

## Scrophulariaceae snapdragon family

A larger family, the snapdragon relatives number about 4000. Most are herbaceous, and all have showy flowers. Several groups are favourite ornamentals. Flowers are perfect and always sympetalous. Typically the corollas are irregular, with 4–5 lobes. The calyx has as many lobes as the corolla and both are bilabiate. Generally there is a palate at the base of the corolla. Stamens number 2–5, alternating with the lobes of the corolla. Staminodes may be present in some species with four stamens. The ovary has two locules, superior. Fruits are generally capsules.

Root parasitism is common in this family, although chlorophyll production continues.

### Key to genera

- |   |                      |
|---|----------------------|
| A. Corolla with a distinct spur or swelling at the base.  | B                    |
| B. Flowers in terminal racemes; stems smooth.   | C                    |
| C. Flowers blue; stripes absent; pedicels <5mm long.  | <i>Nuttallanthus</i> |
| cc. Flowers yellow, orange or white with blue stripes; pedicels >5mm long.                      | <i>Linaria</i>       |
| bb. Flowers solitary in the leaf axils; stem glandular pubescent.                               | <i>Chaenorrhinum</i> |
| aa. Corolla without a spur or swelling in the throat.   | C                    |
| C. Leaves alternate or all basal.   | D                    |
| D. Stems prostrate; leaves and flowers clustered at the nodes; flowers <5mm long.               | <i>Limosella</i>     |
| dd. Stems erect; flowers >5mm long, terminal or nearly so.                                      | E                    |
| E. Corolla nearly regular; stamens 5.   | <i>Verbascum</i>     |
| ee. Corolla definitely irregular; stamens 4.  | <i>Pedicularis</i>   |
| cc. Leaves opposite or whorled.   | F                    |
| F. Stamens 2.   | G                    |
| G. Sepals 4 or calyx-lobes 4.   | <i>Veronica</i>      |
| gg. Sepals 5 or calyx-lobes 5.  | H                    |
| H. Staminode minute or absent; some flowers subtended by a pair of bracts.                      | <i>Gratiola</i>      |
| hh. Sterile stamens a pair of filaments; bractlets absent.                                      | <i>Lindernia</i>     |
| ff. Stamens 4.  | I                    |
| I. Corolla shaped like a helmet; upper lip hooded over the anthers, its teeth wanting or short. | J                    |
| J. Leaves 2x long as wide, veins palmate.   | <i>Euphrasia</i>     |
| jj. Leaves much longer, veins pinnate.  | K                    |
| K. Leaves mostly entire, teeth few and obscure.   | L                    |
| L. Corolla light red, pubescent   | <i>Odontites</i>     |

	ll. Corolla white with yellow; glabrous.	<i>Melampyrum</i>
	kk. Leaves toothed or pinnatifid.	M
M. Calyx inflated at anthesis, enlarged in fruit, lobes 4.		<i>Rhinanthes</i>
mm. Calyx not inflated; lobes usually 2.		<i>Pedicularis</i>
ii. Corolla not helmet-shaped; upper lip not hooded, not enclosing the anthers and sometimes not differentiated.		N
N. Sepals distinct to the base, or nearly so.		O
O. Bracts abruptly reduced in size from foliage, inflorescence therefore terminal.		P
oo. Bracts gradually reduced so flowers appear axillary.		<i>Lindernia</i>
P. Flowers subtended by 2–3 sepal-like bracts.		<i>Chelone</i>
pp. Flowers without bracts.		Q
Q. Corolla green or brown, not showy; staminode reduced.		<i>Scrophularia</i>
qq. Corolla showy, blue or white; staminode prominent.		<i>Penstemon</i>
nn. Sepals connate to form calyx tube.		R
R. Corolla nearly regular.		<i>Agalinis</i>
rr. Corolla strongly bilabiate.		S
S. Middle lobe of lower lip of the corolla folded down and enclosing stamens		<i>Collinsia</i>
ss. Lower lip arcuate, not enclosing the stamens.		<i>Mimulus</i>

A perennial species of *Antirrhinum* L. the snapdragon has been reported from Nova Scotia. An escape from cultivation, it is unlikely that it persists for long.

### ***Agalinis* Raf.** **false foxglove**

About 60 species comprise this genus of root parasites, limited to the Americas. Those found in NS are herbaceous, slender and freely branching, with opposite or alternate linear leaves, generally less than 5cm long. Flowers appear in late summer and are ephemeral; the corolla falls away after only a day. Pink to purple, the corollas are subtended by regular calyces, with the tubes extending longer than the lobes.

Corollas are only slightly irregular, usually bulging basally. Stamens number four, the lower pair exceeds the upper ones.

Key to species

A. Calyx lobes oblong or globose, much shorter than the tube; pedicels much exceeding the length of the calyx; plants fleshy and of saltmarshes

*A. maritima* Page | 931

aa. Calyx lobes lanceolate or deltate, acute; pedicels shorter than the calyx; plants not fleshy nor obligate halophytes.

*B*

B. Calyx lobes from three-quarters to twice as long as the connate base; style about 4–5mm long.

*A. neoscotica*

bb. Calyx lobes from 0.2-1 times as long as the connate basal portion; style about 8-14mm long.

*A. tenuifolia*

***Agalinis maritima* Raf.**

**Saltmarsh False Foxglove; g erardie maritime**



Photo by Martin Thomas

The leaves of this species are very narrow, only 2mm wide. Its flowers are borne in a raceme of 2–5 pairs of flowers on long pedicels, exceeding the length of the calyx. Plants tend to be somewhat succulent.

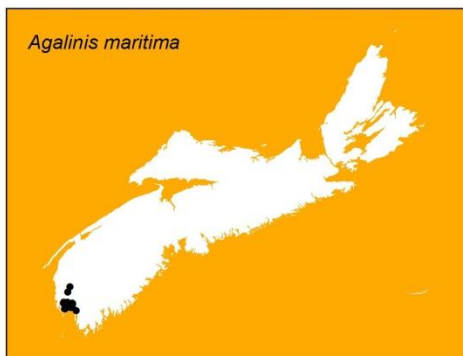
Look for flowers from mid-July through September.

Limited to saltmarshes.

Local. Known from the Argyle Head region of Yarmouth Co. where it is abundant.

Ranges along the coastal plain from NS and ME south to FL and TX.

STATUS: Of conservation concern: ORANGE-listed.



***Agalinis neoscotica* (Greene) Fernald**

(=*Agalinis purpurea* (L.) Pennell, var. *neoscotica* (Greene) B. Boivin); g rardie de Nouvelle- cosse



Photo by Martin Thomas

With its smooth quadrangular stems, this plant may reach 30cm in height. It has leaves to 4mm in width. Sometimes poorly developed axillary clusters of leaves are seen. Flowers are purple, pubescent within. They may be carried in small clusters or singly.

Flowers late summer.

Grows in acidic soils in damp locations where there is little competition from shrubs, lakeshores and woods roads.

Found from Annapolis County around the coast to Queens Co.

This species is endemic to NS, NB and ME.

***Agalinis tenuifolia* (Vahl) Raf.**

(=*Agalinis purpurea* (L.) Pennell, var. *neoscotica* (Greene) B. Boivin)



Photo by Sean Blaney

It was reported as well established on a logging road south of Beecham Settlement in Cumberland County. It was growing with several other calciphiles, including *Equisetum variegatum* and *Liparis loeselii*.

Considered to be introduced in NS currently, although it also grows from NB to MB south to TX and FL.

***Castilleja coccinea* (L.) Spreng., Indian Paintbrush** was collected but once at Chester Basin exit from Highway 103 where 300 plants were counted. Usually found from ME to SK and south to FL and OK, it may be expected here at other locations. To date none have been reported.

***Chaenorhinum* (DC) Reichenb.**

Native to the Mediterranean region, this small genus of 20 species is represented here by only a single species. Annuals or perennials, they are typified by having the leaves alternate and entire. Flowers are axillary, arising from the upper leaf axils. The corolla is only slightly irregular and spurred at the base. It is strongly bilabiate and the palate does not constrict the throat. Calyx is deeply five-lobed.

***Chaenorhinum minus* (L.) Lange**  
**Dwarf Snapdragon; chénorhinum mineur**



Photo by Sean Blaney

A diffuse plant, it is freely branching and only 30cm tall. The leaves are narrow, linear or oblanceolate. Flowers are bluish purple and borne on tiny pedicels. Palate is sometimes yellow. Plant appears messy due to the glandular pubescence that covers it.

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Flowers during July and August.

Waste soils roadsides and along railways, used or abandoned.

Scattered from Lunenburg Co. northward, especially along the rail.

Ranges from NF to BC, variously south to OR, TX and GA. Mediterranean.

***Chelone* L.**  
**turtlehead**

Only four species comprise *Chelone*, restricted to eastern North America. Herbaceous, they are perennials with smooth opposite and toothed leaves. Flowers are large and showy, borne on terminal ends of the branches and the stem. Flowers are closely subtended by 2–3 bracts. Corolla is bilabiate, with villous hairs in its throat. Calyx is deeply cleft into five lobes. There are four fertile stamens, on filiform filaments and a sterile staminode, that is much shorter than the others.

***Chelone glabra* L.**  
**Balmomy; Turtlehead; galane glabre**



Photo by Sean Blaney

Stems are erect and simple, to 80cm in height. Leaves generally are lanceolate and large, equal in length along the stem. Flowers are pinkish white, borne on very short pedicels in short spikes, which may or may not be interrupted. Some flowers are axillary.

Flowers mid-July through August.

Found in wet sites of swamps, meadows, roadsides, streamsides and estuaries.

Scattered throughout, but becoming more common

northward.

NF to MB, south to GA and MS.

***Collinsia* Nutt,  
blue-eyed Mary**

A temperate genus found only in North America and only recently discovered in Nova Scotia. Seventeen species strong, it is best developed in California. An annual herb, it bears opposite cauline leaves and bicoloured flowers. Calyx is campanulate, although it is irregular; the lobes exceed the length of the tube and the lower lobes are shorter and wider than the upper ones. Corolla is bilabiate, the tube is swollen at the base of the top lip. Lower lip reflexed, its middle lobe forming a sac.

***Collinsia parviflora* Dougl.  
Blue-eyed Mary**

Erect and branching from the base, this plant bears linear leaves, entire along their edges. Lowermost flowers are solitary, while the upper ones are borne on slender pedicels, with 2–6 flowers per inflorescence. The upper lip is white; the lower blue usually.

Flowers from mid July to August.

Fallow fields where soils are rocky and sterile.

So far collected only from Sydney River, Cape Breton Co.

Possibly introduced here; native from ON westward to AK and YT, and southward; VT; MA; PA.

***Cymbalaria muralis* Gaertn., Meyer & Scherb. or Kenilworth Ivy** is a Mediterranean species often cultivated in pots for its trailing habit. The pale blue flowers with yellow palate are borne singly from the rooting leaf nodes. It has been reported as thriving outside cultivation on Vancouver Street in Yarmouth. It is unknown if it is extant, although its introduction is reported from both east and west coasts of the continent. Most recently it has been observed thriving in sidewalk cracks and crevices about the town of Lunenburg.

***Euphrasia* L.  
eyebright**

The eyebrights found in Nova Scotia are compact little annuals, with small toothed leaves and tiny sessile flowers. All are hemiparasitic, both photosynthetic and parasitizing the roots of adjacent plants.

Leaves are opposite; bracts are alternate; venation is palmate. Corolla is bilabiate; calyx is unevenly divided into four lobes. The spreading lower lip has three lobes. Stamens number four. Seeds are winged.

Key to species

- |  |                         |            |
|--|-------------------------|------------|
| A. Teeth of the bracteal leaves rounded, corollas <4mm, upper lip emarginate           | <i>Euphrasia randii</i> | Page   935 |
| aa. Teeth of bracteal leaves acute to aristate; corollas >4mm long, upper lip bilobed. | B                       |            |
| B. Teeth of bracteal leaves aristate; calyx glabrous or ciliate.                       | C                       |            |
| C. Spikes produced in upper 2/3 of stem to almost the base.                            | <i>E. stricta</i>       |            |
| cc. Spikes produced only in the top half of the stem and branches.                     | <i>E. nemerosa</i>      |            |
| aa. Teeth of bracteal leaves acute, but not bristle-tipped; calyx pubescent.           | <i>E. disjuncta</i>     |            |

***Euphrasia disjuncta* Fern. & Wieg.**

**Polar Eyebright; euphraise à aires disjointes**

A dwarf species, often reaching no more than 5cm in height. Stems bear several pairs of leaves, each is ovate and with 3–4 teeth per side. They are pubescent on both surfaces. Bracts resemble the leaves. The calyx is also pubescent.

Flowers from July through September.

Damp open soils.

Collected from Lockeport, Shelburne Co. (ACAD).

NL to QC; AK; ME.

***Euphrasia nemerosa* (Pers.) Wallr.**  
**Common Eyebright; euphraise des bois**



*Photo by Sean Blaney*

A more robust and leafier species, this plant is also more widespread. Plants are mostly glabrescent although the calyx may be ciliate. The bracteal leaves are aristate. Flowers only in the upper third of the plant.

Flowering from July through September.

Compacted soils on disturbed open sites, roadsides, meadows, headlands.

Common throughout.

Ranges from NF to ON, south to MN and CT; west coast from AK to WA and AB.

***Euphrasia randii* BL Robins.**  
**Small Eyebright**



*Photo by Sean Blaney*

Another compact species, rarely exceeding 10cm in height. Leaves are rounded distally, sometimes glabrous or even densely pubescent. Tiny flowers are less than 4mm long.

Flowers in August.

Sea cliffs and turfs on headlands, even wet pastures near the coast.

Common northward in Cape Breton and along the lower Fundy coast. Scattered on the Atlantic side.

Endemic from NF to QC, south to ME.



***Euphrasia stricta* D. Wolff**  
**Medicinal Eyebright; euphraise dressée**



Photo by Sean Blaney

Closely resembling *E. nemerosus*, it differs only in the extent of the inflorescence. This species has its flowers often to the base of the plant.

Flowers throughout the summer.

Grows on disturbed soils in sunny locations.

Probably common throughout.

Ranges wider than other species, from NS to ON south to IL and PA. Introduced.

***Gratiola* L.**

Small annuals or perennials, there are only 20 species of these herbs. Leaves are opposite, and in our species, sessile and lanceolate. Solitary flowers carried in the leaf axils, are yellow or white, and pedicellate. The calyx is distinctly five-lobed, the sepals subtended by a pair of bracts. Corolla is tubular or campanulate, bilabiate. Its upper lip is cleft in two, although the lobes are united for most their length. The throat is pubescent. Functional stamens number two, the other pair reduced to slender filaments.

Key to species

Perennial; leaves sessile and broad-based; flowers bright yellow, 12–16mm long.

*Gratiola aurea*

Annual; leaves narrowing at the base; flowers white, with a yellow tube, 8–10mm long.

*G. neglecta*

***Gratiola aurea* Pursh**  
**Golden-pert; gratiole dorée**



Small plants, they have simple or branching stems and opposite sessile leaves, lanceolate or ovate in outline. Brilliant yellow flowers are borne on short pedicels. Sepals are lanceolate or deltate. White form is known around Ponhook Lake.

Flowers during July and August.

Mat-forming on slate cobble of lakeshores, wet savannahs.

Photo by Sean Blaney

Common from Yarmouth around the coast to Halifax Co.

Ranges from NF to ON; variously south and west to ND, IL and FL.

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***Gratiola neglecta* Torr.**  
**gratiolle négligée**



Photo by David Mazerolle



Also has simple or branching habit, reaching from 10–30cm tall. Leaves are lanceolate or elliptical, even oblanceolate. Flowers are borne on slender pedicels, from basal axils to the top of the plant.

Flowers from May until August.

May be found on wet mud.

Limited to the bank of the Stewiacke River and Hilden, both in Colchester Co. and more recently at a single Cumberland Co. locality.

North American, but for NF and FL and the far northern territories.

***Limosella* L.**  
**mudwort**

Found nearly worldwide, this small genus includes only 15 species. All are small annual herbs, with prostrate stems rooting from the nodes. Peduncles bear solitary flowers, arising from the base. Flowers are nearly regular, with five lobes on both the calyx and corolla. Corolla tube is longer than the lobes. Stamens count is four, the anthers unite to form a single pollen sac.

***Limosella australis* R. Br.**

(=*L. subulata* Ives)

**Mudwort; limoselle à feuilles subulées**



Photo by David Mazerolle



A caespitose plant, very short in stature and comprising 5–10 linear leaves, to 5cm long and 2mm wide. Flowers arise on pedicels shorter than the leaves and usually nodding.

Begins flowering in late June through the summer into October.

Only on muddy shores or gravels of ponds, lakes and rivers along the coast.

Yarmouth, Shelburne, Queens and Cumberland counties; Sable Island; Cape Breton and likely elsewhere.

Ranges from NF to QC, south to NC; CA.

***Linaria* Miller  
toadflax**

Eurasian in distribution, there are nearly 100 species comprising the genus, many planted as short-lived ornamentals. Annual or perennial all are herbaceous and smooth, the stems bearing terminal racemes of many flowers. Calyx is deeply divided into five lobes; the corolla is irregular and bilabiate. Upper lips have two lobes, the lower lip with three. Palate is well-developed, sometimes closing the throat.

Key to species

A. Flowers yellow or mostly so.

B. Leaves linear narrowing slightly at the base.

bb. Leaves lanceolate to ovate, widest at the base, sessile.

aa. Flowers white with blue stripes.

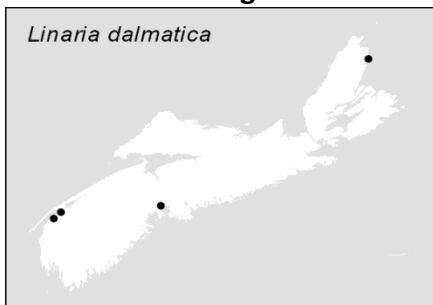
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*Linaria vulgaris*

*L. dalmatica*

*L. repens*

***Linaria dalmatica* (L.) P. Mill.**  
**linaire à feuilles larges**



Plants have stout stems, bearing leaves to 3cm in length. Acutely pointed, their outline is broadly ovate. They are sessile and semi-clasping. Raceme is densely flowered with showy yellow blooms.

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Flowers June until September.

Roadsides and other disturbed sites.

Victoria Co., Hubbards, Halifax Co. and Digby Co.

NS to BC, south CA, AR and NJ. Introduced from southern Europe.

***Linaria repens* (L.) BSP**  
**Striped Toadflax; linaire rampante**

A perennial toadflax and more slender than our other species. Usually basal leaves are whorled. Flowers are white with purple lines, arranged in a loose raceme. Pedicels 2–6mm long.

Flowering from late June to September.

Found in disturbed soils as on roadsides, in fields and even dry thickets.

Collected from a single locality: an orchard behind Acadia University, Wolfville and possibly extirpated.

Ranges from NF south to MA and PA. Introduced.

***Linaria vulgaris* P. Mill.**  
**Butter-and-eggs; linaire vulgaire**



Photo by Martin Thomas

Generally arising on sparsely branching erect stems, to 80cm. Leaves are crowded and numerous, linear or narrowly lanceolate and light green, tapering to the base. Flowers are bright yellow and tightly clustered at the top of the plant. They are spurred and sport an orange palate, nearly closing the throat of the corolla.

Flowers July and August.

Broad range of light soils on disturbed sites.

Very common species.

Ranges throughout the continent. Naturalized. Native to Eurasia.

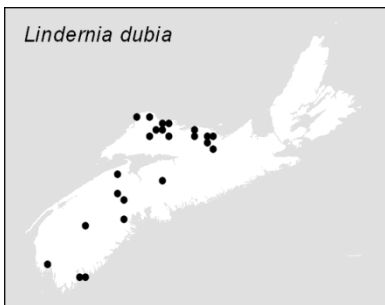
***Lindernia* All.**  
**False pimpernel**

Cosmopolitan in its distribution, of 70 species, only a single annual reaches Nova Scotia. Leaves are opposite, marked with 3–5 veins and small solitary flowers. Plants produces cleistogamous flowers nearing the end of the season. Calyx is regular; corolla is bilabiate, the lower wider than the upper. Stamens may be two or four, the lower pair often folded back appearing bifurcate.

***Lindernia dubia* (L.) Pennell**  
**False Pimpernel**



Photo by Sean Blaney



Branching freely from the base, the stems are to 30cm in height. Leaves are ovate or widely elliptic, 1–3cm long and entire or serrulate. Flowers are solitary and usually in the axils. Pedicels shorter than the leaves subtending them.

Flowers from late June until frost.

Riparian, muddy streamsides, drained ponds.

Kings and Lunenburg counties north to the Northumberland Strait.

North American, absent only from western Canada and the Great Plains.

***Melampyrum* L.**  
**cow-wheat**

Northern hemispheric in scope, the 25 species of cow-wheat are all annual root parasites. Leaves are opposite and the upper ones bear flowers in their axils. Flowers have a slightly irregular four-lobed calyx. The corolla tube slightly exceeds the length of its lobes. The upper lip is concave and the lower lip has three lobes, ridged below the sinus. The four stamens are inserted.

***Melampyrum lineare* Desr.**  
**Cow-wheat; mélampyre linéaire**



*Photo by Martin Thomas*

Simple or branched, the stems reach 10–40cm tall. Basal leaves, if present are oblanceolate or spatulate. Upper leaves are lanceolate and may be lobed or cuneate. Flowers 1–2 in the axils.

Flowers mid-summer.

Found on rocky barrens, bogs and heaths.

Common throughout the province.

NF to BC south to ID and GA.

***Mimulus* L.**  
**monkey-flower**

A widespread genus, *Mimulus* includes about 120 species, mostly of western North America. Generally they are rhizomatous perennials. Leaves are opposite and flowers are showy colours of red, yellow or blue, arising on slender pedicels from the leaf axils. The tubular calyx is angled and its lobes are shorter than the calyx tube. Corolla is bilabiate, with the lower lip convex or ridged, closing the throat. Stamens number four, inserted along the tube.

Key to species

Plants smooth; flowers blue.

*Mimulus ringens*

Plants downy pubescent, sticky; flowers yellow.

*M. moschatus*

***Mimulus moschatus* Dougl.**  
**Muskflower; mimule musqué**



*Photo by Sean Blaney*

Very distinctive, in its unpleasant odour and sticky downy pubescence covering the stems. Leaves are ovate and distantly toothed. Petioles are very short. Pedicels arise in pairs or solitary from the leaf axils and bear small yellow flowers.

Flowers in mid-summer.

Grows in wet shady sites and may form dense colonies.

Scattered from Annapolis to Cumberland counties and northeast to Cape Breton.

Ranges from NF to ON, south to NC; BC to CA and inland. There is some question whether it is native in NS.

***Mimulus ringens* L.**  
**Monkey-flower; mimule à fleurs entrouvertes**



*Photo by Martin Thomas*

Stems are distinctly angled, smooth and occasionally branching distally. Leaves are lanceolate and entire or shallowly toothed, sessile and even clasping. Leaves reduce in size up the stem, the long pedicels arising from their axils. Flowers borne in ones or twos, each with bluish-purple corolla to 30mm long.

Mid-summer flowering.

Grows in moist soil as around lakes and streams, even in marshes and meadows.

Scattered from Lunenburg and Annapolis counties to northern Cape Breton. Absent from the warmer southwestern counties.

Ranges from NS to AB, variously south to CA, TX and GA. Absent from arid regions.

## ***Nuttallanthus* DA Sutton**

This small genus of four species, was recently segregated from *Linaria* based on molecular evidence. *Linaria* now includes only Old World plants, while *Nuttallanthus* is limited to the Americas. Resembling *Linaria* in appearance, these have blue flowers borne on very short pedicels. Their corollas are spurred, but the spurs are less than 1mm wide.

### ***Nuttallanthus canadensis* (L.) DA Sutton**

#### **Blue Toadflax; linaire du Canada**



*Photo by Martin Thomas*

Tiny blue flowers have a paler palate bearing two ridges in the throat. Similar to *Linaria* but for colour and size. It is a slender, self-fertile annual.

Flowers very early, often in April until September. One of our best early forage plants for bees.

Found in dry, sandy soils, especially common on roadsides and along abandoned rail cuts.

Occasional from Halifax to Yarmouth and other southwestern ports.

Eastern North America, and from WA to CA. Introduced to NS.

## ***Odontites* Ludwig**

### **red bartsia; eyebright**

European in scope, the native range of the 30 species includes centres around the Mediterranean. Mostly root parasites, their leaves are opposite but small. Flowers are red, yellow or purple, and second in a terminal inflorescence. The calyx is four-lobed, deeply divided above and below, less so laterally. The bilabiate corolla is irregular. The upper lip is concave and straight while the lower is spreading with three shallow lobes.



***Odontites vernus* (Bellardi) Dumort, ssp. *serotinus* (Dumort) Corb.**  
(=*O. serotina* Dumort)

Red Bartsia; odontite tardif



Photo by Reta Cook

A branched herb 10–50cm tall, its stem is puberulent. Short leaves are sessile and lanceolate, short and numerous, bearing a few acute teeth. Flowers are also sessile and carried in a long secund raceme. The corolla is pink, an unusual colour for this family.

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Flowers from July onward.

Generally on moist soils in fields, roadsides and pastures and often coastal.

Scattered in southern Cape Breton and becoming common along the Gulf of St. Lawrence-Northumberland, less frequent westward.

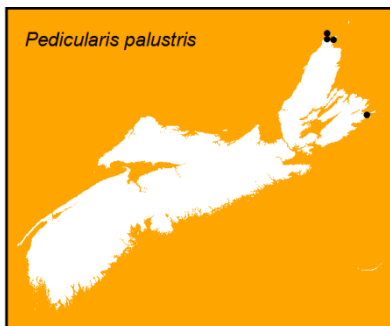
Found from NS to AB, south to WI and NY; Introduced from Europe.

***Pedicularis* L.**  
**lousewort**

About 500 species are included as louseworts, north-temperate, boreal or alpine. Most are hemi-parasitic or root parasites, with opposite or alternate serrate leaves. Flowers are red, purple or yellow, borne in a terminal leafy inflorescence. The calyx is campanulate or tubiform, regular or irregular. The corolla is irregular. Its tube is enlarged at the throat forming a palate. The upper lip while equal in length to the lower, is arched or laterally compressed or galeate. It may be beaked and is usually denticulate. Lower lip is trilobed, with two ridges below. Stamens are inserted.

***Pedicularis palustris* L.**

**Swamp Lousewort; pédiculaire des marais**



An erect plant, its stems may reach 30–50 cm, simple or more commonly, branched. Leaves are lanceolate and pinnatifid, nearly to the midrib. Flowers are arranged in one or more spikes. The calyx measures 6–9mm long and the pinkish corolla is to 2cm long.

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Flowers in July.

Wet substrates as in marshes or meadows.

Rare and local: Bay St. Lawrence, Baleine and Sydney area. Reported from Guysborough Co.

Ranges from NF to QC.

STATUS: Of potential conservation concern, ORANGE-listed.

A collection of ***Pedicularis sylvatica* L.** is housed at UCCB. This specimen should be verified. This would be an interesting site as the species is European.

***Penstemon* Mitchell  
beard-tongue**

Most of these plants are from North America, especially western regions. All have leaves showing great variation, rendering them not useful as identifying characters. Many are perennial; a few are biennial. Leaves are mostly basal, from which a stem arises. Cauline leaves decrease in size towards the flowers. Inflorescence is a panicle or raceme of white to blue, purple or red flowers. Calyx is cleft deeply into five lobes; the corolla is tubular or trumpet shaped, its tube longer than the limbs. Stamens include four fertile; one sterile, bearded.

***Penstemon digitalis* Nutt.**

**Beard-tongue; penstémon digitale**



*Photo by Martin Thomas*

It is an erect plant, to 1.5m in height. Basal leaves are long-petiolate, lanceolate or ovate and entire. Flowers are borne in a raceme, the pedicels strongly ascending. Flowers are white.

Early flowering, from May to July.

A plant of meadows and prairies, spreading to eastern fields and clearings.

Historically known from north side of a field on Cape Blomidon, Kings Co. where it is believed to be an introduction.

Ranges from NS to ON, south to TX and GA, may be adventive in the northeast.

***Rhinanthus* L.**

**yellow rattle**

Only three species are included in this genus of hemiparasites; one reaches Nova Scotia, with two subspecies. The opposite leaves are sessile. Yellow flowers are borne in a terminal leafy spike. Most distinctive is the papery calyx, which becomes swollen at maturity. The highly irregular flowers carry appendages on either side of the top corolla lobe. The lower lip is trilobed and ridged. Stamens are borne in two pairs beneath the upper lip. Seeds are large and flat, winged.

***Rhinanthus minor* L.****(=*R. crus-galli* L.)****Yellow Rattle; petit rhinathe**

Photo by Alain Belliveau

Flowers are borne on erect stems which may be simple or branched, rarely more than 60cm tall. Leaves are sessile and lanceolate or oblong, crenate or serrate. Flowers are carried in spikes arising from the upper axils. Corolla is yellow and to 2cm in length, subtended by a calyx to 1cm and round. Bracts at the base of the flowers are attenuate and serrate.

*ssp. groenlandicus* (Ostenf.)L. Nenin has the leaves oblong and crenate; the corolla has no purplish brown mottle.

*ssp. minor* has lanceolate attenuate leaves, their margins serrate; the lower lip of the corolla is mottled brown.

Flowers from mid-June through July.

Grows on disturbed, compacted soils as on roadsides, abandoned fields and the like.

Common throughout.

*ssp. minor* is considered introduced to Canada from Europe. Greenland to NT south to AZ and NM. *ssp. groenlandicus* ranges from Greenland to AK, south to OR and CT and is considered native.

***Scrophularia* L.****figwort**

About 150 species comprise this temperate Eurasian genus, for which the family is named. All are perennial herbs with opposite toothed leaves, petiolate or apetiolate. Flowers are small, green to reddish brown borne terminally in large panicles. Calyx is regular and five lobed. The corolla is bilabiate, its tube wide. The central lobe on the lower lip droops, while the others are borne flat. Stamens number four, beneath the upper lip. Seeds are rough and angular.

Key to species

Leaves cuneate or truncate at the base; sterile stamen greenish yellow.

*Scrophularia lanceolata*

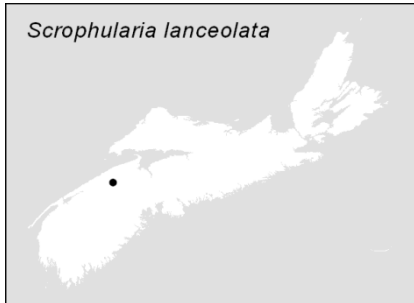
Leaves rounded or cordate at the base; sterile stamen purple or brown.

*S. nodosa*

***Scrophularia lanceolata* Pursh**  
**Figwort; scrofulaire lancéolée**



Photo by Sean Blaney



*Scrophularia lanceolata*

Reaching 2m in height, this plant has broadly lanceolate leaves, coarsely serrate. Cauline leaves are whorled and carried on petioles about one-third the length of the blades. Panicles are elongated and loosely branched; they are composed of many flowers.

Flowers June and July.

Limited to open forest and thickets, dryish soils.

Rare and known only from Harmony, Kings Co.; Boylston, Guysborough Co. and Baddeck, Victoria Co. although only a single locality is reflected in the collections.

Ranges from NS to BC, south to CA and NC. Introduced.

***Scrophularia nodosa* L.**  
**Knotty Figwort; scrofulaire noueuse**



*Scrophularia nodosa*

Resembling the previous species in stature and inflorescence, this species differs mainly in the leaf outline, with the base cordate or at least rounded rather than squared. The sterile stamens are also purplish or brown rather than green.

Flowers in summer.

Vacant lots and roadsides; base of talus.

So far known from Main Street, Wolfville where it is actively spreading and from Middle River, Pictou.

Elsewhere it is known from NF to QC. In the east as far south as NC; in the west found in WA. Introduced to Canada

***Verbascum L.***  
**mullein**

Centred about Eurasia, of 300 species only one reaches Nova Scotia, as an introduction. Ours is distinctive in its size, sometimes reaching 2m. The elongated spike of yellow flowers is unique amongst the scrophs, at least in our species. The calyx and corolla are nearly regular. Five lobes of calyx subtend the salveriform corolla, whose tube is nearly absent. The three lower lobes are only slightly longer than the remaining pair. There are five dimorphic stamens. The lower pair differs in length and pubescence. The fruit has two valves, dehiscent at the top. Leaves are both basal and cauline.

***Verbascum thapsus L.***  
**Common Mullein; grande molène**



*Photo by Martin Thomas*

Common in its habitat, with tall cylindrical spikes arising from large rosettes of woolly light green leaves. The basal leaves are oblanceolate and petiolate while the cauline leaves are decurrent and acute.

Flowers throughout the summer.

Commonly grows on light gravelly soils as found roadside, or on railways, plains and pastures.

Common throughout.

Introduced throughout North America from Europe.



Photo by Sean Blaney

## **Veronica L. speedwells**

A genus of the north-temperate regions, Eurasian-centred. Eleven are found in Nova Scotia, of 300 described. All herbaceous, they carry opposite or whorled leaves and alternate or opposite bracteate leaves. Flowers are small, ranging from white to blue or purple. The corolla is generally tubiform, the tube shorter than the limbs, which appear to be only four due to fusion in the upper pair. The calyx is cleft into 4–5 lobes and persistent on the fruit. Style is persistent; stamens a single pair.

### Key to species

- |   |                              |
|---|------------------------------|
| A. Inflorescence terminal on the main stem and flowers crowded, bracteate leaves alternate. | B                            |
| B. Flowers in a terminal raceme or spike.   | <i>V. serpyllifolia</i>      |
| bb. Flowers axillary.   | C                            |
| C. Pedicels very short, to 2mm.   | D                            |
| D. Flowers white; leaves at least 3x long as broad, not lobed as below.                     | <i>V. peregrina</i>          |
| dd. Flowers blue; leaves much broader or lobed, with lobes pinnately arranged.              | E                            |
| E. Leaves toothed; fruit ciliate.   | <i>V. arvensis</i>           |
| ee. Some leaves pinnate; fruit glandular.   | <i>V. verna</i>              |
| cc. Pedicels to 40mm, at least at maturity.   | <i>V. agrestis</i> , in part |
| aa. Inflorescence never terminal on main branch; flowers axillary; all leaves opposite.     | F                            |
| F. Mature pedicels <15mm long; corolla <8mm wide.   | <i>V. persica</i>            |
| ff. Mature pedicels >15mm long; corolla >8mm wide.  | G                            |
| G. Plants of dry habitats; pubescent.   | H                            |
| H. Leaves cuneate; pedicels much shorter than the bracts.                                   | <i>V. officinalis</i>        |
| hh. Leaves round or square at the base; pedicels as long as or longer than the bracts.      | <i>V. chamaedrys</i>         |

gg. Plants of wet soils; glabrous, or finely pubescent only in the inflorescence.

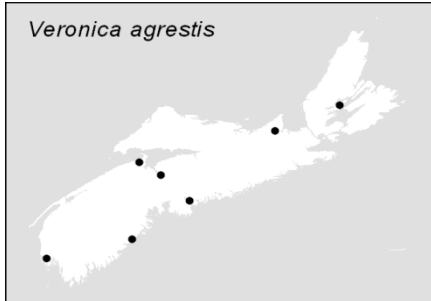
I

- I. Leaves all short-petiolate.
- ii. Leaves sessile from the middle upwards.

*V. americana*  
*V. scutellata*

***Veronica agrestis* L.**

**Field Speedwell; véronique agreste**



A small tangly plant with prostrate growth, its stems sparsely branched. The leaves are widely ovate, almost round, crenate and with the veins palmate. Blue flowers top slender pedicels in the leaf axils, exceeding the length of the leaves. Plants are puberulent.

Flowers from May until October.

Fallow soils in lawns and fields.

Scattered localities along the Atlantic and at Windsor, Hants Co.

An introduced species and now reported sporadically from NF to AB, south to TX and FL.

***Veronica americana* (Raf.) Schwein.**

**American Brooklime; véronique d'Amérique**



A sprawling plant with prostrate stems, 20–60cm long. Generally it bears ovate to oblong leaves, their margins serrate or entire. Arising on very short petioles, they may be less than 1cm long. One to several racemes arise from the upper axils. Pedicels are longer than the minute bracts, from 5–10mm.

Flowers from June until September.

Found on wet soils near streams and springs, marshes and





Photos by Sean Blaney

swamps or in riparian habitats.

Common from Yarmouth to northern Cape Breton along the northern side. Unknown from Atlantic counties.

Ranges from NF to AK, south to FL, TX and CA; Asia. Absent only from the prairie provinces. Introduced.

***Veronica arvensis* L.**

**Field Speedwell; véronique des champs**



Photo by Martin Thomas

A tidy, erect plant to 20cm tall, usually with simple or sparingly branched stems. Leaves are ovate, larger towards the base and rarely exceeding 1cm. They narrow towards the top where the flowers arise from the axils. Pedicels are short and become crowded terminally.

Flowers May and June.

Found in fields, on slopes and other dry sandy conditions.

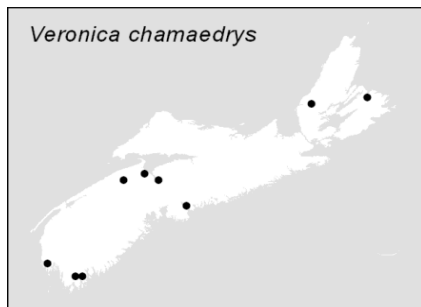
Scattered throughout and forming large patches.

Ranges from NF to AK, southward; BC to CA. Introduced from Eurasia.

***Veronica chamaedrys* L.**  
**Birds-eye; véronique petit-chêne**



Photo by Martin Thomas



Lightly puberulent, the stems are simple or sparsely branching. Leaves are deltate to ovate and sessile. They are deeply serrate or crenate on the margins. Flowers are arranged in racemes, distant, on long slender pedicels, subtended by lanceolate bracts, shorter than the pedicels. Corolla is pale blue with darker nectar guides, 5–6mm long.

Flowers from May to July.

Found along edges of roadsides, fields and forests.

Scattered localities from Yarmouth to the Windsor area, north to Cape Breton.

NS to ON, south to MO and NC; AK to CA. European introduction.

***Veronica longifolia* L.**  
**(= *Pseudolysimachion longifolium* (L.) Opiz)**  
**Garden Speedwell; véronique à longues feuilles**

Stems reach to 1m, standing erect and pubescent. Leaves are lanceolate and borne in pairs or whorls of three on tiny petioles. Flowers are brilliant purple crowded into spike-like racemes atop the stem, 15cm or more in height.

Flowers during July and August.

Often planted and sometimes persisting, especially in roadside thickets.

Abundant from Yarmouth to Annapolis counties and scattered to Pictou and Amherst.

Introduced from Europe. Ranges from NF to AK, south to OR, MD; FL.

***Veronica officinalis* L.****Common Speedwell; véronique officinale**

A prostrate species, its stems are decumbent, but for the ascending inflorescences. The entire plant is puberulent. Leaves are broadly elliptic, tapering to a short petiole, serrate. Flowers are purplish blue, arranged in spike-like racemes with inconspicuous linear bracts.

In addition to the typical variety, var. *tournefortii* (Vill.) Reichb. has been recorded from NS. Our material needs to be examined for inclusion to variety.

Flowers July to August.

Roadsides, fields and shady edges elsewhere.

Throughout.

Greenland to ON; BC south to CA and GA. Absent from arid regions. Introduced from Europe.



Photos by Martin Thomas

***Veronica peregrina* L.****véronique voyageuse**

A slender annual to 30cm, its stems may be simple or often branching from the base. Leaves are mostly cauline, linear to oblong, entire or toothed. Inflorescence is loose, bearing tiny white flowers whose corollas are barely 2mm wide.

Flowers from April to September, throughout its range.

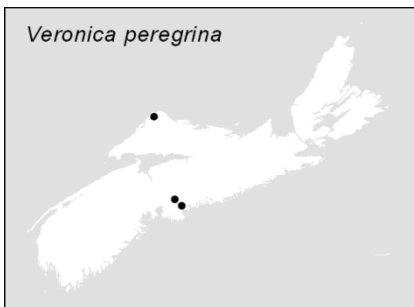
A weedy introduction in damp open soils.

Collected from Halifax's Point Pleasant Park and Broad Cove, in Cape Breton Highlands National Park, Victoria Co.

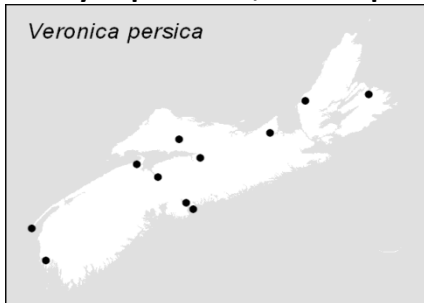
Probably introduced to Nova Scotia from elsewhere on the continent.



Photos by Martin Thomas



***Veronica persica* Poir.**  
**Birds-eye Speedwell; véronique de Perse**



A diffuse plant, it is freely branching and spreading, but only 10–30cm tall. Leaves are ovate and toothed or lobed, on short petioles. Flowers are blue on slender pedicels, exceeding the leaves in length. Capsules are deeply notched at the top and covered by a network of ridges.

Flowers to September.

Edges of fields, lawns and in open woods.

Recorded from Yarmouth to Cape Breton.

Introduced and now spread across the continent.



***Veronica scutellata* L.**

**Marsh Speedwell; véronique en écusson**



Photo by Martin Thomas

A tenuous plant, it reaches 20–60cm tall. Its leaves are linear to narrowly lanceolate, sometimes serrulate. Sessile, they are also dark olive-green in colour. Racemes are few-flowered and slender, axillary near the top of the plants. Flowers are borne on drooping pedicels.

Flowers mid-June through September.

Emergent from shallows in ponds, marshes or swamps, persisting in ephemeral ponds for some time.

Throughout the province and more frequent in north and central regions.

NF to AK, south to NC, CO and CA; LA. Eurasia.

***Veronica serpyllifolia* L.**

**Thyme-leaved Speedwell; véronique à feuilles de serpolet**



Photo by Sean Blaney

The stems of this perennial are creeping, with only the flowering portions ascending. Leaves are ovate or elliptic, mostly sessile and each pair is widely spaced. Flowers are borne on slender pedicels, arranged in a raceme. There is a single elliptic bract subtending the inflorescence.

Flowers from mid-May to October.

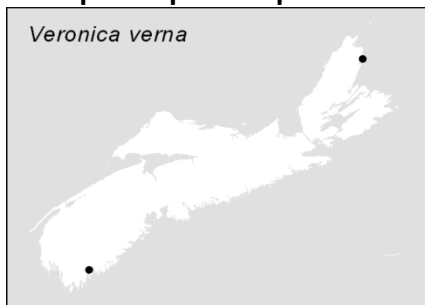
Limited to moist soils, as found in fields and roadsides.



Common throughout.

Ranges from NF to AK, south to CA and GA. Absent from NT and MB as well as some southern states.

***Veronica verna* L.**  
**véronique du printemps**



This species was recently added to our flora. It bears certain resemblance to *V. peregrina*, except for its possessing some pinnately lobed leaves. The style is about equal in length to the fruit, while *V. peregrina* has a shorter style.

Flowers as early as April, rendering it overlooked perhaps.

Compacted soils as in picnic and campgrounds, roadsides.

Islands Provincial Park, Shelburne Co.

NS and NB; ON south to IN; west coast. Introduced.