

## Saxifragaceae

### saxifrage family

About 700 species in 40 genera comprise this family of herbs and shrubs. Nova Scotia has several representative species, ranging from the highland saxifrages to deciduous forest mitreworts.

Calyx and corolla are 4-5-merous. Sepals appear to be lobes of the hypanthium. Petals are variable in size and dissection. Stamens are equal in number or double the number of sepals and petals. Pistils number one or three; carpels 2–5, united basally to form a compound ovary, which may be deeply lobed. Fruit is dehiscent. Leaves are alternate with or without stipules, basal or cauline. Several genera are cultivated, but not persisting outside of cultivation.

#### Key to genera

- |  |                       |
|--|-----------------------|
| A. Leaves opposite, cauline; plant sprawling; flowers 4-merous; petals absent.                                     | <i>Chrysosplenium</i> |
| aa. Leaves mostly in a basal rosette, or very small and alternate; plants erect; flowers 5-merous; petals present. | B                     |
| B. Flowers solitary; stamens equal in number to the petals.  | <i>Parnassia</i>      |
| bb. Flowers several to numerous; stamens double the number of petals.  | C                     |
| C. Leaves small, crowded, sessile or nearly so.  | <i>Saxifraga</i>      |
| cc. Leaves mostly basal, on long petioles.   | D                     |
| D. Leaves serrate; petals entire; capsule beak acute.  | <i>Tiarella</i>       |
| dd. Leaves crenate; petals finely cleft; capsule beak obtuse.  | <i>Mitella</i>        |

### ***Chrysosplenium* L.**

Plants of cool regions, all 40 species have minute flowers. Petals are absent; calyx is four-merous. Flowers are perfect and perigynous. Hypanthium has eight lobes in its centre, with 4–8 stamens attached. Perennial creeping herbs, they are freely branched, their leaves simple.

***Chrysosplenium americanum* Schwein.**  
**Golden saxifrage; dorine d'Amérique**



*Photo by Sean Blaney*

A smooth, nearly succulent plant, it has many trailing branches, forming thick mats. Round opposite leaves are small, less than 1cm wide and borne on short petioles. Flowers are solitary or arranged in a leafy cyme, sessile and apetalous. They are nearly invisible but for the reddish stamens. Fruits are tiny capsules.

Flowers from early May to July.

Springs, trickles, seeps and wet low-lying nooks.

Common throughout, from Annapolis to northern Cape Breton. Less frequent on the Atlantic side from Yarmouth Co., eastward.

NS to MB, south to AL and GA.

***Mitella* L.**  
**mitrewort**

Rhizomatous, this herbaceous genus totals 12 species; 1 reaches Nova Scotia. Uncommon, our species is associated with the Alleghenian flora. Flowers are regular, perfect and perigynous. Also, they are five-merous. Hypanthium is saucer-shaped. Leaves are basal (in our species); Seeds are shining black.

***Mitella nuda* L.****Mitrewort; Bishop's Cap; mitrelle nue***Photo by Sean Blaney*

A small woodland perennial, its basal, cordate leaves are scalloped on the margins. Petioles are long. Cauline leaves are absent. Scape ranges from 10–20cm tall. Inflorescence is a terminal raceme, with a few distant flowers, on very short pedicels, 2–3mm long. Flowers are greenish-yellow, 3–5mm long and deeply split along each side into linear lobes, giving a distinctive appearance.

Flowers June and July.

Limited to shady habitats as in wooded swamps, mossy thickets and mixed forests, on fertile soils.

Annapolis Co., to northern Cape Breton.

Ranges from NL to AK, south to WA, IA and PA. Asia

***Parnassia* L.****grass of Parnassus**

About 50 species of *Parnassia* are found in the north temperate zones and but a single one in Nova Scotia, limited to Cape Breton. White flowers are marked with purple nectar guides, perfect and five-merous. Staminodes opposite each petal, are connate basally. Stigmas are four and the capsules divided into four valves. Leaves basal, smooth and entire, with a single cauline leaf, midway along the stem.

***Parnassia palustris* L.**  
**(=*P. parviflora* DC)**

**Grass-of-Parnassus; parnassie des marais**



*Photo by Beth Cameron*



*Photo by Beth Cameron*



A small upright perennial, it bears several ovate leaves in a basal rosette. One or two scapes up to 15cm tall, each bear a single flower, whose white petals are suffused with purple lines. Petals exceed the length of the sepals slightly. A small cauline leaf is present near the middle of the stem.

Flowers in July.

Sand dune hollows amongst grasses and in hummocks in swamps or tussocks.

Rare to infrequent. Known from Mabou Harbour northward.

Ranges from NS; NF to AK, south to WY and ON.

***Saxifraga* L.****saxifrage**

Primarily of the Arctic and north-temperate zones, the saxifrages total about 350 species. Flowers are usually arranged in a slender cyme. Flowers are perfect, five-merous and usually regular. Petals are delicate and distinct. Perennial herbs, they rarely exceed 30cm in height, even in flower. Leaves are generally basal, and some species also have cauline leaves. Their margins may be entire or toothed and are usually ciliate.

In Nova Scotia, these species are associated with cliffs and rock crevices especially in northern areas.

Key to species

A. Leaves opposite; flowers purple.

*Saxifraga oppositifolia*

aa. Leaves alternate; flowers white or yellow.

B

B. Matted; leaves cauline, entire and ciliate; flowers yellow,  
5–8mm wide.

*S. aizoides*

bb. Leaves in dense basal rosettes, ciliate at the base  
and serrate, each tooth ending in a lime-encrusted pore; flowers white,  
3–4mm wide.

*S. paniculata*

***Saxifraga aizoides* L****Yellow Mountain Saxifrage; saxifrage jaune**

Photo by Jamie Ellison

A small delicate plant, dwelling only on the windswept cliffs of northern Cape Breton. Leaves are crowded on the stems, opposite or whorled. Yellow flowers are distant in a slender cyme.

Flowers June to September.



Luxuriant where found, dripping limestone cliffs within spray zone.

In Cape Breton, known from Big Southwest Brook and south of French Lake in Cape Breton Highlands National Park.

Ranges from NS; NF to AK, south to MI and NY; Absent from SK. Europe.

***Saxifraga oppositifolia* L.**  
**Purple Alpine Saxifrage**

A densely matted species, its scapes may reach 10cm in height. Flowers are solitary, purple and about 1cm wide. Opposite leaves are pubescent, tightly clustered and overlapping at the base, with but a few cauline leaves.

Flowers June and July.

Rock face and seepage area at our only locality.

Found only at Corney Brook gorge to date, in Cape Breton National Park.

Ranges from NS; NF to AK, south to CO and NY. Circumboreal.

***Saxifraga paniculata* Mill**  
**(*S. aizoon* Jacq.)**

**White Alpine Saxifrage; saxifrage paniculée**

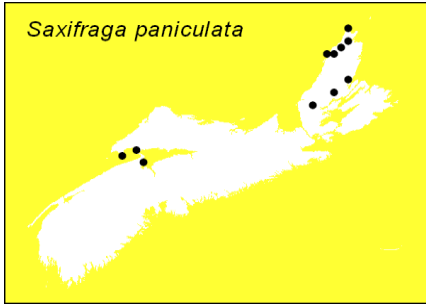


Photo by Jamie Ellison

A perennial with basal rosettes 2–3cm wide, it has leathery, serrate leaves. Each serration bears a pore, encircled by lime, a striking character. Scapes range from 10–30cm tall with a few flowers forming a small cyme. Petals are white and tiny. North American plants are separated from European ones as ssp. *neogaea* (Butters) D. Löve

Flowers late June to July.





Crevices and peaty pockets in cliffs and limestone ledges.

Limited distribution: Cape Blomidon (3km east of Cape Split), Cape d'Or and northern Cape Breton.

Arctic regions, south to NS, NY and MN; Europe.

## ***Tiarella* L.** **foamflower**

A small genus of only six species, it is centred in North America, but for a single Asian species. Nova Scotia hosts one species. Flowers are white, arranged in racemes on a scape. Five-merous and perfect, the flowers are also perigynous. Hypanthium is small, campanulate and basally united to the superior ovary. Leaves are mostly basal, lobed and toothed. Plants are rhizomatous.

### ***Tiarella cordifolia* L**

#### **False Mitrewort; Foamflower; tiarelle cordifoliée**



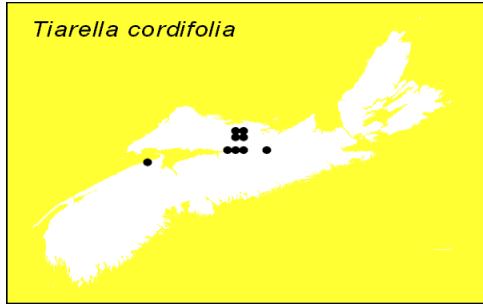
*Photo by Sean Blaney*

A beautiful plant, its tall slender scapes bear delicate white flowers. Basal leaves are long-petiolate, resembling those of Red Maple. Stems and petioles are puberulent. Capsule formed of two valves, unequal in size.

Flowers mid-May to mid-June.

Alluvial soils, deciduous forests even stony roadsides.

Centred about Colchester and Pictou counties, with a small population near Huntington Point, Kings Co.



Ranges from NS to ON, south to GA and MS.