Ranunculaceae

buttercup family

Larkspur, Columbine, Clematis and Anenome are common showy garden favourites belonging to this family. Mostly herbaceous, 2500 species have been described, organized in 51–88 genera. Flowers are regular, except in the Larkspur and Monkshood, where sepals resemble petals in form and colour. Petals may be present or absent. Stamens are numerous; pistils 1–many, developing fruit of various forms. The stamens may be modified into a staminode, producing nectar in some species. It may be large and showy as in the Columbine or inconspicuous. Leaves are alternate and compound, with some exceptions. Several are woody and some are even vines.

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Key to the species

Key to th	e species		
A. Plant a	Clematis		
aa. Plant	В		
B. L	B. Leaves simple, shallowly lobed or serrate.		
	C. Leaves mostly 0.5–5cm wide; cauline leaves reduced; fruit an achene,	Ranunculus	
	many per plant. (Buttercups, in part).		
	cc. Leaves kidney-shaped, 5–20cm wide; fruit a follicle, with many	Caltha	
	seeds.		
bb.	Leaves compound, or deeply lobed.	D	
	D. Leaves all basal; plant <10cm tall.	Е	
	E. Leaves trilobed, cut half or two-thirds to their bases,	Hepatica	
	margins smooth; flowers blue; sepals minute; rare species.		
	ee. Leaves with 3 leaflets, toothed; flowers white, sepals	Coptis	
	absent; common in a variety of habitats.		
	dd. Leaves both basal and cauline, or merely cauline; plant >10cm	F	
	tall.		
	F. Cauline leaves 2–3, opposite or whorled; flowers 1–	Anemone	
	several, white; pedicels long; sepals petaloid.		
	ff. Cauline leaves alternate, >3; flowers many, panicle;	G	
	yellow, pink, or purple; petals present.		
	G. Leaves deeply cleft, or palmately compound and	Ranunculus	
	only once-divided. (Buttercups in part)		
	gg. Leaves large, in 3s, with 3 large leaflets; divided	Н	
	again 1–2 times.		
	H. Leaves sessile, or nearly so; flowers	Thalictrum	
	unisexual; petals absent.		
	hh. Leaves on long petioles; flowers perfect;	1	
	petals present.		
	I. Leaves mostly basal, those on the	Aquilegia	

stem reduced; distally serrulate or

lobed; fruit of 5 follicles; flowers few, large, long-spurred.

ii. Leaves, 1–2, cauline; much-divided, lobes long-pointed; fruit a berry; flowers small and crowded, racemes; petals not spurred.

Actaea

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Actaea L. baneberry

Perennial herbs, baneberries are woodland species, producing white petals and deciduous sepals that drop as the flower expands. The long peduncles carry racemes of flowers, producing red or white berries. Of the five circumboreal species, two are found in Nova Scotia. Both are toxic if eaten.

Key to species

Leaves pubescent beneath; fruit red, occasionally white, on slender pedicels.

Actaea rubra

Leaves smooth, except for the veins fruit shiny, white, on short, thick pedicels.

A. pachypoda

Actaea pachypoda Elliot (A. alba (L.) Miller)

White Baneberry; actée à gros pédicelles



Photo by Sean Blaney

Leaves divided into 3–5 toothed leaflets, which are smooth above and below, except on the veins. Berries are white with 3–10 seeds, borne on short stout pedicels.

Flowers early, from late May to early June.

Grows in open woodland along the edges in loamy soils. Typical species of deciduous and intervale forests.

Frequent from Annapolis and Cumberland counties to northern Cape Breton. Less common in southwestern NS and along the colder Atlantic coast.

Ranges from NS to ON, south to OK, LA and FL



Photo by David Mazerolle

Actaea rubra (Ait.) Willd. Red Baneberry



Photo by Sean Blaney



Photo by Ross Hall

This species also produces compound toothed leaves. Stems, leaves and petioles are pilose. Flattened red berries are terminally clustered on long slender pedicels. There are forms with pure white berries, historically designated as forma *neglecta* by Fernald. The fruit is poisonous.

May flower slightly earlier than the previous species, May 15 to early June.

Grows in deep fertile forest soils as typical in deciduous forests and streamside.

Most common from Annapolis Co. to northern Cape Breton. Absent or infrequent in southwestern counties and along the Atlantic's coast.

NL to AK, south to NJ and NM and CA.

Anemone L. windflowers

Worldwide there are about 100 species; Nova Scotia has only five, four of which are of conservation concern. Windflowers are typified by the absence of petals. Rather the sepals are petaloid and may be

white, yellowish, red or bluish. Leaves are deeply cleft, once or twice-palmately compound and toothed. Plants and achenes may or may not be pubescent. Basal leaves may be present or absent.

Key to species

A. Plant stout; achenes densely villous.

Anemone virginiana

bb. Involucral leaves sessile.

B. Involucral leaves on petioles.

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C. Plant with slender rhizomes; leaf segments shallowly

A. parviflora

cc. Plant with a caudex; leaves deeply cleft at least twice.

A. multifida

aa. Plant slender; achenes hispid.

A. quinquefolia

D. Involucral leaves on petioles.

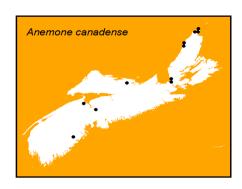
dd. Involucral bracts sessile.

A. canadensis

Anemone canadensis L. anémone du Canada



Photo by Sean Blaney



Leaves tripartite, each segment further deeply cleft and toothed. Upper leaves and bracts sessile, while the basal leaves are long-petiolate. Long peduncles bear single flowers, each to 4cm in width. Styles are long, prominent, straight or bent. Achenes formed in rounded head.

Flowers May to June.

In thickets, meadows and stony shores. Grows in alluvial soils in calcareous regions.

Cape Jack and Havre Boucher, Antigonish Co. Locally abundant in northern Cape Breton. Historically collected or reported from the Meander River, Hants Co. and in Queens Co. The Wolfville collection once grew behind an old greenhouse at Acadia University from a planting.

NS to YT, south to WVA and NM.

Anemone multifida Poiret

Larger than the next species which it otherwise resembles, reaching 60cm tall from a caudex, Basal leaves borne on long petioles, deeply incised. Peduncles number 1–3. Sepals number 5–9 and may be white, yellow or red.

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Flowers May to June.

On rocky habitats, with calcareous substrate.

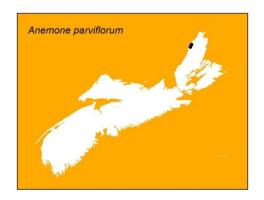
Known from a single locality in Cape Breton Highlands National Park, below the waterfall at Corney Brook gorge, south of French Lake, Inverness Co.

NF to AK, south to NY, MI, CA.

STATUS: ORANGE-listed in NS.

Anemone parviflora Michx.

Small-flowered Anemone; anémone à petites fleur



Small in stature, barely reaching 30cm, it's a densely pubescent herb. Basal leaves are long-petiolate, deeply cleft several times. Involucral leaves resemble the basal leaves, but are sessile. Sepals 5–6, white or bluish. Style is straight. Fruit head about 1cm in length; achenes are densely villous.

Flowers June to August throughout its range.

In NS, along the gravelly bluff of wet limestone associated with waterfalls.

Collected north of Cheticamp in the 1920s and not seen again until the 1980s at Grand Falaise, 1km north of the entrance to Cape Breton Highlands National Park, Inverness Co.

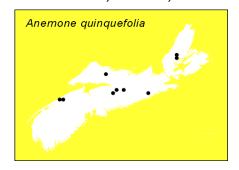
Ranges from NL to AK, south to UT, ND and ON.

STATUS: ORANGE-listed.

Anemone quinquefolia L. Wood Anemone



Photo by Sean Blaney



Leaves are few, those deeply-cleft and whorled, on petioles several cm long. Flowers solitary on slender peduncles.

Flowers late May to early June.

Found on wooded streamsides, terraces and intervals.

Rare and localized populations north of Bridgetown and Paradise, Annapolis County; Kingston, Kings Co.; Middle Stewiacke, Colchester Co. Somewhat frequent along the St. Andrews River and east of Shubenacadie in Colchester Co.; Wallace River, Cumberland Co. Elsewhere, north of Sherbrooke, Guysborough Co. and in southern Victoria Co.

NS to BC, south to NC and IA.

STATUS: YELLOW-listed.

Anemone virginiana L. Thimbleweed

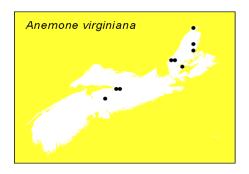


Photo by Sean Blaney

Leaflets are cuneate and toothed, except across the base. Flowers and achenes are arranged in an oval head. Involucral bracts are sessile. Achenes are tomentose. Ours is var. *alba* A. Wood.

Flowers in early July.

Calcareous and slate ledges along streams. Intervales and thickets of same.



Reported from the Meander River and collected from the Herbert River, Hants Co. Occasional in Colchester and Pictou counties. Scattered at several localities in northern Cape Breton.

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Species ranges from NF to BC, south to CO and GA.

Aquilegia L columbine

In our province, Columbines are garden perennials, naturalizing in woodland or shady habitats. Northern plants, there are 70 species worldwide. Flowers are perfect and spurred, by an elongation of the base of the perianth. Sepals and petals five-merous, petals blue, mauve and pink. Recent hybrids are bicoloured with yellow or cream. Leaves are alternate and compound, the leaflets trilobed.

Aquilegia vulgaris L Garden Columbine; ancolie vulgaire



Photo by Sean Blaney

Basal leaves arise on long petioles, cleft into three toothed leaflets. Cauline leaves are sessile, or nearly so. Nodding flowers are large and showy, ranging from purple, blue, pink and even white.

Flowers to be expected from late May to early June.

Frequently seen in shady fertile sites as along roadsides and in fields, intervals, woodlands.



Photo by Sean Blaney

Throughout the province.

Widely established in North America. Introduced from Europe.

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Caltha L. marsh-marigold

Perennials of wetlands or streamsides, there are only 15 species worldwide and all are poisonous. A single species is found in northern NS. Flowers are terminal and pedunculate; petals are absent. Sepals number 5–9; stamens are numerous. Cauline leaves arranged alternately and toothed or lobed, while the basal leaves are kidney-shaped and also toothed.

Caltha palustris L. Marsh-marigold; populage des marais



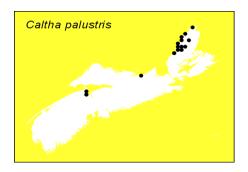
Photo by Ross Hall

A hollow stemmed perennial, it may reach 60cm in height. Leaves are rounded or kidney-shaped with a deep sinus at the base. They are serrate. Basal leaves borne on long petioles, decreasing in size upwards on the plant. Bright yellow flowers are conspicuous. Fruits are follicles, each with several seeds.

Flowers in early June.



Photo by Ross Hall



Grows in open or treed swamps, alder marshes and meadows.

Restricted to the Northumberland coastal plain: Mabou, Northeast Margaree, Margaree River, Terre Noir. St. Josephdu-Moine, Cheticamp, Pleasant Bay area, all of Inverness County. North shore of Merigomish Island, Pictou County represents the only mainland collection to date. Collections in Kings Co. represent introductions.

Elsewhere ranges from NL to AK, south to CA, NE and NC; absent from the arid plains. Eurasia.

Clematis L. Clematis

Over 300 species and numerous cultivars make up this cosmopolitan genus. Herbaceous or woody, they may be upright or vines, with simple or compound leaves. Petals are absent, instead the sepals are petaloid. Stamens and pistils numerous.

Ours are both vines.

Key

Sepals reddish violet; limited distribution.

Clematis occidentalis

Sepals white, yellow or green; widespread throughout.

C. virginiana

Clematis occidentalis (Hornem.) DC (=C. verticillaris DC)

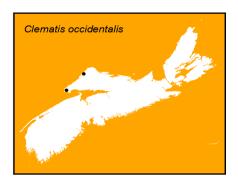
Purple Clematis; clématite verticillée



Photo by Ross Hall



Photo by Sean Blaney



A woody vine, its flowers are mainly solitary, borne in the leaf axils. Sepals are reddish or violet.

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So far as known, flowers earlier than our common species, May to June.

Found on rocky, calcareous slopes and in open forests.

Limited to Cumberland County, so far known only from Amherst Point Bird Sanctuary and Cape Chignecto Provincial Park.

NS to ON, south to IA and NC.

Clematis virginiana L.

Virgin's-bower; Clematis; clématite de Virginie



Photo by Sean Blaney



Photo by Sean Blaney

Extending from 2–3m, it is best seen clamoring over shrubs and trees. Leaves are palmately divided with toothed leaflets. Flowers are white in compact panicles in leaf axils, equal to or exceeding the size of the leaves. One of only a few native NS vines.

Flowers during the first half of August.

Grows in stony habitat as on streamsides and in ravines.

Scattered throughout the province, especially common in northern counties and eastern NS.

NS to MB, south to TX and FL.

Coptis Salisb Gold-thread

North American species are typified by having golden-yellow rhizomes that provide the vernacular name. Worldwide there are 10 species, limited to the north-temperate and arctic regions. Leaves are evergreen and basal, cleft into three toothed leaflets. Slender scapes bear single flowers, with white sepals. Petals are absent. Fruit is a follicle.

Coptis trifolia (L.) Salisb. Gold-thread; savoyane



Photo by Beth Cameron



Photo by Marian Munro

Small tidy plants, they have basal leaves only. Leaflets are sessile, toothed and ovate to obovate. Single white flowers extend above the leaves. Follicles have long, persistent styles, about 13mm long. Plants arise from bright golden yellow roots.

Flowers from mid-May to early June.

Variety of habitats in acidic soil: swamps, bogs, coniferous forests.

Common throughout NS.

NL to AK, variously south to OR, MN and NC; Eurasia.

Hepatica Mill. Hepatica

Only four species comprise the genus, with but two in North America. Leaves have a basal sinus, the blades divided into three lobes. They are persistent over winter. Scapes are pubescent, each bearing a single flower.

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Hepatica nobilis Mill., var. obtusa (Pursh) Steyerm.

(H. americana (DC) H. Hara)

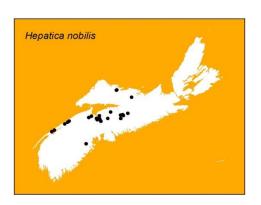
Hepatica; hépatique d'Amérique



Photo by Sean Blaney



Photo by Martin Thomas



Flowers are mauve, pink or nearly white borne singly on villous scapes and appearing from the rusty rosettes of last year's leaves. Leaves are trilobed, the newly emerging ones densely villous. The pubescence turns rusty throughout the summer and persists.

One of our earliest spring flowers to bloom and one of our least common. Flowers in April.

Dry, mixed deciduous forests.

Local and rare at Bridgewater, New Minas, Windsor, Pictou, Stewiacke, Antigonish and at a couple of North Mountain sites. Recently discovered along the Cogmagun River, Hants Co. Long known from along the St. Andrews River. Populations at Wolfville and St. Croix appear to be extirpated.

Elsewhere, NS west to MB and southward to AR and FL.

STATUS: ORANGE-listed in NS.

Ranunculus L.

Buttercups, Crowfoots

Buttercups form a cosmopolitan genus counting 250 species. They are widely variable depending upon habitat. Regular flowers produced, with green or yellow sepals; petals are white or yellow (in ours). There are nectar grooves at the base of the corollas. Fruits are achenes. The sap of all is poisonous.

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Key to species

A. Leaves finely dissected; aquatic submerged; flowers white; achenes rugose.	В
B. Submerged leaves flaccid, petiolate above the stipule;	Ranunculus trichophyllus
achenes beakless.	
bb. Submerged leaves stiff, retaining shape when removed from water;	R. longirostris
leaves sessile or nearly so; achenes beaked.	
aa. Leaves entire, or lobed; neither truly aquatic nor limited to terrestrial sites;	С
flowers yellowish; achenes not rugose.	
C. Plants of brackish soil; small; leaves basal and fleshy; rhizomatous.	R. cymbalaria
cc. Plants not of brackish soils; aquatic or terrestrial; rhizomes absent; lea	ves D
not succulent.	
D. Leaves linear to broadly lanceolate; entire or nearly so;	R. flammula
plants rooting at the nodes.	
dd. Leaves round to elliptical, toothed; not rooting from nodes.	E
E.Plants tenuous; leaves round, radially cleft;	R. gmelini
flowers 1cm across; aquatic or on exposed sand flats.	
ee. Plants vigorous, erect or creeping; leaves not	F
round nor floating, irregularly divided, or with	
rounded teeth; flowers >1cm wide.	
F. Achene swollen; without a flattened	G
margin; petals 1.5–4mm long.	
G. Leaves palmate, deeply cut; of marshes and swan	nps. <i>R. scleratus</i>
gg. Basal leaves round or reniform, crenate; lower	R. abortivus
cauline ones sometimes trilobed; deciduous woods.	
ff. Achene flat, with a winged border; petals >5mm long.	Н
H. Flowers inconspicuous; petals <4mm; plants hirs	ute. <i>R. recurvatus</i>
hh. Flowers showy; petals to 10mm; plants smooth	or I
villous.	
I. Leaflets sessile; style >1mm long.	R. acris
ii.Leaflets petiolate; style <1mm long.	J
J. Stems creeping; base not swollen.	R. repens
jj. Stems erect; base bulbous.	R. bulbosus

Ranunculus abortivus L.

Wood Buttercup; ranoncule abortive



Photo by Sean Blaney



Photo by Sean Blaney

Basal leaves are reniform, their margins crenate and with a deep sinus at the top of the petiole. Cauline leaves are palmately divided and toothed. Leaflets narrow towards the top of the plant; their margins entire. Petioles and pedicels are villous.

Flowers in early May.

Grows in fertile loam on wooded hillsides and along intervales.

Found from Digby and Cumberland counties to northern Cape Breton.

Ranges from NL to AK, south to WA, NM and FL

Ranunculus acris L

Tall Buttercup; renoncule âcre



Photo by Martin Thomas



Photo by Martin Thomas

A tall species, it may also be sprawling and has its branched stems pubescent. The palmate leaves are deeply and variously divided. Basal petioles are long, shortening distally up the plant. Large yellow flowers are showy; doubleflowered forms have been reported.

May to August.

An opportunistic species and naturalized in a variety of habitats, but mostly in moist heavy soils.

Common throughout the province.

NF to AK, variously south to CA and GA. Introduced from Europe. Toxic to people and livestock if ingested.

Ranunculus bulbosus L.

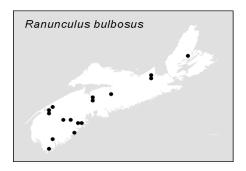
Bulbous Buttercup; renoncule bulbeuse



Photo by Sean Timpa



Photo by Sean Timpa



Base of the stem is swollen, erect and often not branched. Basal leaves are long-petiolate, leaflets in threes, further cleft. Cauline leaves are few, borne on short petioles. Solitary flower is yellow and showy, with distinctive nectar guides.

Flowers late May to June.

Open habitats such as fields, pastures, roadsides and even open woods.

Known from Shelburne County to Antigonish Co. and often common where found.

Ranges from NF to ON, south to GA and LA; west coast. Introduced from Europe.

Ranunculus cymbalaria Pursh

Seashore Buttercup; renoncule cymbalaire



Photo by Catherine Pross



Photo by Sean Blaney

Leaves are mostly basal, nearly round and crenate distally. Petioles are no more than 5cm in length. Yellow flowers are few, carried on scapes about equal in length to the petioles. Rhizomes are distinctive in this species.

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Flowers from May to October.

Typical saltmarsh species and found anywhere salt water intrudes. Dykelands, brackish pools and backwaters behind beaches.

Often abundant where found; coastal.

NL to AK, south to CA, TX and NJ; South America; Eurasia.

Ranunculus ficaria has recently been collected from Wolfville area. There is a dense population in a roadside ditch along Hwy 1, at Lower Wolfville and a small population along stream in gully off of Oak Ave., Wolfville.

Ranunculus flammula L. renoncule flammette



Var. filiformis Photo by Sean Blaney

Two varieties are found here:

Erect, becoming decumbent distally. var. *flammula*Creeping plant from slender rhizomes. aa. var *filiformis*

Var. flammula L. is a stout, mostly erect plant. Its only North American distribution is NS: Tusket, Yarmouth Co., in Kejimkujik National Park, Uniacke Lake, Hants Co; Truro and one Antigonish County location. Ranges from NF to PA





Photo by Sean Blaney

Var. *filiformis* (Michx.) DC is a small creeping variety, circumboreal in distribution. Flowers from July to September and is generally aquatic, associated with streamsides and lakeshores. Common from Annapolis to Cumberland counties to northern Cape Breton. Elsewhere may be found from NF to AK, south to CO and WVA and in Eurasia.

Ranunculus gmelini DC

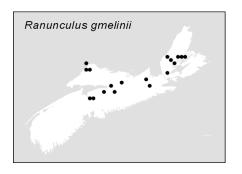
Yellow Water-crowfoot; renoncule de Gmelin



Photo by Beth Cameron



Photo by Beth Cameron



Leaves are usually submerged, with 3–5 lobes. Borne on long petioles, they are arranged alternately along the stem. Flowers are generally terminal. Stems may be long and spreading or short and bushy.

Summer flowers during July and August.

Frequents marshes, slow-moving streams, pools, ditches and ponds in alkaline areas in shallow water; may be seasonally stranded.

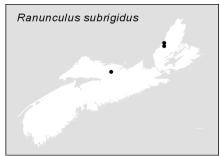
More northerly in NS: from Kentville and Truro to Amherst and Cape Breton.

Ranges from NF to AK, south to NE, NM and IL; Eurasia.

Ranunculus longirostris Godr.

(R. subrigidus)

Long-beaked Buttercup; renoncule à long bec



Very similar to *R. trichophyllus* but for the achenes and leaves. When withdrawn from the water, this species is stiffer, retaining its shape. The leaves are round or subglobular and not flat, sessile above the stipules. Flowers are also white. The rugose achenes of this plant are beaked, whilst the other aquatic species has beakless achenes.

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Flowers from June to September here.

More limited in habitat tolerances, restricted to calcareous or brackish water.

In NS reported from Cape Breton and Earltown area of Colchester Co.

Elsewhere from NS; MA to WA southward.

Ranunculus recurvatus Poir. renoncule à bec recourbé



Photo by Martin Thomas

Sparingly branched and a sparsely villous species, its leaves arise on long petioles. They are divided into three toothed lobes, which may be round or reniform. Flowers are few and widely spaced. The achenes are flattened and bear a hooked beak, aggregated into a spherical head.

May to July flowers.



Photo by Sean Blaney

Grows in moist, fertile sites as along streams and in deciduous woodlands.

Not common but widespread from Annapolis and Cumberland counties to northern Cape Breton. Less frequent in the Atlantic coastal areas.

Elsewhere from NF to ON, south to FL and TX; WA.

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Ranunculus repens L.

Creeping Buttercup; renoncule rampante



Photo by David Mazerolle



Photo by Martin Thomas

Always creeping in habit and sometimes rooting from the leaf nodes. Pubescence is variable. Leaves carried on long petioles, deeply divided into threes; each lobe is toothed. Flowers have overlapping yellow petals, arising on erect scapes. Former varieties are now included under the typical var. *repens*.

Flowers throughout the growing season from May to November.

Tolerant of shade or sun and often found in disturbed soils and also streamside, in forests and ditches.

Common throughout, and often a marker of former settlements.

Ranges from NF to AK and variously southward to the Gulf of Mexico. Introduced from Europe.

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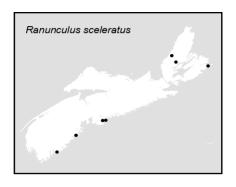
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Ranunculus scleratus L.

Cursed Crowfoot



Photo by Sean Blaney



A variable species, it has either stems with many branches or if sparsely branched, the stems are hollow. Basal leaves are reniform and lobed, with the margins irregularly toothed. Cauline leaves are linear or palmately divided into linear leaflets. Flowers are often numerous in a short cylindrical head.

Flowers from May to August.

Associated with wetlands, both freshwater and saline.

Local and rare in NS: West Berlin, Queens Co.; Barrie Beach, Lunenburg Co.; McNabs Island and Eastern Passage, Halifax Co. and at Main-à-Dieu, Cape Breton Co.

Eurasia and also throughout North America.

Ranunculus trichophyllus Chaix White Water-crowfoot (R. aquatilis L.)



Photo by Martin Thomas



Photo by Sean Blaney

Stems are submerged; leaves are palmately split into threadlike leaflets, alternately arranged and well-spaced. Stipules are present. Flowers 1–1.5cm across, white, borne above the water surface.

We have two varieties: var. *eradicatus* (Laedst.) W. Drew has smooth receptacles and achenes. Uncommon here and northern. The typical variety is more common. It has the achenes and receptacle puberulent.

Summer flowering in July and August.

Submerged in slow-moving streams, lagoons and shallow ponds. Can even be found in permanent ditches.

Digby and Annapolis counties to northern Cape Breton. Not known on the Atlantic side.

Circumboreal, NF to AK, south to CA and NM and TN.

Thalictrum L. Meadow-rue

North-temperate perennials totaling about 50 species; NS has a single dioecious species. Petals are absent; sepals 4–5, quickly deciduous. Flowers are arranged in panicles. Fruit is an achene, variously veined or ribbed. Leaflets are delicate, distally trilobed and finely puberulent beneath.

Thalictrum pubescens Pursh (T. polygamum Muhl.)

Meadow-rue; pigamon pubescent



Photo by Sean Blaney



Photo by Martin Thomas

May reach 1.5m in height on a stout stem. Leaves are compound, 2–3 times divided. Leaflets are further lobed into three rounded segments distally. Inflorescence is a broad panicle, bearing many staminate or pistillate flowers.

One of our most conspicuous summer wildflowers,

Found in marshes, meadows, ditches and wet thickets, intervale forests.

Common throughout.

appearing in July to early August.

Elsewhere found from NF to ON, south to GA and MS.

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