Haloragaceae
water-milfoil family

One hundred species comprise this family; all are aquatics in this region. Plants are heterophyllous; the leaves are finely divided. The flowers are wind-pollinated and tiny, epigynous, 3–4-merous. Stamens are twice as numerous as the sepals. Styles feathery. Fruit a nutlet or drupe-like.

Key to genera

Submerged leaves much reduced, filiform and bractlike; flowers 4-merous.	*Myriophyllum*
Submerged leaves not filiform nor bractlike; flowers trimerous.	*Proserpinaca*

Myriophyllum L.
water-milfoils

Cosmopolitan in distribution, there are about 20 species in total. Flowers are unisexual and axillary, often arranged in emergent terminal spikes. Calyx is absent or four-merous; petals present or absent. Leaves are usually pinnately divided.

Key to species

A. Leaves absent, or if present, entire.	*Myriophyllum tenellum*
aa. Leaves pinnately cleft; leaflets filiform.	B
B. Foliage leaves alternate.	C
C. Mature fruit with distinct tubercles on the back.	*M. farwellii*
cc. Mature fruit smooth, or barely wrinkled.	*M. humile*
bb. Foliage leaves distinctly whorled.	D
D. Bracts and flowers mostly alternate.	*M. alterniflorum*
dd. Bracts and flowers whorled.	E
E. Bracts exceeding the staminate flowers, deeply cleft.	*M. verticillatum*
ee. Bracts shorter than the staminate flowers; nearly entire or serrate.	*M. sibiricum*

Myriophyllum alterniflorum DC
Water-milfoil

Photos by Sean Blaney

Plants are slender, the whorls of leaves decreasing slightly in width towards the top of the plant. Leaves are mostly filiform. Floral bracts are alternate and exceed the flowers in length.

Flowers from June to September.

Slow-moving streams and in shallow pools.

Hants and Halifax counties, northward to Cape Breton, where it is common.

Europe, including Greenland; NF to NT south to NY and MN.

Myriophyllum farwellii Morong
Myriophylle de Farwell

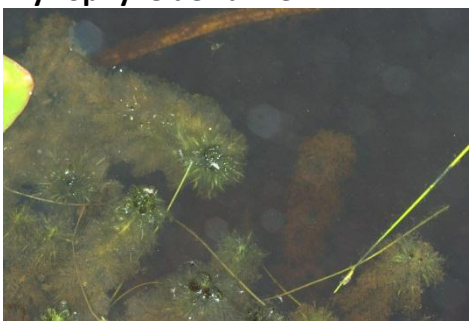
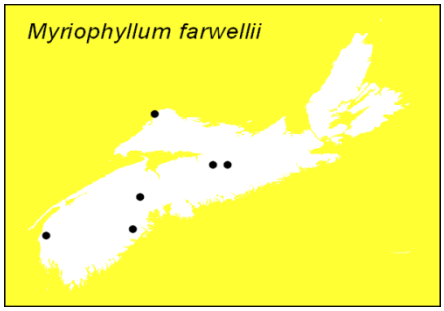


Photo by Martin Thomas

Leaflets are longer towards the base of the plant; all whorled. Some leaves also scattered the length of the stem and not in whorls. The submerged flowers are axillary, not terminal.

Flowers June to September.

Ponds and slow-flowing fresh water.



Scattered across the mainland.

NS to MB. south to MN and PA; AK; BC.

***Myriophyllum humile* (Raf.) Morong**
myriophylle menu

Photo by David Mazerolle

Leaves are scattered the length of the stem. Flowers are arranged in terminal spikes and submerged. They are subtended by leaflike bracts, which exceed their length.

Flowers from mid-June until October.

Riparian where substrate is peat, sand or mud.

Scattered from Yarmouth to Hants Co.; local to Pictou and Guysborough counties.

NS to QC, south to VA and west to MN and IL.

Photo by David Mazerolle

Myriophyllum sibiricum Komarov
myriophylle de Sibérie

Photos by Sean Blaney

A large coarser species, with whorled leaves. Unlike *M. farwellii*, the paired flowers are in terminal spikes, with their bracts less than or equalling their length.

Flowers July to September.

Grows in brackish shallows or alkaline ponds.

Northern in its range in NS. Cumberland County east to Cape Breton Co.

NF to AK, south to CA, NM and MD.

Myriophyllum tenellum Bigel.
myriophylle grêle

Its height is variable. Plants may appear when exposed as small pegs projecting from lakeshore mud. The tiny entire leaves are inconspicuous.

Flowers from July to October.

Peaty margins of lakes and stream shallows.

Photo by David Mazerolle

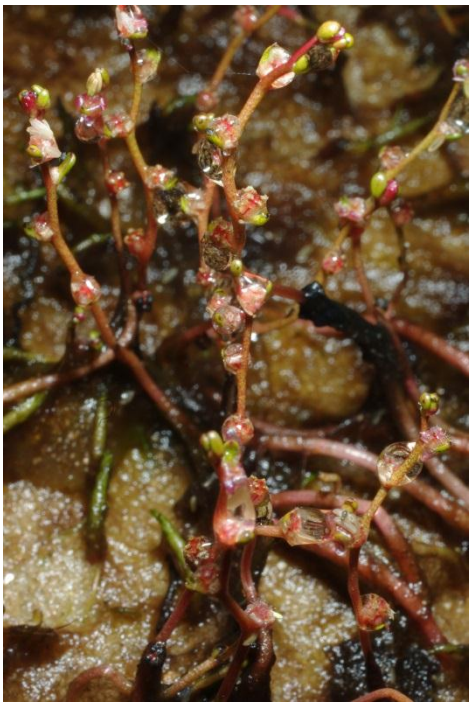


Photo by Martin Thomas

Scattered throughout.

NF to ON, south to MN and NC.

***Myriophyllum verticillatum* L.**
myriophylle verticillé

Photo by David Mazerolle

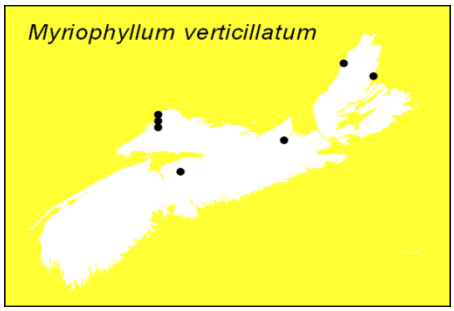
Leaves are whorled, the whorls decreasing in width towards the apex. Floral lobes are deeply cleft and twice as long as the flowers. Rachis is compressed and much wider basally.

Flowers late June until September.

Shallows, especially in fine, often calcareous sediments, as in oxbow ponds.

Cumberland and Hants counties to northern Cape Breton.

NF to BC, variously south to CA, TX and FL



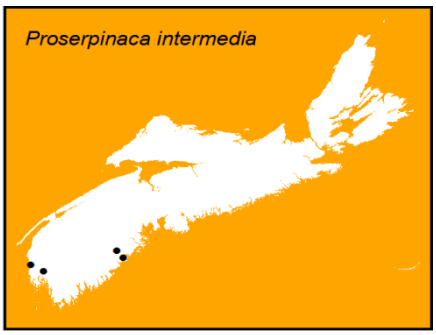
Proserpinaca L.
mermaidweeds

The genus is small, with only 2–3 species worldwide, two in Nova Scotia. Plants of marshes, they are usually emergent. The emergent leaves differ in size and shape from those submerged. Sessile flowers are purplish or green, perfect but without petals. Axillary, they are carried in clusters of 1–3. Fruit is bony, carrying three seeds and is indehiscent.

Key to species

A. Bractlike leaves serrate.	*Proserpinaca palustris*
aa. Bractlike leaves deeply cleft or pinnatifid.	B
B. Leaves deeply cleft.	*P. pectinata*
bb. Leaves shallowly cleft.	*P.x intermedia*

Proserpinaca x intermedia Mack.
proserpinie intermédiaire



Resembling *P. pectinata*, but for the more shallow leaf lobes. The solid portion of the leaves is more than 1mm wide in emergent leaves. Submerged leaves are also deeply pinnatifid in this species. The plants are held to be hybrid in origin (Voss and Reznicek, 2012).

Filling in small depressions in shallow water on lakeshores and in fens.

Known from Yarmouth to Queens Co. in scattered localities.

Coastal plain: NS; MA inland to MI, south to PA, FL and MS.

***Proserpinaca palustris* L.**
proserpinie des marais

Photo by Sean Blaney

var. creba
Photo by David Mazerolle

Photo by Sean Blaney

Submerged leaves are deeply divided into filiform pinnate segments, whilst the aerial leaves are lanceolate and serrate. The submerged flowers are axillary. Both the typical variety and var. *creba* Fern. and Grsc. The former has concave fruit 4–6mm wide while var. *creba* has convex fruit only 2.3–4mm wide.

Flowers July to September.

Lakeshore fens and streamsides.

Var. *palustris* is known only from Lunenburg and Yarmouth counties although it may be more widespread. Var. *creba* is abundant where found from southwestern NS to Cumberland Co. It tends to be less frequent on Cape Breton's Atlantic side.

Species ranges from NS to ON, south to FL and TX.

Proserpinaca pectinata
proserpinie pectinée

Photo by David Mazerolle

Photo by Sean Blaney

Mat-forming, it resembles *Myriophyllum*. Its leaves however are alternate and pinnately divided. Flowers are axillary and solitary, submerged.

Flowers from June until October.

Grows in sphagnous peatlands, lacustrine peaty sands and gravels.

Frequently seen in Yarmouth and Shelburne counties, becoming scarcer to Cumberland County.

NF, NS; ME to TX, inland along the Great Lakes' southern shores.