust; robinier faux-acacia

Photos by Andy Dean

Generally found as a large shrub or tree. Leaves of 7–19 leaflets, 4cm long. Stipules are modified into woody thorns; the branches are further armed with appressed pubescence. White fragrant flowers are arranged in drooping inflorescences. Long black pods are produced, which may be 10cm in length. Fruit not often seen in NS material.

Flowers in early summer, June and July.

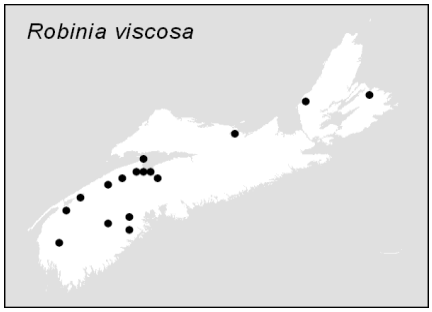
Photo by Sean Blaney

An ornamental, persisting along fences, in thickets and roadside.

Collected and reported from Yarmouth to Pictou counties.

An Appalachian deciduous forest element from further south introduced to NS.

***Robinia viscosa* Vent.**
Rose Acacia; Clammy Locust; robinier visqueux



Another large shrub or small tree, this one is clearly marked with sticky sessile glands. Young wood, petioles and peduncles are all glandular. The pink flowers are clustered in a short ascending raceme.

Flowers appear during June or July.

An ornamental, spreading to roadsides and thickets.

Occasional in Cape Breton; most common in the western half of the province. Expected elsewhere.

Ranges from NS to ON, south to AL and GA. Introduced from further south.

Securigera DC

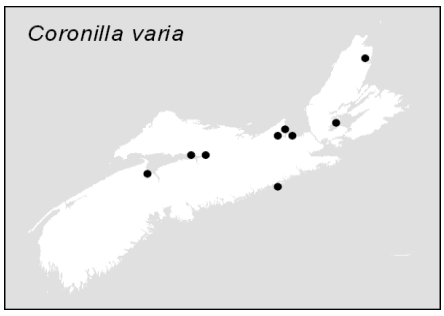
A Mediterranean genus, there about 12 species of annuals or perennials in all. One has been used to stabilize roadsides in Nova Scotia. Leaves are sessile and odd-pinnately compound. Umbels of flowers arise on slender stalks from the axils. The petals are unequal in size and shape, and clawed. The keels are arching. The tomentose pods are transversely jointed, containing several seeds. Formerly included with *Coronilla*, it is now separated on characters other than the fruit.

Securigera varia (L.) Lassen
(=*Coronilla varia* L.)
Crown Vetch; coronille bigarrée

Photo by Sean Blaney

Pretty in flower as it usually grows in colonies. Branching, it may reach 40cm in height, with ample leaves. Flowers deep rose-pink, tinged purple on the keels, each about 1–1.5cm long.

Flowers in July.



Occasionally planted along highway verges to stabilize slopes, persisting or spreading locally. May become invasive of beaches. (Garbary and Moller, 2012).

Central NS, with scattered reports to Cape Breton.

Throughout North America south of the Arctic.

Trifolium L.
clovers

Widespread plants, the genus comprises 250 species; we have seven introductions persistent in Nova Scotia. Some are our most valuable forage crops. All are herbs with typically three ovate leaflets and small flowers. The inflorescences are heads, tight rounded clusters of small flowers. Some species require fruit to confirm identification, although the strongly bilobed calyx distinguishes them from *Medicago*. Calyx tube is tubular or campanulate. Petals may be united or separate. The corolla tube if present, withers but remains attached.

Key to species

A. Flowers yellow.	B
B. Leaves palmate, terminal leaflet sessile; stipules equal in length to petioles.	*Trifolium aureum*
bb. Leaves pinnate; terminal leaflet stalked; stipules half as long as petioles.	C
C. Flowers 3.5mm long or greater; leaf rachis 1–3mm long.	*T. campestre*
cc. Flowers 3.5mm long or less; leaf rachis barely 1mm.	*T. dubium*
aa. Flowers white, pink, purple, never yellow.	D
D. Flowers sessile in heads.	E
E. Individual flowers 10–20mm	*T. pratense*
ee. Individual flowers <7mm long.	*T. arvense*
dd. Flowers on pedicels 2mm long within heads.	F
F. Stems trailing and rooting at the nodes.	*T. repens*
ee. Stems ascending, not rooting at nodes.	*T. hybridum*

Trifolium arvense L.

Rabbitfoot Clover; trèfle pied-de-lièvre

Photo by Martin Thomas

Low-growing and wiry, this little plant may reach 40cm in height. Its leaflets are linear, borne on short petioles. The silvery sessile flowers are sessile, tightly clustered in cylindrical heads borne on short peduncles. The calyx lobes are long bristly and densely villous, exceeding the length of the tiny red corollas.

Flowers throughout the summer July to September.

Grows on stony, gravelly sand such as found on roadsides, where it may form a pale mauve haze in flower.

Common from Kings to Pictou counties; occasional elsewhere.

Ranges from NF to MB, variously south to TX and FL; west coast.

***Trifolium aureum* Pollich**
trèfle doré

Photo by Martin Thomas

An annual species less than 40cm in height. Leaves are carried on short petioles, with the terminal leaflet nearly sessile. Stipules nearly equal in length to the petioles. The cylindrical heads of yellow flowers turn brown with age.

Flowers from June to September.

Roadsides, disturbed soils, fallow fields or meadows.

Scattered throughout.

Ranges from NF to ON, south to MO and GA; western; Eurasian.

***Trifolium campestre* Schreber**

Low Hop Clover; trèfle couché

Photo by Sean Blaney

A small neat plant resembling the previous species, but for the long stalk of the terminal leaflet. The other two leaflets are sessile. Stipules are present, ovate and half as long as the petioles. Yellow flowers are borne in an ovoid head, the lower flowers on short drooping pedicels.

Flowers in July and August.

Waste places, old fields and roadsides.

Common throughout.

Ranges from NF to MB, south to TX and FL; western.

Photo by Martin Thomas

***Trifolium dubium* Sibth.**
petit trèfle jaune

Photo by Martin Thomas

A small slender species, it has a very short-stemmed terminal leaflet. Flowers and flower-heads are smaller than most clovers. The standard is barely striated, in contrast to those of *T. campestre* which has definite markings.

Flowers June to September.

Roadsides, fields, meadows, even open forests.

Common in the southwestern counties, Yarmouth and Digby to Annapolis and Hants counties.

Ranges from NS to ON south to FL and TX; AK to BC and inland.

***Trifolium hybridum* L.**

Alsike Clover; trèfle alsike

Photo by Sean Blaney

A perennial clover, tall and glabrous, and widely planted for forage. Its erect or ascending stem may be nearly 80cm tall. Leaflets are ovate, rounded at the apices and not acute. Flowers are white to rosy coloured and to 3.5cm across, on slender peduncles.

Flowers during June and July.

Roadside banks, pastures, cultivated fields escaping to ditches, meadows and roadsides. Not long-persistent.

Common throughout.

NL to AK, south to CA and FL; absent from TX.

***Trifolium pratense* L.**

Red Clover; trèfle rouge

Photo by David Mazerolle

Growing as a biennial or short-lived perennial, this species may reach 60cm tall. Leaves are carried on long densely pubescent petioles, their blades 2–3cm wide. Flowers are reddish, sessile or carried on short peduncles. The species is highly variable and several cultivars have been introduced. This is our largest clover species.

Flowers throughout the summer.

Photo by Martin Thomas

Grown for forage and freely spreading into neighbouring habitats.

Common throughout.

NF to AK and south; Eurasian.

***Trifolium repens* L.**
Creeping White Clover; trèfle blanc

Photo by Sean Blaney

A perennial plant, this species roots freely from the stems. Leaves are long-petiolate and smooth, but leaflets are mucronate. Flower-heads are white or rose-coloured on long peduncles. Flowers are pedicellate, with the corolla longer than the calyx. It is widely seeded in lawns and pastures.

Flowers throughout the summer into early fall.

Spreading into fields, pastures, edges of forests, along paths and trails.

Common throughout.

Widely grown and naturalized throughout northern North America. From Europe.

Photo by David Mazerolle

Vicia L.
vetch

Vetch is widespread, with 140 species and includes vining annuals and perennials. Tendrils are formed by the modified terminal leaflet of each leaf allowing it to climb or clasp. Leaves are pinnately divided into an even number of leaflets, stems bearing tiny stipules. Flowers are white or blue in axillary racemes. Calyx is regular or irregular, sometimes swollen on one side. Standard petal is clawed, overlapping the wings, which are connate to the keel and overlap it.

Key to species

A. Inflorescence and flowers sessile or nearly so; style pubescent near the summit only on the outer side.	B
B. Calyx irregular; upper 2 lobes much shorter than the lower and half as long .	*Vicia sepium*
bb. Calyx regular or nearly so; lobes similar in shape and size; more than half as long as the tube.	*V. sativa*
aa. Inflorescence and flowers within distinctly stalked; style pubescent all around the tip	C
C. Flowers 3–7mm long, whitish; solitary or in racemes of 2–8; annual.	D
D. Calyx lobes equal or nearly so; fruit mostly 2-seeded, hirsute.	*V. hirsuta*
dd. Calyx lobes distinctly unequal; fruit mostly 4-seeded, smooth.	*V. tetrasperma*
cc. Flowers >7mm long, blue, rarely white, >8 per raceme; annual, biennial or perennial.	E
E. Calyx only slightly swollen; pedicel basal; perennial.	*V. cracca*
ee.Calyx very swollen at base; pedicel appearing almost lateral; annual or biennial.	*V. villosa*

Vicia cracca L.

Tufted Vetch; vesce jargeau

Photo by Sean Blaney

Perennial trailer forming tangled mats, plants produce slender linear or oblong pairs of leaflets. Flowers are arranged in slender one-sided racemes. They range from palest lilac to deep purple. Calyx tubes are rounded, sometimes narrowing to a constricted base. Pods are light brown, to 3cm long.

White flowers are known from Truro, Wolfville and Annapolis Royal.

Flowers from late June into the fall.

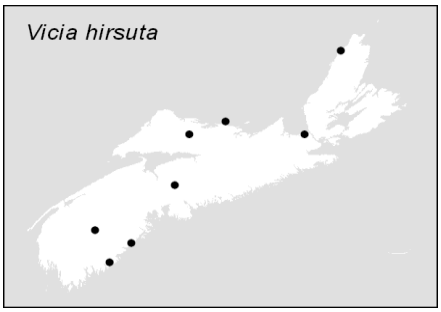
Frequents dryish soils in meadows, fields, arable land and fallow soil. A persistent weedy species.

Abundant throughout.

Photo by Martin Thomas

Across Canada and variously south to CA and GA. Eurasian.

***Vicia hirsuta* (L.) Gray**
Hairy Vetch; vescue hérissée



A very slender plant, it has oblanceolate leaves. Flowers number 3–8, on a slender glaucous puberulent peduncle. 3–4cm long. Hirsute pods may reach 1cm in length, each containing two puberulent seeds.

Flowers in July.

Open areas in light disturbed soils.

Infrequent throughout.

Ranges from NF to ON; south to TX and FL; west coast. Introduced from Europe, perhaps associated with ballast.

Photo by Martin Thomas

***Vicia sativa* L.**
(incl. *V. angustifolia*)
Cultivated Vetch; vesce cultivée

Photo by Sean Blaney

Photo by Martin Thomas

An erect or ascending annual, its stems may reach 1m in height. Leaves are divided into 4–8 pairs of oblong leaflets, each to 3cm long. Sessile flowers, violet or purple, arise in pairs from the leaf axils. Calyx teeth are equal in size and about the same length as the calyx tube. Pods are finely hairy, 4–6cm long.

Two ssp. are present in Nova Scotia, differing mainly on the colour of the seeds. Ssp. *nigra* (L.) Ehrh. has black seeds contained within black glabrous pods. Ssp. *sativa* is as above; the seeds are pale.

Flowers in June and July.

Found on roadsides and in fields, dykelands and shores. Not long-persisting.

Throughout.

Widespread in North America, wherever planted.

Vicia sepium L.
Hedge Vetch; vesce des haies

Photo by Martin Thomas

Robust for a vetch, it is also a perennial. Leaflets are lanceolate and rounded at their bases. Flowers are borne in a sessile raceme of 2–5 flowers, their calyces with the upper teeth much shorter than the lower teeth, deltate, and only half as long as the tube.

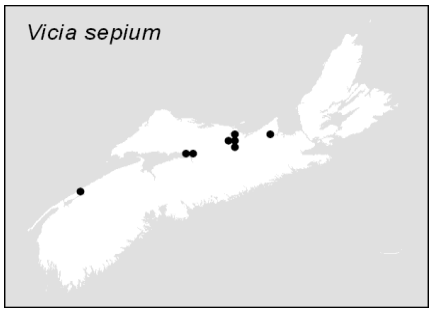
Flowers in July.

Roadsides and old fields.

Occasional from Annapolis to Pictou counties.

Photo by Martin Thomas

NF to ON, south to WVA. From Europe.



Vicia tetrasperma Moench.
Slender Vetch; vesce à quatre graines

Photo by Martin Thomas

A small, delicate winter-annual, it rarely exceeding 30cm in height. Leaves are divided into 3–4 pairs of leaflets, to 1.5cm long. Flowers are gathered in pedunculate heads with 1–6 individuals per inflorescence. Pods are smooth and contain four seeds, 1–1.5cm in length.

Flowers during July and August.

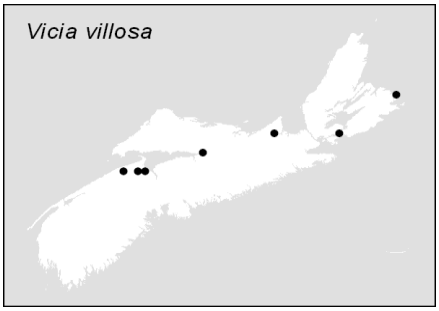
Photo by Sean Blaney

Orchards, fields, arable soils, gardens where it may become troublesome. Fall planted in grain fields.

Frequent on the sandy soils of the Annapolis Valley, spreading throughout the province.

NF to ON, south to TX and FL; west coast.

***Vicia villosa* Roth**
(incl. *V. dasycarpa* Tenore)
Hairy Vetch; vesce velue



Photos by Martin Thomas

Annual or biennial, this species is mostly pubescent. Flowers are reddish purple arranged in a one-sided raceme, which is villous. Calyx is irregular, the lower lobes as long as the tube, drooping from pedicel attachment. Pods range 2–3cm long.

Two ssp. are found here, ssp. *varia* (Host.) Corb. is found only at two stations in the Annapolis Valley, our only Canadian records. It is distinguishable in the presence of appressed pubescence in the raceme and on the calyx and not the villous covering of the typical subspecies.

Flowers July to September.

Persistent on sandy soils in full sun.

Scattered from Kings Co. to Colchester Co. and Cape Breton. Persisting after cultivation.

NF to AK, south to CA and FL. Absent from the prairies. Introduced.