

## Rubiaceae

### coffee family

A relatively large family, there are 6500 species of shrubs or herbaceous plants, centred about the tropics/subtropics. Leaves are simple and entire and opposite with stipules, or whorled. The inflorescence is a cyme. Our species are generally four-merous; the flowers are perfect, subtended by a reduced calyx. Stamens are inserted, alternating with the corolla lobes. Ovary is inferior; carpels number 2–5.

#### Key to genera

- A. Shrubs; inflorescence a spherical head, pedunculate. *Cephalanthus*
- aa. Herbs; inflorescence a cyme or reduced. B
  - B. Cauline leaves whorled. *Galium*
  - bb. Cauline leaves opposite. C
    - C. Plants caespitose, leaves deciduous; rhizomatous; fruit a capsule. *Houstonia*
    - cc. Plants stoloniferous, rooting at the nodes; leaves evergreen; fruit a berry. *Mitchella*

### ***Cephalanthus* L**

Generally shrubs or small trees, they include only six species. Flowers are four-merous, clustered in dense spherical heads. Hypanthia are ovate. Calyx is short; corolla is funnellform, with exerted stamens. Fruit is dehiscent from the base; the pair of nutlets within indehiscent.

#### ***Cephalanthus occidentalis* L.**

##### **Buttonbush; céphalanthe occidental**



Photo by David Mazerolle

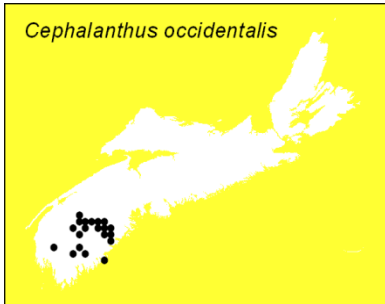
Leaves are opposite or whorled, obovate and entire and petiolate. Veins curve towards the leaf's apex. Flowers are pedicellate from the axils in compact heads forming tightly packed nutlets.

Flowers mid-summer.

Grows amidst boulders at waterline and overflow marshes of lakes.



Photo by Sean Blaney



Rare from Queens to Yarmouth Co. Locally abundant in suitable habitat from Medway to Roseway Rivers. Lunenburg Co. Part of our coastal plain floral community.

Ranges from NS to ON, south to TX and FL. CA and AZ.

***Galium* L.**  
**bedstraw**

About 300 species of bedstraws are known, cosmopolitan in distribution. All are herbs, arising on slender erect or reclining angled stems with cauline leaves in whorls. The flowers are carried in cymes. Calyx is reduced and without lobes; the corolla has four lobes, equal in length to the tube or shorter. The dry fruit is formed from the round carpels, each with one seed. Sometimes one carpel is aborted.

Key to species

- A. Plants from a short taproot, annual. *Galium aparine*
- aa. Plants rhizomatous, perennial. B
  - B. Fruit glabrous or granular, or prickly, not pubescent. C
  - C. Stems erect or nearly so. D
    - D. Main cauline leaves in whorls of 4; veins 3. *G. boreale*
    - dd. Main cauline leaves in whorls of 5 or more; 1 vein. E

E. Flowers white or green.	<i>G. mollugo</i>
ee. Flowers yellow.	<i>G. verum</i>
cc. Stems weak, matted and decumbent, sometimes ascending.	F
F. Leaves acute, in whorls of 5–8.	<i>G. asprellum</i>
ff. Leaves blunt or round, mostly in whorls of 4–6.	G
G. Corollas with 4 lobes, longer than wide.	H
H. Cymes branching repeatedly, with 5 to many flowers; nodes not bearded.	<i>G. palustre</i>
hh. Cymes branching 1–2 times, flowers 2–4; nodes with short beards.	I
i. Leaves ascending, >2.5mm wide; southern NS.	<i>G. obtusum</i>
ii. Leaves recurved, 2.5mm wide; northern NS.	<i>G. labradoricum</i>
gg. Corollas with 3 lobes, length and width about the same.	J
J. Flowers solitary, long-pedunculate, 3 per node; leaves in whorls of 4.	<i>G. trifidum</i>
jj. Flowers 2–3 on each peduncle; leaves 4–6 per whorl.	<i>G. tinctorium</i>
bb. Fruit pubescent or hirsute.	K
K. Principal leaves in whorls of 5–8.	<i>G. triflorum</i>
kk. Principal leaves 4.	L
L. Main leaves ovate to orbicular; fruit armed with hooked bristles.	<i>G. kamtschaticum</i>
ll. Main leaves lanceolate-linear; fruit with straight pubescence.	<i>G. boreale</i>

***Galium aparine* L.****Cleavers; Stickywilly; gaillet gratteron***Photo by Sean Blaney*

An annual species, the stems bear several whorls of eight acute leaves, both are coarsely pubescent. Fruit is also hirsute, the bristles hooked.

Flowers from May until July.

Composts, ballast and waste soils.

Collected at various coastal localities on the mainland.

Absent only from the northern territories, it is questionable whether it is native in Canada. Eurasia.

***Galium asprellum* Michx.****Rough Bedstraw; gaillet piquant***Photo by Sean Blaney*

Weak-stemmed and reclining, this species clings to other plants, forming tangled mats. The rough stems are clearly four-angled and freely branching, bearing recurved prickles. Acute leaves are whorled. Flowers are cymose.

Flowers throughout the summer.

Pastures, fields, ditches and streamsides.

Very common throughout.

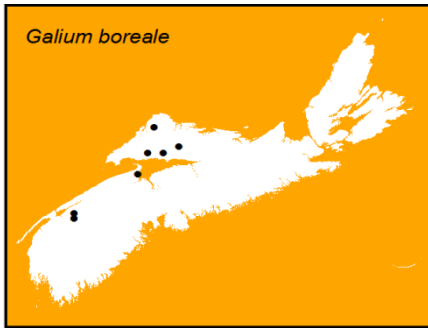
NF to ON, south to MI and NC.

***Galium boreale* L.****gaillet boréal***Photo by Sean Blaney*

Leaves are lanceolate or linear, marked by three distinct nerves. They are whorled in fours, from a glabrous stem. Their margins are entire. Inflorescence is a terminal crowded cyme. The fruit are stiffly hirsute, the bristles hooked.

Flowers from June through August.

A species of edges, forests and fields and other grassy



verges.

Very local in only a few counties: Kings, Annapolis and Cumberland counties. Perhaps historic.

Greenland; NS to AK, south to CA, TX and VA.

***Galium kamtschaticum* Steller**  
**Northern Bedstraw; gaillet du Kamtchatka**



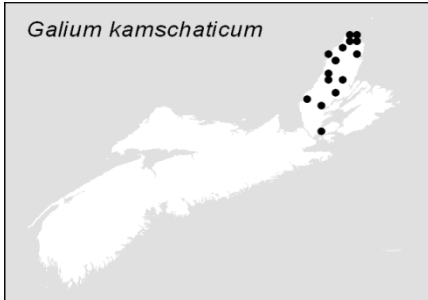
Photo by Sean Blaney

A colonial species it arises from stout stems. Cauline leaves are arranged in whorls of four, each ovate and acutely pointed. Leaves reduce in size towards the base. Cymes are simple, flowers white; fruit is bristly.

Flowers from June through August.

Fertile deciduous forests and ravines. Associated in the north with fir-birch boreal forest.

Known only from Cape Breton.

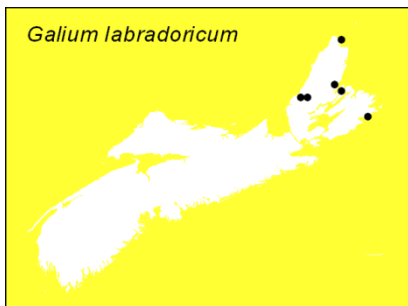


NF to ON south to MI and NY; NT to WA. The Aleutians and eastern Asia.

***Galium labradoricum* Wieg.**  
**gaillet du Labrador**



Photo by Sean Blaney



Small and delicate compared to other species, this one has slender, glabrous stems, that are sometimes puberulent. Leaves are linear or lanceolate, blunt tipped and only reaching 1–2cm in length. There are four to a whorl. The lateral cymes are once-branched and comprise tiny white flowers, producing smooth fruit.

Flowers from May through August.

Alkaline soils in wet meadows, bogs.

Limited to Cape Breton counties.

Ranges from NF to NT, south to BC, IL and NJ.

***Galium mollugo* L.**

**Cleavers; False baby's-breath; gaillet mollugine**



Photo by Sean Blaney

A tall species, Cleavers has glabrous stems bearing whorls of at least six acute leaves. Inflorescence is large with many pedicellate flowers. Fruit is also glabrous.

July and August flowers.

Roadsides and adjacent fields, forming dense colonies.

Weedy. North and central parts of the province.

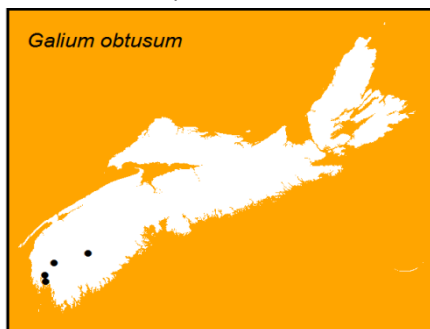
NF to ON, south to MS and GA; west coast. European and naturalized here.

***Galium obtusum* Bigel.**

**gaillet obtus**



*Photo by Martin Thomas*



Very slender and tenuous, this species has weak stems, bearing few whorls of four elliptical leaves. Cymes are terminal but sparse, the pedicels ascending.

Flowers earlier, from mid-May through July.

Found in wet soils as in bogs and thickets.

Coastal plain in distribution, limited to the Tusket River valley. Also Lake Rossignol, Queens Co.

Ranges from NS to ON south to TX and FL.

***Galium palustre* L.**

**Common Bedstraw; Marsh Bedstraw; gaillet palustre**



*Photo by Sean Blaney*

Freely branching and slender, this plant also bears elliptic blunt leaves in whorls of 4–5. The inflorescence is much-branched, the limbs ending in clusters of tiny white flowers.

Flowers July and August.

Wet or alluvial soils, streamsides and even in ditches.

Common throughout.

Ranges from NF to MB, south to IL and MD; scattered in the western US; Eurasia.

***Galium tinctorium* L.**

**Small Bedstraw; gaillet des teinturiers**



A trailing plant, it has weak flexuous stems, which are armed with stiff curved prickles when young. Leaves are elliptic but not acute, armed on the ribs and margins with prickles. Flowers are clustered 2–3 on each pedicel.

Flowers in August.

Streamsides, meadows, marshes and bogs - wet soils.

Common throughout.

Ranges from NF to ON, south to FL and TX.

***Galium trifidum* L.**

**gaillet trifide**



Photo by Sean Blaney

A densely matted species its sprawling stems are puberulent. The leaves are 2.5cm long, blunt-tipped and carried in whorls of 3–4. Flowers are borne on lateral branches, usually clustered in 2–3s. Fruit is glabrous.

Two ssp. are found here, ssp *halophilum* (Fern. & Wieg.) Puff. is a seashore species, smooth and succulent throughout. It is limited to NL, QC, ME, MA, NB and NS. Ssp. *trifidum* (described above) is found throughout the continent and as far south as UT and VA.

Flowers July to September.

Frequents saturated or very wet sites, usually on fertile



alluvium or paludal edges.

Local and found throughout but for northern Cape Breton.

The species is found throughout North America, except in the extreme southeastern US.

***Galium triflorum* Michx.**

**Sweet-scented Bedstraw; gaillet à trois fleurs**



*Photo by Martin Thomas*

Stems are glabrous, but not armed with clinging prickles. Leaves are lanceolate and acute, in whorls of six. Inflorescence is composed of three flowers on long pedicels.

Flowers July and August.

Found in mixed or deciduous forest.

Scattered throughout, but more common from Annapolis to northern Cape Breton.

Found throughout the continent.

***Galium verum* L.**

**Yellow Bedstraw; gaillet vrai**



*Photo by Martin Thomas*

Stems are robust and glabrous, the lanceolate acute leaves are borne in whorls of six. The terminal inflorescence is large and pubescent, the flowers yellow. Fruit is smooth.

June to August in flower.



*Photo by Martin Thomas*

Frequently seen about gardens and roadsides on light soils.

Known only from the Kentville area of Kings Co. and perhaps no longer extant.

Elsewhere from Greenland; NF to BC, south to CA and NC; a European introduction.

## ***Houstonia* L.**

A tropical genus with 300 species of herbs, one is found in Nova Scotia. Typically they are herbaceous, with small, opposite leaves. Flowers are four-merous and usually small. The corolla may be rotate or funnellform; the calyx is lanceolate to linear. Ovary is inferior at least in part. The locules each have many seeds, the capsule splitting loculicidally.

### ***Houstonia caerulea* L**

#### **Bluets; houstonie bleue**



*Photo by Sean Blaney*

A small species, it has stiffly erect stems from a cespitose base. Leaves are lanceolate and the cauline leaves are sessile in pairs along the stem. Flowers range from pale pink to pale blue.

Flowers mid-May to mid-June.

Colonial often in sandy gravelly soils, grassy hillsides, etc.

Scattered in the west, become abundant to central NS and northward. Less frequent along the eastern shore.

Ranges from St. Pierre et Miquelon to ON, south to LA and GA.

## ***Mitchella* L.**

Only two species comprise this genus of evergreen vines, one in North America; the other Asian. Ground-creeper, the stems are sparingly branched. Inflorescences are axillary, the pairs of flowers have a shared hypanthium and are each four-merous. Corollas are funnellform, with an elongate tube, the lobes softly pubescent on the inner face. Styles are of different lengths. Fruits are twinned red or white insipid berries, each containing eight seeds.

### ***Mitchella repens* L.**

#### **Partridgeberry; pain-de-perdrix**



*Photo by Martin Thomas*

A vining species, its pairs of evergreen dark green leaves, nearly round in outline, marked by white veins. Each pair of pink flowers shares an ovary and is borne on a short pedicel. Fruits are red.

Flowers in July.

Moist habitats where competition is low from taller shrubs or herbs as in mossy woods, banks, etc.



*Photo by David Mazerolle*

Common throughout, even on Sable Island where it frequents the turf-covered dunes.

NF to ON, south to TX and FL.