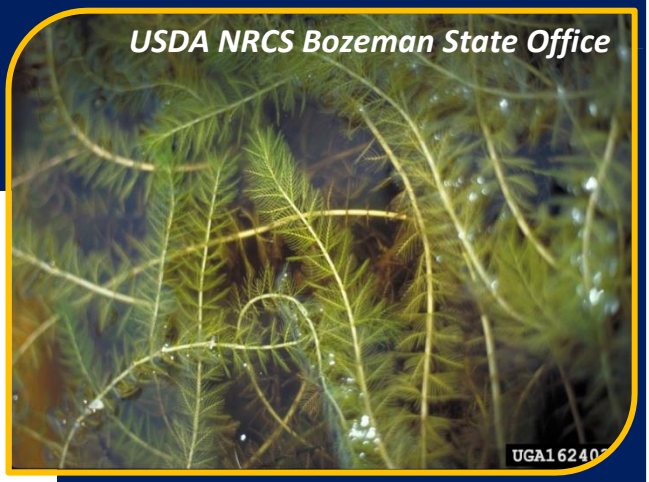
INVASIVE SPECIES ALERT!

Eurasian watermilfoil
(*Myriophyllum spicatum*)



HAVE YOU SEEN THIS PLANT?

DESCRIPTION

- Native to Eurasia and Northern Africa, common throughout North America, including southern B.C.
- Submersed, perennial aquatic plant (macrophyte).
- Roots attach to substrate with slender, fragile rhizomes.
- Smooth, hairless stems grow up to 25 m to the water surface, branch profusely and self-fragment without disturbance.
- *Leaf shape and size distinguishes from other milfoils.*
- Leaves in whorls of 3 to 5 mostly 1 cm apart on stem, simply pinnate with 12 or more segments, segments rarely to 1.5 cm long in a regular feather-like arrangement, 1 to 2.5 mm apart.
- Thrives in fresh to brackish water 1 to 4 metres deep but can survive in depths up to 12.5 metres.
- Indicator of eutrophic (nutrient-rich, warm, low oxygen) conditions, but grows under a range of environments.

PRIMARY THREAT: Spreads rapidly, impedes use of shallow waters for recreation, irrigation and alters natural ecosystems.

REPORT INVASIVE SPECIES

Download the App!

www.gov.bc.ca/invasive-species

DID YOU KNOW?

- Eurasian watermilfoil hybridizes with native Siberian water-milfoil (*Myriophyllum sibiricum*)
- Dies back to propagating root crown buds in the Fall.

John Halpop, Montana State Univ.

SPREAD

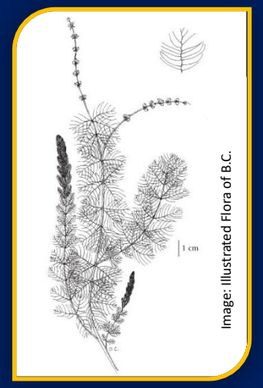
- Reproduces mainly by stem and rhizome fragmentation and root crown buds; seed spread is rare.
- Local dispersal mainly by fragmentation in water currents.
- Long range dispersal mainly by attachment to boats, propellers, trailers or fishing tackle moved between waterbodies.

For more information: https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/invasive-species/plants

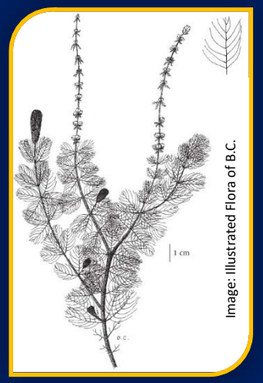
BRITISH COLUMBIA

Invasive Milfoil Identification and Look-Alikes

Eurasian watermilfoil or Hybrid milfoil
(Myriophyllum spicatum or *M. spicatum L. x M. sibiricum* Kom)



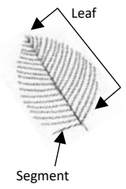
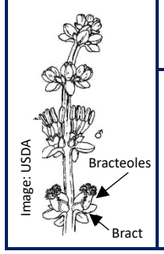
Siberian watermilfoil
M. sibiricum



Whorled watermilfoil
M. verticillatum

Varied-leaf watermilfoil
M. heterophyllum

Parrot's feather
M. aquaticum

Shared Traits	• The roots of all species in this identification key are fibrous, with slender short rhizomes; and the ability to form adventitious roots at the leaf nodes, especially on fragments. There are two types of leaves, feather-like submerged leaves and very small leaf-like bracts on the flower stem that typically emerge above the water surface. Stems are smooth with a round cross-section.				
BC Status	• Introduced	• Native	• Native	• Introduced	• Introduced
Stems	• **Reddish-brown, becoming pinkish-tawny in drying** • **Very branched**, especially at water surface, up to 3m long	• **Purplish, becoming white in drying** • Simple or forked branches, typically lower in water column, up to **1.5 m long**	• Green • Simple or with few long branches, up to 2.5 m long	• Whitish, lighter than leaves • Often branched, up to 2.5 m long	• Submerged stems brown, emerged stems green. • **Thick stems (2-5 mm diameter)** • Branched or unbranched, up to **5 m long**
Leaves 	• Whorls 3-5 (spaced ≥1 cm apart on stem) • Stalk (petiole) 0-0.4 mm long • Submerged leaves feather-like with blunt or rounded tip		• Whorls 4-5 • Stalk (petiole) up to 6 mm long	• **Alternate or in pseudo-whorls** 4-6, with additional alternate leaves scattered outside whorls • Stalk (petiole) up to 5 mm long	• Whorls 5-8 • **Stalk (petiole) up to 9.6 mm long**
	• Submerged leaves 18-32 (14-36) mm long and 10-20 (to 30) mm wide, with **inverted triangular outline**. • Young shoots lacking leaves with smooth margins	• Submerged leaves 13-32 (2.8-44) mm long and 16-35 mm wide, with **lance-shaped outline** (segment pairs at leaf base longer than those at tip).	• Submerged leaves 12-30 (7-46) mm long and 9-24 (to 40) mm wide	• Submerged leaves comb-like with egg-shaped outline, 12-29 (6-65) mm long and 14-18 (12-50) mm wide	• **Submerged leaves comb-like, lance-shaped or egg-shaped outline 25-70 (20-75) mm long and 5-26 (4-32) mm wide** • Firm, bright green colour
	• Submerged segments 24-36 (20-42) per leaf (rarely ≤15 mm long) • Longest segment 2-20 (to 26) mm • Segments arranged in opposite pairs, **angled <45° with central axis, usually parallel, on single plane, in organized arrangement.** • **Segments spaced 1-2.5 mm apart**	• Submerged segments 6-18 (to 26)(usually ≤11) per leaf (>15 mm long) • **Bottom segments often as long as leaf axis.** • Segments arranged in opposite pairs, **angled 45-90° with central axis, angles vary appearing untidy on leaf, not parallel, or on same plane.** • **Segments spaced 2-4 mm apart**	• Submerged segments 12-22 (9-34) per leaf, arranged in **opposite or alternate pairs** • Longest segment 6-19 (2-29) mm • **Bottom segment usually ≥2/3 central axis of leaf**	• Submerged segments 12-20 (10-28) per leaf • Longest segment 9-25 (7-29) mm	• Submerged segments 16-36 (14-40) per leaf • Longest segment 4-27 (2-33) mm
Winter buds (turions)	• Absent	• **Present,** well-developed in fall • **Dark green, cylindrical**, feather-like but, thickened and stiff compared to normal leaves • **Leaf tips press flat against axis**, 12-40 (to 45) mm long and **5-12 (3-15) mm wide**	• **Present,** well-developed in fall • **Brown to red-brown, club-shaped (broadest at the top)** • **All leaves press flat against axis**, 1-4 cm long and **4-6 mm wide**	• Absent	• Absent
		• New stems from turions have visible blackish, thick compact leaves at the base of new shoots in the following growing season.			
Inflorescence 	• Lower emergent leaves feather-like or deeply toothed, abruptly changing to floral bracts (flowers in axils) with smooth or shallowly toothed margins, forming inverted triangular shape with a pointed or rounded tip. • Emergent, erect spikes, **up to 15 cm long** • Bracts 1-2.3 (3.9) mm long and 0.6-1 (to 1.5) mm wide		• Emergent leaves/floral bracts **2-5 (to 15) mm long and 0.9-2.6 mm wide**, comb-like • Emergent, erect spikes up to 25 cm long • **Whorls of 4-6 flowers** • **Bracteolates minute, 7-lobed (0.5 mm long and 0.1-0.6 mm wide)** • Monoecious	• Emergent leaves/floral bracts 3-14 (to 31) mm long and 1-5 (to 7) mm wide, margins serrated to lobed • Emergent, erect spikes **up to 60 cm long** • Bracteolates at the base of flowers 1-1.3 mm long • Monoecious	• Emergent leaves/floral **bracts 25-35 mm long with uniform linear divisions (4-8 mm long), bracts similar in size and division to submersed leaves** • Emergent, erect spikes up to 20 cm long • Bractioles 0.5-1 (0.3-1.5) mm long and 0.1-0.3 (to 0.5) mm wide • **Dioecious** with only female plants found in North America
	• Whorls of 4 • All but the lowest bracts shorter than the flowers and fruits, **lowest bracts longer than flowers and comb-like to sharply toothed** • Bracteoles 0.5-0.9 mm long and 0.4-0.7 mm wide, usually oval, sometimes diamond shaped. • Monoecious	• Whorls 4 bright pink-red flowers • **Bract leaves shorter than flowers and fruits** • Bracteoles (0.4 to) 0.6-1.3 mm long and 0.4-0.7 mm wide, usually oval, sometimes egg-shaped or triangular. • Monoecious			

November 2024