

Field Guide to

AQUATIC INVASIVE SPECIES

for British Columbia



Clockwise from top left: European green crab (*Carcinus maenas*); Yellow floating heart (*Nymphoides peltata*); Dense-flowered cordgrass (*Spartina densiflora*); Goldfish (*Carassius auratus*)

The species of plants, fish and invertebrates described in the identification guide are some of the priority aquatic invasives for BC.

This identification guide provides information on aquatic invasive species that are:

- Listed as priority species by the B.C. Inter-Ministry Invasive Species Working Group
- **Prohibited aquatic invasive species that are listed under B.C. *Wildlife Act*, Controlled Alien Species Regulations.**  Indicated by the icon, this subset of species described in the guide are **PROHIBITED** from **POSSESSION, BREEDING, RELEASE, SALE, or TRANSPORT** in BC. Please report any known or suspected violations to the **B.C. Conservation Officer Service: 1-877-952-7277 (RAPP)**
- *Listed as species subject to prohibition and controls in the Aquatic Invasive Species Regulations of the Fisheries Act or noted as species of concern by the Fisheries and Oceans Canada Aquatic Invasive Species National Core Program*

There are other aquatic invasive species in BC not described here. Please refer to the references provided at the end of this guide to learn about which these are and how to identify them.

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B.C. Inter-Ministry Invasive Species Working Group

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Yellow floating heart: B.C. Government

European green crab: Patty Menning,
Fisheries and Oceans Canada

Dense-flowered cordgrass: B.C. Government

Goldfish: ISCBC

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Introduction: Why are Invasive Species a Concern?

Impacts of Aquatic Invasive Species

ENVIRONMENTAL

Displace native species; reduce desirable aquatic habitat; alter wetland and shoreline structure; decrease native populations; carry and transmit disease, impact sedimentation (i.e., water clarity); restrict water flow.

ECONOMIC

Impact commercial and recreational fisheries and aquaculture; increase watercraft and industry infrastructure repair and maintenance costs (e.g., fouled pipes, clogged dams, and structures); extremely costly and challenging to control/eradicate.

SOCIAL

Degrade water quality; reduce recreational activities (e.g., impede swimmers and boat traffic), may cause harmful algae blooms leading to health risks.

What You Can Do

PREVENTION AND EARLY DETECTION ARE KEY!



Prevent the Spread of Aquatic Invasive Species

**CLEAN
DRAIN
DRY**

CLEAN and inspect plants, animals, and mud from watercraft, trailer, and gear (fishing gear, waders, boots, etc.).

DRAIN all water from your watercraft, trailer, and gear (e.g., buckets, well, bilge, ballast etc.).

DRY all parts of your watercraft, trailer, and gear completely between trips.

1. Never release plants and animals into the wild or waterways.
2. Keep pets, livestock, and game animals properly enclosed.
3. Find safe and humane alternatives to releasing plants and animals into the wild.
4. Learn to identify common invasive species and report them.



AQUARIUMS/PONDS

Check that species are not invasive before acquiring or sharing them. Drain aquarium water on dry land away from drains and waterways. Do not buy fish, plants, or live rock from overseas on the internet. Design fish tanks and ornamental ponds so that they cannot overflow into drains or waterways.

DISPOSAL

Never dump or flush healthy unwanted aquarium fish; instead, consider giving them to a local fish/pet shop, other fish owners, fish clubs, or schools, nursing homes, or offices (If they do not have an aquarium consider donating yours). If you have a diseased aquarium, fish cannot be given away and must not be dumped or flushed into waterways. The sick fish should be euthanized and disposed of in a sanitary landfill.

SPORTFISHING, ANGLING AND HARVESTING

Do not possess, breed, ship, or release any of the sport fish species. The use of live or dead finfish for bait is strictly prohibited.



FRESHWATER PLANT SPECIES

Water lettuce; B.C. Government



L.J. Mehrhoff, Bugwood.org



B.C. Government

Brazilian elodea (*Egeria densa*)

KEY ID FEATURES

- Trailing, irregularly branched, solitary stems that form dense fibrous mats.
- Whorls of 4–6 finely serrated, bright green leaves, spaced by short internodes gives a ‘leafy’ appearance.

OTHER

- Submerged, freshwater perennial herb growing rooted or free-floating up to 6.5 m deep.
- Flowers with three white petals rise above the water surface.
- Reproduces vegetatively by stem fragments in North America.
- Grows in lakes, rivers and shallow, mild, or warm, slow-moving freshwater bodies, with low light.
- Brazilian elodea is a widely available aquarium plant commonly sold under the alias *Anacharis* spp.

DISTRIBUTION

- Very limited in open waterbodies in south coastal BC. Report all occurrences.



R Vidéki, Bugwood.org



L J Mehroff, Bugwood.org

Cabomba/Fanwort (*Cabomba caroliniana*)

KEY ID FEATURES

- Has both submersed and floating leaves.
- Submersed leaves are oppositely arranged, finely dissected, and appear feathery, while floating leaves are small and diamond shaped blades.

OTHER

- Submerged, freshwater rhizomatous perennial herb that grows rooted, but can survive free-floating.
- Flowers are white to purplish or yellow and are from 6–15 mm in diameter.
- Produces fragile rhizomes that are green to olive green and sometime reddish brown.
- Reproduces vegetatively by stem fragments or rhizomes.
- Found in slow moving streams and rivers as well as in shallow lakes, reservoirs, and ponds.
- Popular species in the aquarium trade.

DISTRIBUTION

- Not present in BC. Report all occurrences.



B Legler



ISCBC

Flowering rush (*Butomus umbellatus*)

KEY ID FEATURES

- Leaves are linear, up to 1 m long, and triangular and fleshy in cross-section.
- Flowers are pink to white in colour in umbrella-like clusters and only produced when situated in shallow water or dryer sites.

OTHER

- Perennial, freshwater submerged and semi aquatic emergent herb growing up to 1.5 m tall; stems are green, round and resemble native reeds.
- Reproduces mainly by rhizomes and bulblets which grow at the root crown and base of flower umbel (>5 mm diameter). Also reproduces by seed.
- Found growing as an emergent plant along shorelines and as a submersed plant in lakes and rivers.
- Local dispersal mainly by water, human recreation and improper garden waste disposal. Nursery sales are the main pathway for long distance spread.

DISTRIBUTION

- Very limited presence in southern and central BC. Report all occurrences.



Indo-aquascape



S Winterton, Bugwood.org

Hydrilla (*Hydrilla verticillata*)

KEY ID FEATURES

- Whorls of five translucent, lance-shaped leaves, with toothed margins.
- Root structure consists of rhizomes tipped with small white tubers and horizontal stolons.

OTHER

- Perennial, freshwater submerged herb which grows rooted, but occasionally detached and floating.
- Erect branching stems that are 0.8–1 mm thick.
- Solitary white flowers are funnel-shaped (2–4 mm long) which reach the water surface via threadlike stalks (<10 cm long).
- Reproduces vegetatively by root fragments, tubers and turions.
- Prefers slow-moving freshwater bodies and brackish estuaries.
- From the aquarium and ornamental water gardening trades.

DISTRIBUTION

- Not present in BC. Report all occurrences.



S Winterton, Bugwood.org



B.C. Government

Water hyacinth (*Eichhornia crassipes*)

KEY ID FEATURES

- Flowers are spikes composed of 4–15 individual flowers. Flowers have six petals that are purple to pink with the upper petal having a distinct yellow spot.
- Bright green leaves are thick, glossy, and slightly kidney shaped; and attached to an inflated spongy leafstalk.

OTHER

- Perennial, freshwater emergent free-floating herb.
- Roots are dark purple to black and hang underwater beneath the rosette.
- Reproduces by stolons that extend to form daughter plants.
- Prefers shallow ponds, wetlands and marshes or slow flowing waterways, lakes, and rivers.
- Widely distributed in the nursery trade.

DISTRIBUTION

- Not present in open waterbodies in BC. Report all occurrences.



B.C. Government



L J Mehrhoff, Bugwood.org

Water lettuce (*Pistia stratiotes*)

KEY ID FEATURES

- Stoloniferous with no stems, but instead a rosette of sessile leaves.
- Leaves are pale, green, soft, succulent, with wavy margins, parallel running veins, white woolly hairs and measure up to 20 cm long and 10 cm wide.

OTHER

- Perennial, freshwater emergent free-floating herb with feathery roots hanging below.
- White solitary flowers form from the centre of the rosette.
- Reproduces vegetatively from offshoots on short stolons and by seed.
- Inhabits all types of freshwater habitats with stagnant water.
- Widely distributed in the nursery trade.

DISTRIBUTION

- Not present in open waterbodies in BC. Report all occurrences.



R Andress, Dept of Conservation



R Andress, Dept of Conservation

Yellow floating heart (*Nymphoides peltata*)

KEY ID FEATURES

- Floating leaves have slightly wavy margins and purplish undersides. Heart-shaped measuring 3–10 cm across and alternately arranged on stems or oppositely arranged on the flower stalks.
- Two to five bright yellow flowers (3–4 cm in diameter) arise from erect flower stalks. Each petal has a distinctive fringe along the edges.

OTHER

- Perennial, freshwater submerged herb growing rooted.
- Stems are rope-like stolons that grow partly underground or along the sediment surface.
- Reproduces vegetatively by stem fragments and by seed.
- Prefers slow moving rivers, ponds, and lakes, depths of 0–4 m.
- Distributed in nursery trade.

DISTRIBUTION

- Limited presence in southern and northern BC. Report all occurrences.

PLANT GROUP:

Milfoils (*Myriophyllum* spp.)

KEY GROUP ID FEATURES

- Perennial, freshwater submerged herbs.
- Submerged leaves are small pinnate and feather-like.
- Forms dense intertwined mats.

OTHER GROUP INFO

- Invasive species mainly include Variable-leaf-milfoil (*Myriophyllum heterophyllum*), Eurasian watermilfoil (*M. spicatum*), and Parrot's feather (*M. aquaticum*).
- Popular in the aquarium and ornamental water gardening trades.



Eurasian watermilfoil; C Evans, Bugwood.org



Twoleaf watermilfoil;
L J Mehrhoff, Bugwood.org



Parrot's feather;
N Lowenstein, Bugwood.org



G Lovell, Bugwood.org



L J Mehrhoff, Bugwood.org

Variable-leaf-milfoil (*Myriophyllum heterophyllum*)

KEY ID FEATURES

- Flowering spikes growing to 100 cm long with reddish flowers in whorls of four.
- Submerged leaves are whorled and finely dissected, emergent leaves within the inflorescence.

OTHER

- Grows from a rhizome.
- Stems are thick, robust, simple, or branching, usually red-tinged.
- Emerged leaves are lanceolate to elliptic or oblanceolate, rigid, $\frac{1}{8}$ to $\frac{1}{2}$ of an inch long, mostly serrate, with lower leaves more deeply toothed.
- Reproduces vegetatively through fragmentation.
- Found in still or slow moving water of lakes, ponds, rivers and swamps.

DISTRIBUTION

- Limited to south coastal BC. Report all occurrences.



R Wersel,
University of Mississippi



L J Mehrhoff, Bugwood.org

Parrot's feather (*Myriophyllum aquaticum*)

KEY ID FEATURES

- Emergent stem and leaves resemble small fir trees.
- Submerged leaves in whorls of 5–6.
- Can be distinguished from Eurasian watermilfoil (*M. spicatum*) by the small pinkish-white flowers from the leaf axils of emergent stems, approximately 1.6 mm.

OTHER

- Grows from a stout rhizome.
- Submerged stems brownish, to 2 m long, rooting freely from lower nodes, green emergent stems grow over 1.5 m long.
- Reproduces vegetatively through fragmentation.
- Found in freshwater lakes, ponds, streams, and canals with low flow and high nutrient levels.

DISTRIBUTION

- Well established in south coastal BC. Report occurrences in other regions.



R Old, XID Services



L J Mehrhoff, Bugwood.org

Eurasian watermilfoil (*Myriophyllum spicatum*)

KEY ID FEATURES

- Leaves distinguish the species from other milfoils. Submerged leaves in whorls of 3–5 mostly 1 cm apart on stem, simply pinnate with 12 or more segments, segments rarely to 1.5 cm long, 1–2.5 mm apart.
- Stems are smooth and hairless growing up to 25 m to the water surface, branch profusely.
- Reddish-brown flowering spikes growing to about 15 cm long, white small yellow flowers usually in whorls of four.

OTHER

- Grows attached to substrate with long, slender, fragile rhizomes growing to 250 cm.
- Reproduces vegetatively through stem fragments, rhizomes, and root crown buds, rarely by seed.
- Found in still or slow moving fresh to brackish waters.

DISTRIBUTION

- Well established throughout southern BC. Report occurrences in other regions.

PLANT GROUP:

Water lilies (*Nymphaea* spp.)

KEY GROUP ID FEATURES

- Perennial, emergent floating herbs growing from rhizomes with adventitious roots.
- Long slender stems.
- Large, glossy, dark green, and round floating leaves with a strong cleft at the base.

OTHER GROUP INFO

- Symmetrical flowers that close at night.
- Reproduces vegetatively through rhizomes and by seed
- Often found on the surface of slow-moving waters or edges of ponds, lakes, and streams.
- Popular in the ornamental water gardening trade.



Fragrant waterlily;
B.C. Government



C Evans, Bugwood.org



G Lovell, Bugwood.org

Fragrant waterlily (*Nymphaea odorata*)

KEY ID FEATURES

- Nearly circular, heart-shaped leaves, notched to the centre with pointed leaf lobes range from 10–40 cm in diameter.
- Leaves reddish to purple underside.
- Large very fragrant flower (6–19 cm diameter) with 17–43 white or sometimes pink petals and yellow centre.

DISTRIBUTION

- Present throughout southern BC. Report occurrences in other regions.



P Hass



Dreamstime

European waterlily (*Nymphaea alba*)

KEY ID FEATURES

- Leaves up to 25 cm in diameter often with a red tinge.
- Large white flower (10–20 cm in diameter) with 12–28 petals and a yellow interior.

DISTRIBUTION

- Presence limited in south coastal BC. Report occurrences in other regions.



R Vidéki, Bugwood.org



R Wells, Bugwood.org

Major oxygen weed (*Lagarosiphon major*)

KEY ID FEATURES

- Dark green downward curling alternating leaves (5–20 mm long, 2–3 mm wide).
- Stems are brittle, “J” shaped at the base and can grow up to 6 m long in dense thick mats along the waterbody bed.

OTHER

- Perennial, submerged, freshwater herb growing from rhizomes with adventitious roots.
- Very small flowers with three transparently white/pink petals are attached to a filament-like stalk above the water's surface.
- Primarily reproduces by stem fragments.
- Prefers lakes, reservoirs, and slow-moving rivers with silty or sandy bottoms.

DISTRIBUTION

- Not present in BC. Report all occurrences.



A Cofrancesco, Bugwood.org



L J Mehrhoff, Bugwood.org

Water chestnut (*Trapa natans*)

KEY ID FEATURES

- Floating leaves are arranged in a rosette, leathery and up to 5 cm wide. Submersed leaves are alternate, finely divided and up to 15 cm long.
- Small, 4-petaled white flowers.
- Fruit is a single-seeded horned nut-like structure that develops underwater and is approximately 3 cm wide.

OTHER

- Annual, emergent freshwater herb growing from slim roots.
- Reproduces primarily by seed, but also from the detachment of rosettes from the stem.
- Prefers slow-moving lakes, ponds, and canals.
- From the ornamental water gardening trades and aquaculture.

DISTRIBUTION

- Not present in BC. Report all occurrences.



J Hempel



J Hempel

Water soldier (*Stratiotes aloides*)

KEY ID FEATURES

- Leaves are thick, rigid, brittle, dark green, serrated, lanceolate, measuring 40–60 cm long and 1–4 cm wide and found in a tuft-like rosette.
- Stems grow from 10–18 mm long, produces stolons and forms dense mats.

OTHER

- Perennial, aquatic submerged and semi aquatic emergent herb that grows loosely rooted.
- Flowers are small, white to pinkish and 3-petaled.
- Reproduces vegetatively through stolons and turions
- Commonly found in wet ditches and ponds up to 5 m deep.

DISTRIBUTION

- Not present in BC. Report all occurrences.



L J Mehroff, Bugwood.org



C Fischer

Common frogbit (*Hydrocharis morsus-ranae*)

KEY ID FEATURES

- Leathery heart shaped floating leaves are up to 6 cm long, 6 cm wide.
- Small white flower with three petals and yellow centre.
- Produces turions at the nodes of stolons.
- Can grow in dense floating mats.

OTHER

- Annual, freshwater submerged herb growing free floating or rooted in shallow water.
- Can grow to be 1.5 m across, with individual rosettes measuring 1–30 cm.
- Reproduces vegetatively through stolons and turions
- Commonly found in ponds, wetlands, and slow-flowing rivers.
- Distributed in the nursery trade.

DISTRIBUTION

- Not present in BC. Report all occurrences.



R Routledge, Bugwood.org



C Evans, Bugwood.org

Curly leaf pondweed (*Potamogeton crispus*)

KEY ID FEATURES

- The wavy, dark green, serrated leaves are a distinguishing feature of this species. Leaves are fully submersed, alternate, and oblong with parallel sides (1–10 cm long, 0.4–1 cm wide).
- Branching stems up to 150 cm long and forms mats.

OTHER

- Perennial, aquatic submerged herb with fibrous roots.
- Inconspicuous flowers are spike-like measuring 2.5–4 cm long, with 3–5 whorls of flowers.
- Reproduces vegetatively through rhizomes and turions.
- Found in slow-moving rivers and streams, lakes, ponds, and backwater channels.
- Popular in the aquarium trade and aquaculture.

DISTRIBUTION

- Well established throughout southern BC. Report all occurrences in other regions.



L J Mehroff, Bugwood.org



S Winterton, Bugwood.org

Giant salvinia (*Salvinia molesta*)

KEY ID FEATURES

- Forms thick mats of connected fronds.
- Leaves in whorls of three fronds, two upper and one lower.
- Floating fronds are 2.5–4 cm in length which may be green to gold to brown.
- Non-flowering.

OTHER

- Perennial, aquatic floating fern with a rootless rhizome.
- Stems irregularly branched and pubescent.
- Reproduces vegetatively through rhizomes.
- Prefers stagnant or slow-moving water of freshwater lakes, rivers, swamps, streams, and ditches.
- From the aquarium and ornamental water gardening trades.

DISTRIBUTION

- Not present in BC. Report all occurrences.



FRESHWATER FISH AND INVERTEBRATE SPECIES

Zebra & Quagga mussels; J Leekie

FISH GROUP:

Bullhead and Channel catfish

CAS

(Family Ictaluridae)

KEY GROUP ID FEATURES

- Four pairs of barbels on a large, flattened head; no scales; adipose fin present; only freshwater fish in BC with a strong (sometimes serrated) spine along the leading edge of the pectoral fin.
- Dorsal fin has a strong spine at its leading edge, and the combined trio of spines can be locked into place when a fish is in danger.
- Tail fin is unforked.

	Black Bullhead	Yellow Bullhead	Brown Bullhead
Barbels (whisker-like projection)	Dark brown-black	Cream to white	Dark brown-black
Dorsal side of body	Black-brown	Yellow-olive to slate black	Yellow-brown
Sides	Blotched	Light yellow-olive	Evenly coloured
Ventral side of body	Light brown	Bright yellow-white	Dirty white

OTHER GROUP INFO

- These fish are found in the live food trade.
- Family Ictaluridae has 46 species of North American catfish; all are banned in BC.
- Three species have been introduced and are established in southern BC: the Yellow (*Ameiurus natalis*), the Brown (*A. nebulosus*), and the Black (*A. melas*) bullhead.
- Have an adipose fin, and four pairs of barbels on the snout (one pair behind the nostrils, one long pair attached to the upper lip, and two shorter pairs found under the chin).
- Bullhead males guard their young. Inky black looking schools of young bullheads are found near the surface of ponds, streams and lakes in calm water and break up later in summer.
- Can grow to 50 cm but larger Ictalurids grow to 1.5 m.
- Bullheads prefer vegetated freshwaters of slow-moving rivers, ponds, and lakes.

Black bullhead (*Ameiurus melas*)

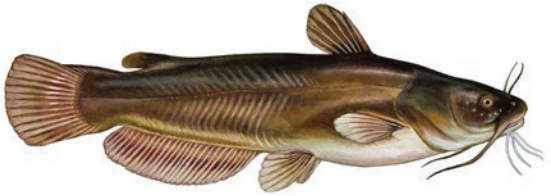


D Raver, USFWS

DISTRIBUTION

- Reported in several lakes in the Lower Mainland and Okanagan regions. Report all occurrences.

Yellow bullhead (*Ameiurus natalis*)



D Raver, USFWS

DISTRIBUTION

- Several populations have been identified in the Lower Mainland. Report all occurrences.

Brown bullhead (*Ameiurus nebulosus*)



D Raver, USFWS

DISTRIBUTION

- Introduced into several regions in BC, including the Lower Mainland, Vancouver Island, and the Okanagan. Report all occurrences.

Channel catfish (*Ictalurus punctatus*)



D Raver, USFWS

KEY ID FEATURES

- Bluish-green-olive, silver-grey, or slate coloured, with dark spots on back and sides.
- Grows up to 125 cm in length.
- Forked tail fin.
- The upper jaw is longer than the lower jaw.

OTHER

- May carry viral hemorrhagic septicemia, a disease that may cause death in many finfish species.
- Occasionally appear in BC in the pet trade under false names, such as “Blue channel catfish”
(DO NOT PURCHASE).
- Found in deep water areas of freshwater lakes.

DISTRIBUTION

- Not present in BC. Report all occurrences.

FISH GROUP:

Subfamily Cyprininae

KEY GROUP ID FEATURES

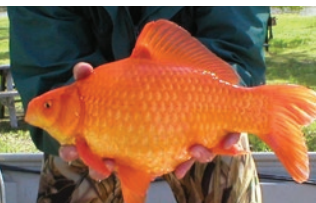
- Fishes with deep-elongated bodies and large scales.
- The first dorsal and anal fin spines are serrated.

OTHER GROUP INFO

- Part of the family of freshwater fish commonly called the carp or minnow family.
- Have been introduced widely as part of the live food and aquarium trade.
- Goldfish (*Carassius auratus*), Prussian carp (*Carassius gibelio*) and Common carp (*Cyprinus carpio*) are commonly misidentified due to their resemblance.



Goldfish; ISCBC



USGS, Bugwood.org



USGS, Bugwood.org

Goldfish (*Carassius auratus*)

KEY ID FEATURES

- No barbels around the mouth.
- Large eyes with large scales on body, but lack scales on head.
- Distinguished from other Cyprinid fishes by a long dorsal fin which is longer than the head.

OTHER

- Typically grow 15–20 cm in length and weigh 100–300 g as mature adults.
- Can range in colour from gold to olive-green to white.
- Inhabits vegetated areas of streams and pools, ditches, and ponds.

DISTRIBUTION

- Established populations in the Lower Mainland, southern Interior, and southern Vancouver Island. Report all occurrences.



G Chernilevsky,
Wikimedia Commons

Prussian carp (*Carassius gibelio*)

KEY ID FEATURES

- No barbels.
- The anal fins are spiny and appear similar to those of Goldfish, however the caudal fin is notched, and the dorsal fin is convex.
- Usually silvery-brown in colour.

OTHER

- Typically grow 20–30 cm and weigh approximately 2–3 kg.
- May grow up to 50 cm in length.
- Not a typical aquaculture or aquarium species in Canada but could potentially be introduced alongside the two closely related *C. carpio* and *C. auratus*.

DISTRIBUTION

- Not present in BC. Report all occurrences.



D Raver, Bugwood.org

Common carp (*Cyprinus carpio*)

KEY ID FEATURES

- Two barbels on each side of their mouths.
- Long dorsal fin with a serrated leading-edge spine.

OTHER

- Small eyes with thick lips on forward-protruding mouths.
- On average grow from 30–75 cm in length and weigh 2–14 kg. May reach 1.2 m and up to 40 kg.
- Colour varies from silver to olive-green, brass, or grey on the back and sides.
- Its underside is yellowish, and the lower fins are orange red.
- Prefers warm, shallow, vegetated lakes and rivers.

DISTRIBUTION

- Introduced to some parts of BC. Report all occurrences.

FISH GROUP:

Asian carps **CAS**

KEY GROUP ID FEATURES

	Bighead Carp	Silver Carp	Grass Carp	Black Carp
Eye Position	Below centre line of body		On centre line of body	
Colour				
Top	Grey	Grey-black	Dark grey	Black-brown
Sides	Grey	Olive-silver	White-yellow	Black-brown
Belly	Cream	Silver	White	White
Markings	Black blotches on back and sides	None	Scales appear Crosshatched	
Scales	None on head			
	Small, curved body scales	Small, shiny, curved body scales	Large body scales with dark edges	
Length	Up to 1.5 m	Up to 1.4 m	Up to 1.4 m	Up to 1.8 m
Teeth	None	None	None	Molar-like teeth in throat

OTHER GROUP INFO

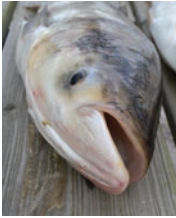
- Asian carp are part of the live food and aquarium trade.
- Grass carp have been used to control plant growth in ponds and irrigation ditches.
- Asian carp prefer freshwater ponds, lakes, and rivers and to spawn in areas of consistent water flow to aid in egg development.
- No Asian carp species have been reported in BC. Report all occurrences.

Bighead carp (*Hypophthalmichthys nobilis*)



R Hagerty, USFWS

Silver carp (*Hypophthalmichthys molitrix*)



R Hagerty, USFWS

Grass carp (*Ctenopharyngodon idella*)



R Hagerty, USFWS

Black carp (*Mylopharyngodon piceus*)



R Hagerty, USFWS



Rhodeus amarus bitterling; Viridiflavus CC

Bitterlings (*Rhodeus* spp.)

CAS

KEY GROUP ID FEATURES

- Pink-purple-blue base colouration; orange-red spot in tail fins of adults; some red pigment in dorsal and anal fins.
- Distinct silvery-grey-blue stripe from the base of the tail to about halfway along the body. Dark tear-drop band behind the gills; fewer than 12 scales with lateral line pores along the body.

OTHER GROUP INFO

- Over 40 species in the genus *Rhodeus*, with Bitterling and Rosy bitterling as the most common in the pet trade. All species of the genus are banned in BC.

(DO NOT PURCHASE)

- Deep bodies appear flattened from side to side. Dorsal fin begins behind the origin of the pelvic fins.
- Rounded snout, with a terminal to slightly subterminal mouth.
- Can grow to about 11 cm.
- Found in ponds, lakes, marshes, muddy and sandy pools, and backwaters of rivers. Reproduction is dependent on the presence of mussels; therefore, are found in habitats with freshwater mussels.

DISTRIBUTION

- Not present in BC. Report all occurrences.

FISH GROUP:

Snakeheads

CAS

(*Channa* spp.)

KEY GROUP ID FEATURES

- With over 30 species in the family Channidae, three commonly sold Snakeheads are Northern (*Channa argus*), Blotched (*C. maculata*) and Rainbow (*C. bleheri*).
- Long body is nearly round in cross-section with large thick tile-like scales on the head.
- Have dark blotches across body, more closely together near the tail.
- Pelvic fins are positioned along the underside about half-way between the gills and anus. Both dorsal and anal fins are elongate, with no notches or separation between a spiny and soft portion.
- The lower jaw extends past the upper jaw, and the mouth contains sharp canine-like teeth.

OTHER GROUP INFO

- Snakeheads are found in the aquarium and live food trades in BC and pose a significant risk to BC's rivers and lakes **(DO NOT PURCHASE)**.
- The head looks flattened, and the eyes appear to angle up and to the side. The tail fin is rounded.
- Can grow up to 1 m and reach 20 kg.
- Can be found in a variety of habitats such as lakes, ponds, streams, and ditches, in shallow water with vegetation.

DISTRIBUTION

- Not present in BC. Report all occurrences.

Northern snakehead (*Channa argus*)



USGS, Bugwood.org



USGS, Bugwood.org

Blotched snakehead (*C. maculata*)



C Yang, CAFS

Rainbow snakehead (*C. bleheri*)



M Hartig



C and C Robertson



R McDowell, Bugwood.org

Western mosquitofish

CAS

(*Gambusia affinis*)

KEY ID FEATURES

- Large eyes, which take up most of their face with a dusky/black teardrop below.
- 1–3 rows of black spots on dorsal and caudal fins.
- The mouth is horizontal and in dorsal view, appears straight across the snout.
- Males have a modified anal fin (gonopodium) for reproduction.

OTHER

- Grow to be 1–5 cm long.
- Silver with a greenish-blue hue and peppered with gray and black markings.
- Found in fresh and brackish water ponds, lakes, pools, and slow-flowing rivers with vegetation.
- Introduced worldwide to try to reduce mosquito populations.
- Also called Top minnow, Plague minnow, but are not minnows; part of the Guppy family *Poecilia*.

DISTRIBUTION

- Not present in BC. Report all occurrences.

White cloud mountain minnow

(*Tanichthys albonubes*)

CAS

KEY ID FEATURES

- Large red spot on the base of tail fin.
- White tips to fins, pink mid-lateral band and black pinstripe which ends as a black spot at the tail base.

OTHER

- Grows to a maximum of 3–4 cm.
- Have an iridescent golden-green back.
- Their ventral fins tend to be yellow-green with white tips, while their tail has a large round red spot at its base.
- The dorsal fin can be yellow-orange to red with a white tip.
- No barbels, but its lower jaw projects slightly forward.
- Common in the aquarium trade as pets and as “feeder fish” (**DO NOT PURCHASE**). Albino and long-finned varieties are found in the pet trade but would be less successful in nature.



DISTRIBUTION

- Not present in BC. Report all occurrences.



ISCBC



ISCBC

Rosy red minnow (Fathead minnow)

(Pimephales promelas)

KEY ID FEATURES

- Rosy red minnows are a very commonly sold ornamental variety of the Fathead minnow bred for their colour. Fathead minnow in its wild form is commonly dull olive-grey.
- Rosy red minnow are 2–6 cm long with silver sides and underside.
- The back, head, and tail are orange/red/pink.

OTHER

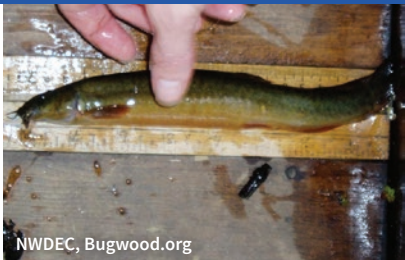
- Fins are translucent.
- Breeding males are black with two light spots.
- The lateral line is short.
- Found in lakes, streams, ponds, slow-flowing water with high turbidity.

DISTRIBUTION

- Sporadically distributed in the central and southern Interior, and South Coast region. Report all occurrences.



B Kuhajda, Bugwood.org



NWDEC, Bugwood.org

Oriental weatherloach

CAS

(*Misgurnus anguillicaudatus*)

KEY ID FEATURES

- Eel-like, cylindrical body, with several pairs of large and small barbels surrounding the mouth.
- Has a distinct retractable sharp spine below the eye.

OTHER

- Can grow up to 25 cm.
- Weatherfish are brown with greenish grey-brown marble markings on the back.
- Leading ray of the pectoral fin is thickened.
- Weatherfish are found in the aquarium trade **(DO NOT PURCHASE)**.
- Also called Dojo, Gold dojo, Weather loach, Japanese weatherfish, Amur weatherfish.
- Prefers stagnant or slow-flowing waters in rivers, lakes, swamps, and ditches with muddy bottoms.

DISTRIBUTION

- Present in the lower Fraser Valley. Report all occurrences.

FISH GROUP:

Gobies **CAS**

KEY GROUP ID FEATURES

- Pelvic fins fused to form a cone.
- Round, Monkey, Tubenose and Amur gobies present a threat from accidental introduction.

OTHER GROUP INFO

- BC has three native Gobies, the Black-eye goby (*Rhinogobiops nicholsii*), Bay goby (*Lepidogobius lepidus*), and Arrow goby (*Clevelandia ios*), but unlike the invasive freshwater goby species, they appear in marine and estuarine environments.
- Have been introduced into North America from the ballast water of oceangoing ships and the aquarium trade.
- There are eight native species of sculpins (*Cottus* sp.) found in BC's freshwater that could be mistaken for non-native Gobies. Unlike Gobies which have a fused pelvic fin, sculpins have two separate pelvic fins or no pelvic fin.

DISTRIBUTION

- No Goby species have been reported in BC. Report all occurrences.



Y Kvach, Wikimedia Commons



Y Kvach, Wikimedia Commons

Monkey goby (*Neogobius fluviatilis*)

KEY ID FEATURES

- Narrower head and bigger fins than other goby species; most commonly found in sandy substrates.

OTHER

- Can grow to 12–13 cm.
- Can persist in freshwater and brackish water environments.



E Engbretson, Bugwood.org



Center for Great Lakes and Aquatic Sciences, Bugwood.org

Round goby (*Neogobius melanostomus*)

KEY ID FEATURES

- Solid slate gray in youth; older fish are black and brown blotched with white to buff yellow fins.
- The anterior (spiny) dorsal fin has a black eyespot near the base towards the back of the fin.

OTHER

- Can grow up to 30 cm.
- Prefers freshwater ecosystems with rocky and sandy bottoms.



P van der Sluijs

Tubenose goby (*Proterorhinus semilunaris*)

KEY ID FEATURES

- Long nostril tubes over upper lip.

OTHER

- Grey-brown colouration over a lighter background colour, with at least three dark saddles extending down from the pair of dorsal fins.
- Prefer waters near the vegetated shores of lakes and rivers.



National Institute of Ecology of the Republic of Korea

Amur goby (*Rhinogobius brunneus*)

KEY ID FEATURES

- Red or dark line from front edge of the eye to snout tip.

OTHER

- Long, broad snout with large fleshy lips.
- Dorsal fin is high and terminates at a point. Median fins have white-yellow tips; the pectoral fin is translucent.
- Scale colouration alternates orange-red/blue-green.
- Little is known about the preferred habitat.



Tui chub (*Siphateles bicolor*)

KEY ID FEATURES

- Have an olive to dark green back, with brown sides, often mottled with light underside.
- The lateral line has 41–64 scales.
- There are differing reports on number of dorsal and anal fin rays. Both dorsal and anal fin rays usually number 8 but may range from 7–9. Fins are olive and may be sometimes tinted with pink/red.
- Has pharyngeal teeth.

OTHER

- Grow to a maximum of 45 cm long.
- Have been intentionally introduced and used as live bait in parts of North America.
- Found in reservoirs, lakes, rivers and streams with mud and sand bottoms.

DISTRIBUTION

- Not present in BC. Report all occurrences.



M Guerin, Bugwood.org



USGS, Bugwood.org

Tench (*Tinca tinca*)

CAS

KEY ID FEATURES

- Iris of the eye is dark orangy red.
- Body is robust, deep, and covered with small, embedded scales.
- Mouth is small with a single thin barbel (whisker) at each two corners of the mouth.
- Fins are dark with rounded margins.

OTHER

- Typically, dark yellow-brown-green to almost black in colour, blending to yellow-gold along the sides and underside. The underside lacks any keels.
- Usually 20–25 cm, but can grow to 70 cm and weigh up to 7.5 kg.
- Tail has no fork or is only slightly indented.
- Part of the live food and aquaculture trade. Captive bred Golden variety is used as an ornamental pond fish and may resemble Goldfish. Can be light gold to red with black or red spots on the sides and fins.
- Likes slow-moving freshwater habitats with vegetation.

DISTRIBUTION

- Present in south central BC. Report all occurrences.

FISH GROUP: **Esox spp.**

KEY GROUP ID FEATURES

- Have elongated, torpedo-like form of predatory fishes.
- Sharply pointed heads, with duckbill-like snouts and sharp teeth.

OTHER GROUP INFO

- Usually occurs in clear, vegetated areas of lakes, marshes, creeks, and small to large rivers.
- Introduced as popular angling species.



T Knepp, USFWS

Muskellunge (*Esox masquinongy*)

KEY ID FEATURES

- Body is silver with blotches on the side of the body and the underside is white with spots.
- The fins are green or red-brown with darker spots.
- Have 6–9 sensory pores on each side of their lower jaw.

OTHER

- Grows larger than *E. lucius* to around 95 cm long.

DISTRIBUTION

- Not present in BC. Report all occurrences.



T Knepp, USFWS

Northern pike (*Esox lucius*) (Southern BC)

KEY ID FEATURES

- Body is brown to olive/brown to green with small white irregular spots on the sides and a yellowy/white underside.
- The dorsal fin starts almost in line with the anal fin.
- Have 5–6 sensory pores on each side of their lower jaw.

OTHER

- Grows to between 45–75 cm in length and weigh 0.5–4 kg.

DISTRIBUTION

- Present in northeastern BC. Report all occurrences.



J Leekie; ISCBC

INVERTEBRATE GROUP:

Invasive Mussels

KEY GROUP ID FEATURES

- Attaches to hard surfaces by threads extending from underneath shell—can be easily transported by boats and equipment. No native mussel species possess these threads and cannot attach to solid surfaces.
- Native mussels are typically found buried, partially buried or on soft substrate or between cobbles and do not form clumps.
- Native mussels are larger in size ($> 3\text{cm}$).

OTHER GROUP INFO

- Free-swimming larvae are transported in currents, but also any free-standing water in a boat, including the live well, bilge and the engine cooling system.
- Have been introduced to new locations via ship ballast water and fouling.
- The following species have not been reported in BC and all observations should be reported to the B.C. Conservation Officer Service RAPP line.



A Benson, Bugwood.org



A Benson, Bugwood.org

Quagga mussels **CAS**

(*Dreissena bugensis*)

KEY ID FEATURES

- Shell is propellor shaped with a convex ventral surface.
- Average 2 cm but may reach up to 3 cm long.

OTHER

- Dark concentric rings on shell.
- Pale colour near hinge.
- Can occupy many freshwater habitats including lakes, waterways, and ponds.

DISTRIBUTION

- Not present in BC. Report all occurrences.



A Benson, Bugwood.org



A Benson, Bugwood.org

Zebra mussels **CAS**

(*Dreissena polymorpha*)

KEY ID FEATURES

- Shell is propellor shaped with a flat underside.
- Average size of 2–2.5 cm.

OTHER

- Brown or cream coloured with varying zigzag patterns of black and brown.
- Can occupy many freshwater habitats including lakes, waterways, and ponds.

DISTRIBUTION

- Not present in BC. Report all occurrences.



Conrad's false mussel

(*Mytilopsis leucophaeata*)

KEY ID FEATURES

- Juveniles may have striped appearance like Zebra mussels, but the shell is less angular than a Zebra mussel.
- As the mussels grow, they become brownish in appearance.

OTHER

- Can grow up to 2.5 cm in length.
- Have a tooth-like projection inside at the end of the shell.
- Found in estuaries due to tolerance to brackish water and thus are also called “Brackish water mussel” or “Dark false mussel.”

DISTRIBUTION

- Not present in BC. Report all occurrences.

INVERTEBRATE GROUP:

Invasive Crayfish

KEY GROUP ID FEATURES

- This crustacean family is characterized by large tubercles on the chelae or carapace and the presence of ventral hooks on the upper segments of walking legs in adult males.
- The native Signal crayfish (*Pacifastacus leniusculus*) is often misidentified as invasive. The topside of the claw has a white to blue-green patch at the hinge, while the claw underside is bright red, and the top of the body is red-brown in colour. Grows up to 15 cm in length.

	Rusty crayfish	Virile crayfish	Red swamp crayfish
Body	Grayish-green to reddish-brown with rusty patches on the sides. The rostrum (helmet over eyes) appears pinched	Reddish-brown to olive-brown	Dark red with red bumps on the mid-body segment and head. A black wedge-shaped stripe on the top of the abdomen.
Claws	Narrow black bands near the tips	Often bluish in colour and have distinct red-orange colored tips	Long narrow claws with red bumps
Length	Up to 10 cm	Up to 13 cm	Up to 12 cm

OTHER GROUP INFO

- Crayfish live in a variety of aquatic habitats, including rivers, lakes, ponds, streams, marshes, and ditches.
- Often spread through bait bucket releases, pet releases, and incidentally with the stocking of fishes.

Rusty crayfish (*Orconectes rusticus*)



DISTRIBUTION

- Not present in BC. Report all occurrences.

Virile crayfish (*Orconectes virilis*)



DISTRIBUTION

- Not present in BC. Report all occurrences.

Red swamp crayfish (*Procambarus clarkii*)



DISTRIBUTION

- Introduced into one location in the Lower Mainland. Report all occurrences.



MARINE ALL SPECIES

European green crab; P Menning, Fisheries and Oceans Canada



European green crab (*Carcinus maenas*)

KEY ID FEATURES

- Has a pentagon-shaped carapace (shell) with five sharp spines on the outer side of each eye. No other native crabs will share feature.

OTHER

- Adults reach up to 10 cm in carapace width.
- Cannot rely on color alone. Can be multicolored and mottled, dark or olive green to brown to greyish, yellow, or orange patches.
- Usually found near shore in shallow waters less than 6 m in preferred habitats like bays, estuaries, and lagoons.

DISTRIBUTION

- Established along the southwest coast of Vancouver Island, parts of the Central Coast, and limited occurrences in Haida Gwaii and Metro Vancouver. Report all occurrences.



D Kelch, Bugwood.org



E Hanson, Bugwood.org

Chinese mitten crab (*Eriocheir sinensis*)

KEY ID FEATURES

- Two claws of the same size with white tips and dense fluffy hair that resemble “mittens.”
- Has a square-shaped carapace with a notch between the eyes and four spines on either side.

OTHER

- Adults have carapace width from 3–8 cm.
- Greenish brown in colour.
- Usually found down to a depth of 10 m, in fresh or brackish waters in estuaries, lakes, rivers and wetlands.
- Has been intentionally spread as a food source, and the accidental release via ship ballast water discharge.

DISTRIBUTION

- Not present in BC. Report all occurrences.

INVERTEBRATE GROUP:

Ascidians

KEY GROUP ID FEATURES

- Both solitary and colonial species. Some solitary species will form in very dense clumps or aggregations.
- Colonial species often form gelatinous mats that may cover almost any surface, which are made up of many microscopic individuals, called zooids. Can be mistaken for sponges, but sponges have a soft-porous texture rather than gelatinous.

OTHER GROUP INFO

- Found in sheltered intertidal and subtidal areas living attached to rocks, eelgrass, seaweeds, other animals or on man-made structures such as boat hulls, buoys, ropes, anchors, floating docks, aquaculture gear and wharf pilings.
- Can be dispersed through aquaculture activities, fouling of watercraft or infrastructure.



DFO Gulf Region

Vase tunicate (*Ciona intestinalis*)

KEY ID FEATURES

- Solitary.
- Body is cylindrical, unstalked, translucent, soft, and smooth.
- Has yellow rims on its siphons.

OTHER

- May reach 15 cm in length.
- Colour is variable from light greenish yellow to orange or pink.

DISTRIBUTION

- Not present in BC. Report all occurrences.



DFO Maritimes Region (SABS)

Club tunicate (*Styela clava*)

KEY ID FEATURES

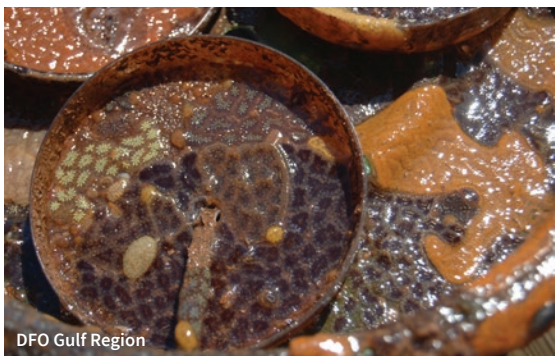
- Solitary.
- Body is firm and wrinkled with little bumps, shaped like a water-filled wineskin.
- Attached to the surfaces with a solid leathery stalk.

OTHER

- Measures up to 18 cm, the stalk accounting for one third of its length.
- Brown in colour.

DISTRIBUTION

- Reported within the Strait of Georgia, and the east coast of Vancouver Island. Report all occurrences.



Golden star tunicate (*Botryllus schlosseri*)

KEY ID FEATURES

- Colonial.
- Zooids that make up the colony arranged in a flower or star-shaped pattern.

OTHER

- Colonies often grow up to 10 cm in diameter.
- Colour is variable from orange, yellow, red, greenish grey, violet, dark grey or black.

DISTRIBUTION

- Reported in the Strait of Georgia and the west coast of Vancouver Island.



DFO Gulf Region

Violet tunicate (*Botrylloides violaceus*)

KEY ID FEATURES

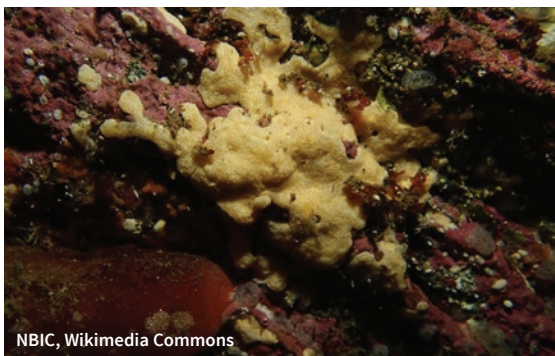
- Colonial.
- Zooids that make up the colony arranged in a network of curving tracks.
- Can be distinguished from other colonial tunicates by the random arrangement of individuals.

OTHER

- Colonies often grow up to 10 cm in diameter.
- Colour is variable ranging from purple, pink, yellow, white, or orange.

DISTRIBUTION

- Widely distributed throughout the Strait of Georgia, the west coast of Vancouver Island and Haida Gwaii.



NBIC, Wikimedia Commons

Pancake batter tunicate (*Didemnum vexillum*)

KEY ID FEATURES

- Colonies are dense and look like pancake batter.
- Often colonies will produce lobes and meandering dark lines (channels) can be visible on the colony surface between zooid groups.
- Can appear 'spotted' due to white, calcareous spicules embedded in the tunic.

OTHER

- Limited data on size however colonies have shown to be 22 cm circumference and 50–100 cm in length, with some as long as 220 cm.
- Colour is yellowish-cream.

DISTRIBUTION

- Reported in the Strait of Georgia and the west coast of Vancouver Island.

INVERTEBRATE GROUP: **Family Muricidae**

OTHER GROUP INFO

- Eggs are laid in yellow, bottle-shaped capsules.
- Typically found in oyster beds from the intertidal to shallow subtidal.
- Accidentally transported as hitchhikers with aquaculture.



R Aguilar, Smithsonian Environmental Research Center

Eastern oyster drill (*Urosalpinx cinerea*)

KEY ID FEATURES

- Has a ribbed conical shell from 2.5–3.5 cm in length.
- Usually has five rounded whorls.
- Can be distinguished from the Japanese oyster drill by its open siphonal canal, shell design features ribs instead of ornate “spokes” and overall smaller adult size.

OTHER

- The shell can be yellow, yellow with brown streaks, gray, white, or orange.

DISTRIBUTION

- Reported in Boundary Bay and Ladysmith harbour. Report all occurrences.



L Schroeder, Bugwood.org

5431487



C Eardley, Washington
Department of Fish and Wildlife

Japanese oyster drill (*Ocinebrellus inornatus*)

KEY ID FEATURES

- Has a conical shell with ornate design that can reach 2.5–6 cm in length.
- There are usually 6–7 whorls.

OTHER

- The shell can be brown, green, orange, beige, or striped.

DISTRIBUTION

- Limited reports from the east and south coasts of Vancouver Island and Boundary Bay of Metro Vancouver.

PLANT GROUP:

Cordgrasses (*Spartina* spp.)

KEY GROUP ID FEATURES

- Cordgrasses are perennial, salt tolerant grasses.
- Grow within intertidal regions such as mud flats, salt marshes, and niche areas of cobble stoned beaches.
- See the [B.C. Spartina Working Group Guide](#) for thorough descriptions.

OTHER GROUP INFO

- There are four invasive *Spartina* species of concern; *S. anglica* (English), *S. densiflora* (Dense-flowered), *S. patens* (Salt meadow) and *S. alterniflora* (Smooth). All except *S. alterniflora* are present in BC.



Salt meadow cordgrass; M Lovit



M Lovit



J DiTomaso,
Bugwood.org



M Lovit

Smooth cordgrass (*Spartina alterniflora*)

KEY ID FEATURES

- Single plant spreads into a circular clone which combine to form stands.
- Stems have an unpleasant sulfur aroma when fresh and have fleshy internodes.
- Leaves are grayish-green, flat, 10–25 mm wide, and up to 60 cm long with the tips in-rolled and tapering to a slender point and the uppermost leaves gracefully drooping, ligules measure 0.7–2 mm long.
- Flowers are borne in multiple, slender upright spikes, 5–20 cm long.

OTHER

- Growing from 0.6–3 m tall.
- Found in high to low marsh range, including mudflats.

DISTRIBUTION

- Not present in BC. Report all occurrences.



J DiTomaso, Bugwood.org



J DiTomaso, Bugwood.org

Common cordgrass (*Spartina anglica*)

KEY ID FEATURES

- Can be seen as a single plant (grown from seed) or as a circular clump or clone. Eventually clones can grow together to form a large stand.
- Deep rooted.
- Stem is reddish-brown and erect, with fleshy internodes.
- Leaf blades are flat, bright green and grow at a distinctive 45–90 degree angle to the stems, ligules are 2–3 mm long.
- Flowerheads resemble that of wheat.

OTHER

- Growing up to 1.3 m tall.
- Habitat ranges from high marsh zone to intertidal mudflats, where most native marsh species will not grow.

DISTRIBUTION

- Limited occurrences in south coastal mainland BC. Report occurrences in other regions.



J DiTomaso,
Bugwood.org



J DiTomaso,
Bugwood.org



J DiTomaso,
Bugwood.org

Dense-flowered cordgrass

(*Spartina densiflora*)

KEY ID FEATURES

- Becomes a very dense tuft or clump of grass as it develops and matures.
- Stems are hollow, with firm internodes.
- Leaf blades are grayish-green, narrow (0.6 cm wide), long, tough, with pronounced ridges on the surface and in-rolled margins, ligules are 1–2 mm long.
- Flowers are arranged in a dense, compact, colourless spike that is 6–30 cm long.

OTHER

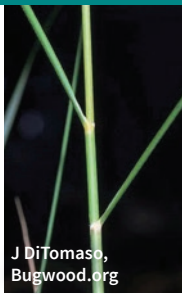
- Growing up to 1.5 m tall.
- Grows in similar mudflat and salt marsh areas as *S. anglica* and *S. alterniflora*, with an additional habitat niche for cobble stone beaches.

DISTRIBUTION

- Limited occurrences in central east coast of Vancouver Island and adjacent islands. Report occurrences.



M Lovit



J DiTomaso,
Bugwood.org



M Lovit

Salt meadow cordgrass (*Spartina patens*)

KEY ID FEATURES

- Does not grow in a circular clone form similar to the other cordgrasses, but grows in continuous, dense, turf-like mats. Mature stems are often prostrate, forming sweeping circular shapes in amongst the other intertidal vegetation.
- Stems are slender, stiff, and numerous, with firm internodes.
- Leaves are narrow, bright green, 10 cm to 50 cm long with in-rolled margins and prominent veins on the lower surface, ligule length is 0.5 mm.
- Flowers are arranged in 5 cm long spikes that are droopy and reddish in colour.

OTHER

- Growing from 30–100 cm tall.

DISTRIBUTION

- Limited occurrences in south coastal BC. Report all occurrences.

PLANT GROUP:

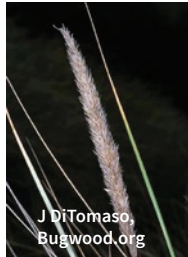
Beach grasses (*Ammophila* spp.)

KEY GROUP ID FEATURES

- Coarse perennial, intertidal grasses growing in small tufts connected by deep, tough, extensively creeping rhizomes.

OTHER GROUP INFO

- Leaves have smooth sheaths with stiff in-rolled blades.
- Reproduces vegetatively through rhizomes.
- Prefers coastal areas, open habitat of mobile and semi-fixed sand dunes.



European beachgrass (*Ammophila arenaria*)

KEY ID FEATURES

- Grows up to 110 cm tall.
- Leaf blades are 2–4 mm wide with ligules measuring 10–25 mm long.
- Flowers in a spike-like panicle measuring 15–30 cm long.

DISTRIBUTION

- Dispersed presence in coastal BC. Report occurrences in the central and north coast regions.



Royalbroil



R Routledge,
Bugwood.org



R Routledge,
Bugwood.org

American beachgrass (*Ammophila breviligulata*)

KEY ID FEATURES

- Grows from 50–100 cm tall.
- Compared to *A. arenaria*, leaf blades measuring 4–8 mm are wider, less in-rolled, with shorter 1–3 mm ligules.
- Flowers in a longer panicle than *A. arenaria*, measuring 10–40 cm long, whitish-brown, or slightly purple-tinged.

DISTRIBUTION

- Presence limited to the central west coast of Vancouver Island. Report occurrences in other regions.



A Kordesch



A Kordesch

Japanese wireweed (*Sargassum muticum*)

KEY ID FEATURES

- A large brown alga, varying in colour from dark brown to pale, yellowish brown.
- Fronts can reach more than 1 m in length.
- Solitary perennial stem attaches to a surface from a disklike holdfast.
- Stem has regularly alternating branches with flattened oval blades.
- Has many round airbladders (2–3 mm) attached to the stems that cause it to stand upright in the water or float if it becomes detached.

OTHER

- Prefers to attach to rocks along sheltered shores in the mid intertidal to upper subtidal.
- Accidentally transported as hitchhikers with aquaculture.

DISTRIBUTION

- Detected in the Strait of Georgia, Strait of Juan de Fuca and Puget Sound.

For more detailed information on these and other aquatic species in BC, please refer to:

<https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/invasive-species/priority-species>

<https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/invasive-species/priority-species/priority-plants>

<https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/invasive-species/priority-species/fish>

<https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/invasive-species/priority-species/invertebrates>

<https://www.dfo-mpo.gc.ca/species-especies/ais-eae/index-eng.html>

<https://bcinvasives.ca/resources/publications/>

<https://linnet.geog.ubc.ca/biodiversity/eflora/invasives.html>

https://ibis.geog.ubc.ca/biodiversity/efauna/invasive_species.html

TAKE ACTION!

To report an aquatic invasive species of concern:

**DOWNLOAD THE
REPORT INVASIVESBC
SMARTPHONE APP:**



ONLINE:

[https://www2.gov.bc.ca/gov/content/environment/
plants-animals-ecosystems/invasive-species/
reporting-invasive-species](https://www2.gov.bc.ca/gov/content/environment/plants-animals-ecosystems/invasive-species/reporting-invasive-species)

CALL:

1-800-933-3722

PROTECT OUR COMMUNITIES FROM INVASIVE SPECIES



**CLEAN
DRAIN
DRY**

Prevent the Spread of Aquatic
Invasive Species





IMISWG employs science-based, innovative strategies to protect the health and diversity of BC ecosystems and minimize the negative impacts of invasive species: gov.bc.ca/invasive-species

**Report ALL activities involving prohibited
fish, mussels, and aquatic plants to the
B.C. Conservation Officer Service:**

**1-877-952-7277 (RAPP) or
#7277 on the TELUS Mobility Network**

<https://www2.gov.bc.ca/gov/content/environment/natural-resource-stewardship/natural-resource-law-enforcement/conservation-officer-service/contact-information>

Canada 

1-888-356-7525
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 **Invasive Species
Council of BC**

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