

Gentianaceae

gentian family

Of temperate and subtropical lands, the gentians comprise 1000 species. All are herbaceous plants and may have alternate, opposite or whorled leaves. Leaves reduced to scales in some species, otherwise simple and entire. Flowers are perfect, 4–5-merous, arranged in cymes. They are usually regular except for a deeply incised calyx. Sympetalous, the corolla lobes may be rolled. Stamens alternate with corolla lobes. Ovary is superior, unilocular. Fruits are capsules.

Most of the species below are rare or uncommon in Nova Scotia or overlooked.

Key to genera

- | | |
|---|--------------------|
| A. Leaves reduced to scales, less than 5mm long. | <i>Bartonia</i> |
| aa. Leaves not reduced to scales, exceeding 1cm in length. | B |
| B. Corolla lobes spurred at the base. | <i>Halenia</i> |
| bb. Corolla lobes not spurred. | C |
| C. Corolla rotate, lobes much longer than the tube. | <i>Sabatia</i> |
| cc. Corolla bell-shaped, tubular or funnel-shaped. | D |
| D. Corolla salverform; flowers pink or white; fruit turgid. | <i>Centaurium</i> |
| dd. Corolla cylindrical or funnelform; flowers blue; fruit not swollen. | <i>Gentianella</i> |

***Bartonia* Muhl.**

Limited to North America, the genus includes only three species; two in Nova Scotia. Known as screw-stems, they are mycotrophic. Leaves are cauline, minute and reduced to scales. Inflorescence is a terminal panicle or raceme; the flowers are white or pinkish.

Key to species

- | | |
|--------------------------|---------------------------|
| Scales mostly opposite. | <i>Bartonia virginica</i> |
| Scales mostly alternate. | <i>B. paniculata</i> |

Bartonia paniculata* (Michx.) Muhl.*Screw-stem; bartonie paniculée**

Photos by Sean Blaney

A slim tenuous plant, its scales are alternate. White to pink flowers are arranged in a slender and loose raceme. Our plants are variable, but the varieties have been included now in ssp. *iodandra* (BL Rob) JM Gillett. The typical ssp. is found further south.

Flowers found from August until October.

Frequents wet hollows of bogs, peaty or cobbly shores. Often overlooked.

Common in southwestern counties and scattered east to Halifax and Annapolis counties.

This subspecies ranges from NL, NS, NB, ON, ME, MA and CT.

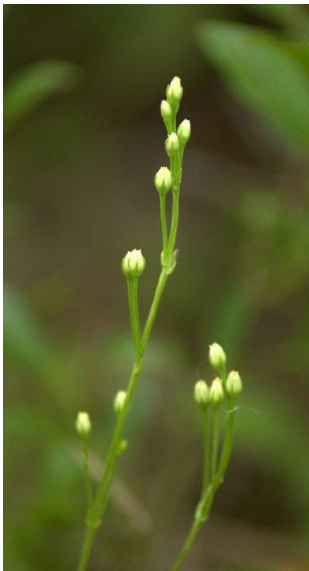
***Bartonia virginica* (L.) BSP****bartonie de Virginie**

Photo by Alain Belliveau

Leaf bracts are opposite, closely spaced towards the base of the stem. Flowers are white, arranged in a loose panicle. Sepals are purplish nearly obscuring the flowers.

Flowers July to September.

Dry barrens, sandy or peaty soils, bogs, lakeshores.

Common in the southwestern counties becoming scarcer east to Annapolis and Halifax; St. Peter's area of Cape Breton.

Ranges from NL to ON, mostly south to LA and FL.



Photo by Sean Blaney

***Centaurium* Hill centaury**

Cosmopolitan in distribution, some 50 species are found worldwide. Plants are annual or perennial, produce terminal cymes of pink or white flowers. Flowers are 4–5-merous. Calyx is deeply incised and the corolla tube expands above it. Anthers may twist around each other post-anthesis. Both are introduced.

Key to species

A. Flowers in flat-topped cymes, sessile or nearly so.

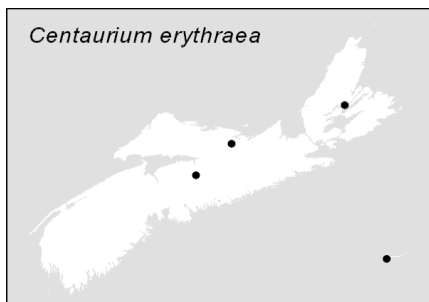
Centaurium erythraea

aa. Flowers in paniculate cymes, their pedicels more than 2mm long.

C. pulchellum

***Centaurium erythraea* Raf.**

Centaury; petite-centaurée commune



Plants have opposite leaves, broader than those of *Sabatia* which it resembles superficially. Flowers are pink, but with very long corolla tubes and short lobes.

Flowers in August and September.

Wet dunes, sandy hollows, roadsides. Pond margins.

Long known from Sable Island, appearing sporadically from Digby County to Cape Breton; Halifax.

NS; QC to ON and variously south to GA; west coast.

Naturalized from Europe.

***Centaurium pulchellum* (Swartz) Druce**
petite-centaurée délicate



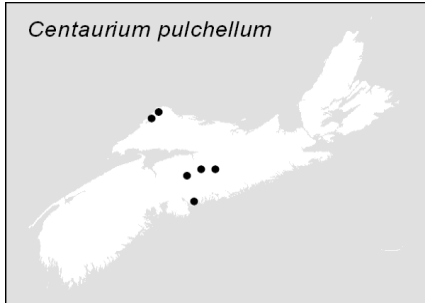
Photo by Sean Blaney

Resembles the previous species but for the branching leafy inflorescence.

Found in waste ground as along roadsides and railways.

Recently found in Cumberland, Colchester, Hants and Kings counties. Halifax Co.

Wider range than previous species, NS to ON, south to WY, TX and LA.



***Gentianella* Moench**

Annual or perennial herbs with opposite cauline leaves; 15 species are recognized to date. If branching, the branches are strongly ascending. Flowers are five-merous, the funnellform corolla exerted, lobed at the summit and fringed at the throat. Lobes are entire and not fringed. Flowers are blue or purple. Calyx is cleft to at least three-quarters its length. Seeds are smooth.

***Gentianella amarella* (L.) Boerner**
Felwort; gentiane amarelle



Photo by Sean Blaney

As above, growing here as an annual or biennial. Purplish blue flowers have lobes spreading at the summit and fringed at the throat. Stiffly erect, these plants may branch along the stem.

Flowers July to September.

Turfy soils and damp sands and gravel.

So far only known from Pollett Cove and Meat Cove area of Inverness Co. where it was found only in the late 1990s.

Ranges from Greenland to AK, south to CA and NM in the west and VT eastward.



***Halenia* Borkh.**

Of nearly 100 species, a single species reaches Nova Scotia, in a limited distribution. Leaves are basal and cauline; the cauline leaves are opposite. Flowers are terminal borne in a cyme, each four-merous. Tubular corollas, lobed at least half their length and spurred at the base. Stamens are inserted, near the summit. Fruit are lanceolate and acute.

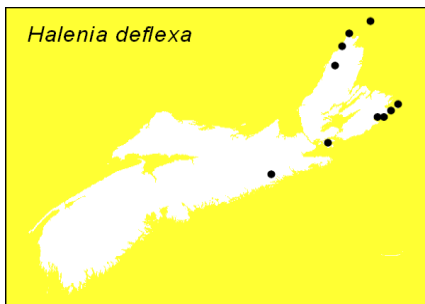
***Halenia deflexa* (Sm.) Griseb.**
Spurred Gentian; halénie déflechie



Photo by David Mazerolle



Photo by David Mazerolle



Freely branching from the base, this species is an annual with pairs of broadly lanceolate leaves. Flowers are crowded in a leafy cyme, yellowish purple, prolonged at the base, forming limbs or spurs.

Flowers from July to September.

Exposed shorelines and headlands along the coast.

Rare and local on the mainland: Hall's Harbour, Kings Co.; Sherbrooke, Guysborough Co. Common in northern Cape Breton, and eastward to Scatarie Island.

NF to NT and BC, south to WY, IL and NY.

STATUS: YELLOW-listed.

***Sabatia* Adans.**

North American in distribution, there are 17 species in total. Plants have sessile linear leaves and terminal cymes of flowers with anthers that coil after pollen release. Calyx lobes are narrow and elongated, subtending a rotate corolla with a short tube. Capsules are long persistent, eventually becoming bivalved.

***Sabatia kennedyana* Fern.**

Plymouth Gentian; sabatie de Kennedy



Photo by David Mazerolle



Photo by Martin Thomas



A handsome coastal plain species with a simple stem bearing pairs of linear or narrowly lanceolate leaves. Inflorescence has 1–4 flowers on slender pedicels, each bearing a single fragrant pink and yellow flower. Styles bifurcate.

Flowers in August.

Cobbly, and sandy beaches of lakes, streams and savannahs.

Local and rare: Tuskaloosa River valley in Yarmouth Co.

Disjunct range: southwestern NS; MA, VA to SC, only along the coastal plain.

STATUS: RED-listed and protected by the Endangered Species ACT 1999 and the Species at Risk Act, 2002.