

INVASIVE SPECIES PROFILE

PARROT'S FEATHER

Myriophyllum aquaticum

Parrot's Feather is a semi aquatic or aquatic emergent/ semi-emergent plant that typically grows up to 2m in height. It is sun loving and grows especially well in nutrient rich slow moving or stagnant waters. This plant is still sold in many nurseries and pet stores all over the world for use in ponds and aquariums.

Origins

Introduced to North America in the late 1800's or early 1900's. Originally from South America but can now be found all over the world.



Impacts

This species grows in dense beds forming large mats which can displace native vegetation, cause flooding, effect drainage, and impede movement of humans and wildlife such as fish within the water column. The Parrot's Feather that exists in Somenos Creek is a clone and does not reproduce by seed but by fragmentation, making it very easy to spread. It can have serious impacts to the ecology of a system as it changes the water chemistry by decreasing the dissolved oxygen.



Management

We are using an experimental management strategy to tackle the Parrot's Feather issue. The short-term strategy is to use sheets of rubber pond liner to shade and smother the patches. For a longer term strategy, we have been working to plant tall shading trees along the banks of Somenos Creek in hopes that they will eventually shade the creek and deter the establishment of Parrot's Feather in the future.



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INVASIVE SPECIES PROFILE SAINT JOHN'S WORT

Hypericum perforatum

Saint John's Wort is a long-stemmed, branching plant reaching 1 meter in height. It has unstemmed leaflets of about 1.5-3 cm in length. Stems are topped with clusters of yellow flowers 25-100 in number, each flower 2 cm in diameter. Seeds are produced late summer, are stocky and 3 capsuled, each capsule containing hundreds of seeds.

Origins

introduced from Eurasia, likely due to cultivation for its medicinal benefits. Saint John's oil was used in tinctures applied to wounds to encourage healing, as well as a treatment for depression and anxiety.

Impacts

Saint John's Wort is poisonous to livestock and some wildlife causing effects on the central nervous system, photosensitization (serious burns cause by sun), sudden abortion, or death. Saint John's wort can quickly take over in areas composed of dry, sandy soil in full sun. This reduces biodiversity and reduced the ability of native vegetation to flourish. Saint John's wort seed can remain viable in soil for many years, moving or tilling soil can allow sprouting of these dormant seeds.

Management

Small infestations can be eradicated by digging and pulling the roots of the plant before seeds are produced. For larger infestations, chemical control should be considered or mowing at regular intervals reduces the seed crop. Biological control has proven to be a very effective method for control, the Saint John's wort Beetle is capable of reducing the plants population in a given area by up to 99%

INVASIVE SPECIES PROFILE

GIANT HOGWEED

Heracleum
mantegazzianum

Hogweed is a tall, perennial flower reaching up to 5 m high. It has large, dark-green leaves which can reach 2.5 meters long. The main stem is straight and hollow, lined with tiny hairs and is topped with umbrella-shaped clusters of tiny white flowers.

It is easily confused with BC native, non-toxic plants, such as, Queen Anne's lace, angelica, and cow parsnip. Its most easily identifiable feature when compared to these species is its incredible size.

Origins

Giant Hogweed is native to Asia, thought to have been brought to western North America as a ornamental garden plant. It is now found throughout southern-mid Vancouver Island, Lower Mainland, gulf islands, and Fraser Valley.

Impacts

A mature plant can produce up to 50,000 seeds which may be carried by the wind (usually up to 10 meters) or transported via an animal, vehicle, or stream. Hogweed easily out competes native species due to its large size and fast-growing nature. It also grows well in shady, wet areas in which most invasive species struggle. One of the most concerning features of giant hogweed is its toxicity. Stems, bristles, and leaves contain a noxious sap which increases skin sensitivity to sun causing burning, blistering, and dark purple-black scarring which continue to cause inflammation and dermatitis for years after exposure. Exposure of sap to the eyes can cause temporary to permanent blindness..

Management

Workers removing the plant must wear thick, water-resistant gloves and coveralls. Lower branches should be removed to make a clear route to the stem. The flower should first be collected to prevent seed dispersal, followed by severing the tap root at 8-12 cm deep. Disposal of the plant should be done extremely carefully to prevent further spread. It is recommended to place hogweed in a doubled-up garbage bag and transferred to an invasive species disposal. Never place in a green bin or compost



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INVASIVE SPECIES PROFILE ENGLISH HAWTHORN

Crataegus monogyna

English Hawthorn is a deciduous shrub/tree with a thick woody main stem and produces white-pink flowers resembling cherry flowers in early spring. Its branches contain thorns 1-2cm long and leaves are long-stalked and deeply lobed. It also produces red berries which ripen in late fall.

Origins

English Hawthorn is native to Europe, north Africa, and eastern Asia. It was brought here in the 1800s but has only recently become a problem as an invasive in some areas. It can be found through both eastern and western United States and is spreading up the coasts through Canada.

Impacts

English Hawthorn berries can be carried long distances by birds to open fields and forests where they can grow rapidly, out competing native plant species. They form dense thickets that make passage of large wildlife difficult. In its native range it is generally part of forest under story, but in North America it also grows in open fields, shrub lands, riparian areas, and locally, it grows extremely well in garry oak ecosystems. There is some hybridization between English hawthorn and black hawthorn, altering the gene pool.

Management

English Hawthorn should be cut down close to the base and the roots removed. If removing the roots is impossible, the remaining stump should be frayed or torched or, otherwise, new growth should be cut back every year. Since hawthorn can spread through seed dispersal, suckering, and cuttings, care should be taken to dispose of the plant. Composting is not recommended. Either disposing of it at a facility approved invasive plant disposal or leaving it in place and burning it at an appropriate time will prevent further propagation.



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SCOTCH BROOM

Cytisus scoparius

Scotch Broom is a woody, evergreen shrub growing up to 3 meters in height. It produces small yellow flowers sometimes with red interiors in late spring to early summer, followed by peapod-like seeds. A mature plant may produce up to 3500 seeds and may also propagate through lateral budding.

Origins

Scotch broom is native to Europe and is thought to have been brought to Vancouver Island by a Captain Walter Calhoun Grant who planted it on his farm near Sooke in the 1850s. It has since spread extensively through southern-mid Vancouver Island and mainland BC. Its range continues to steadily increase.

Impacts

Scotch broom grows very well in recently disturbed areas and areas exposed to direct sun. It is found commonly along roadsides, forest clearings, abandoned logging roads, and unmaintained clearings. Its presence in these areas interrupts natural succession of native plants, displacing many species and forms dense thickets which limit wildlife movement. Scotch broom also contributes substantially to the fuel load of wildfires due to their woody stems and dense growth patterns..

Management

Removal of scotch broom is most effectively done by hand before pods are dry. It must be removed at the roots to avoid re-sprouting and tops should be piled nearby and left to dry. Once foliage is dry, the pile should be burnt which will also kill any seeds that have fallen beneath the pile. Foliage should not be moved from its removal location to prevent further spreading of seeds.



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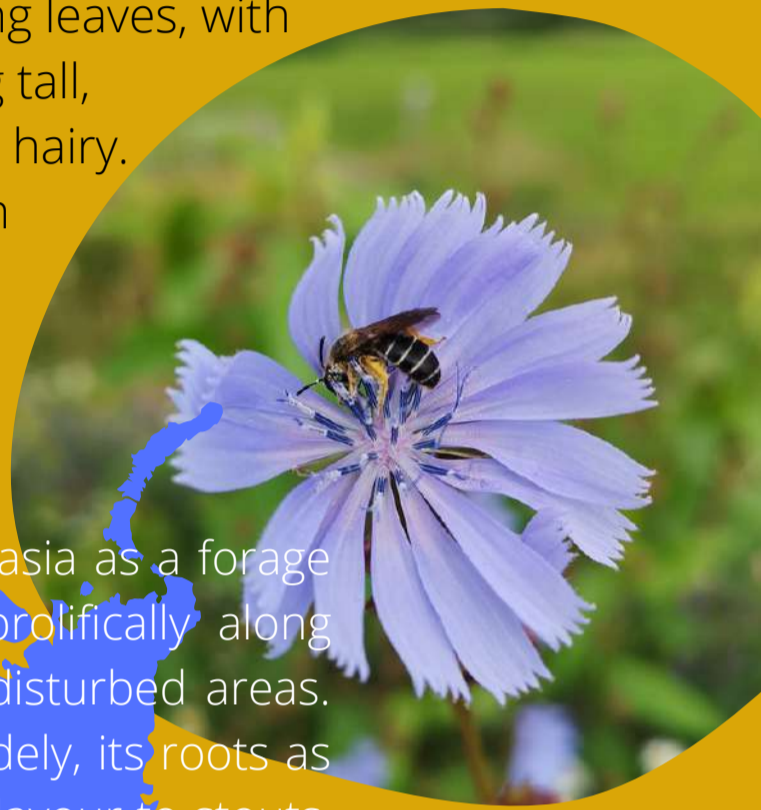
CHICORY

Cichorium intybus

Chicory is a flowering forb related to the Dandelion, reaching 2 meters in height. It has long low-lying leaves, with flowers growing in succession along tall, branched stems that are tough and hairy. Blooms are light blue, about 4 cm in diameter, Petals are squared with frayed edges.

Origins

Chicory was introduced to from Eurasia as a forage crop for livestock. It now grows prolifically along roadsides and other sun-exposed, disturbed areas. Humans have also used the forb widely, its roots as a coffee substitute/additive, to add flavour to stouts, and may even be cooked similarly to parsnips.



Impacts

Chicory produces a milky latex when damaged that can cause dermatitis in humans. This species likes to colonize disturbed sunny areas such as ditches, roadsides, open fields in large numbers.

Due to its ability to colonize rapidly, it quickly has an effect on native vegetation as it takes over the space and reduces biodiversity..

Management

Chicory management is relatively easy as it only reproduces by seed and therefore hand pulling, pruning and mowing are all effective management tactics. For this to be an effective method, it must be done prior to seed development and consistently each year until the patch has exhausted its seed bank. Some may wish to harvest this plant for its highly medicinal properties.



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PURPLE DEAD-NETTLE

Lamium purpureum

As part of the mint family, Purple dead-nettle is a short, ground cover reaching only 5-20 cm on average. It is single stemmed with broad leaves fading from dark purple on the top leaves to green at its base. It produces small, non-descript, light purple flowers below its upper leaves. The flowers are very attractive to bees, produced in early spring.

Origins

Native to Eurasia, purple dead-nettle was likely brought to North America as an ornamental garden plant that has since escaped its confines. The upper leaves and flowers are edible and have been used in salads, stir fries, and sauces.

Impacts

Purple dead-nettle has a niche impact on endangered Garry oak ecosystems due to its preference for seasonally wet, thin soil layers over rocky outcroppings. Garry oak ecosystems harbour many small, understory forbs and vegetation which are displaced and shaded out by dead nettle..

Management

Purple dead-nettle readily reproduces through fragmentation of stems and roots. If an area is cleared of the weed through digging and hand-pulling then all foliage and roots should be disposed of at a certified invasive plant disposal site. Seeds may remain dormant for 8-9 years, therefore soils known to house dead-nettle should not be moved for any purpose. There are many herbicides known to work on purple dead nettle due to its occurrence in agricultural fields.



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COMMON TANSY

Tanacetum vulgare

Common Tansy is a tall forb reaching up to 1.5 meters in height. It is fern-like in appearance with branched, erect stems. Its flowers lack petals, grow in clusters and are yellow and button-like. It spreads through both seed and rhizomes and is found most commonly in sunny, well-drained environments, consistent with disturbed areas.

Origins

Common Tansy is native to Eurasia and was brought here sometime during the 1600s. It is considered a medicinal plant which helps relieve joint pain and expel parasites. It was brought here for its medicinal properties and as a companion plant to crops where it works to repel insects. Historically it has also been used as a non-invasive method of embalming in which the flowers were packed into coffin to ward off worm infestations. It was so widely known for this purpose that it had a well-known, morbid association with death by the 19th century.

Impacts

The Common Tansy has been identified as a noxious weed which may be toxic to livestock and wildlife. Its rhizomatous root system does little to stabilize soils and easily infests large swaths of earth, making it impermeable to native vegetation.

Management

Seeds are tiny and numerous and may be spread by any passing animals or vehicles to which the seeds may attach. Seeds are viable for up to 25 years so prevention of seed spreading is a main concern. Due to its rhizomatous root system, the most effective way to remove tansy once it is established is with a combination of mowing and chemical control.

INVASIVE SPECIES PROFILE

ENGLISH IVY

Hedera helix

English Ivy is an evergreen, woody vine which reaches 8cm in height, but can climb up to 80 vertical feet. Its leaves have 3 main lobes and 2 smaller ones in a star-like formation and produces small clusters of insignificant green flowers. Though the plant is very shade tolerant, flowers are only produced in full sun areas, followed by mildly toxic, small, black berries.

Origins

Introduced to North America as an ornamental plant. Originally from Europe but can now be found in Southern BC, Ontario and the U.S.

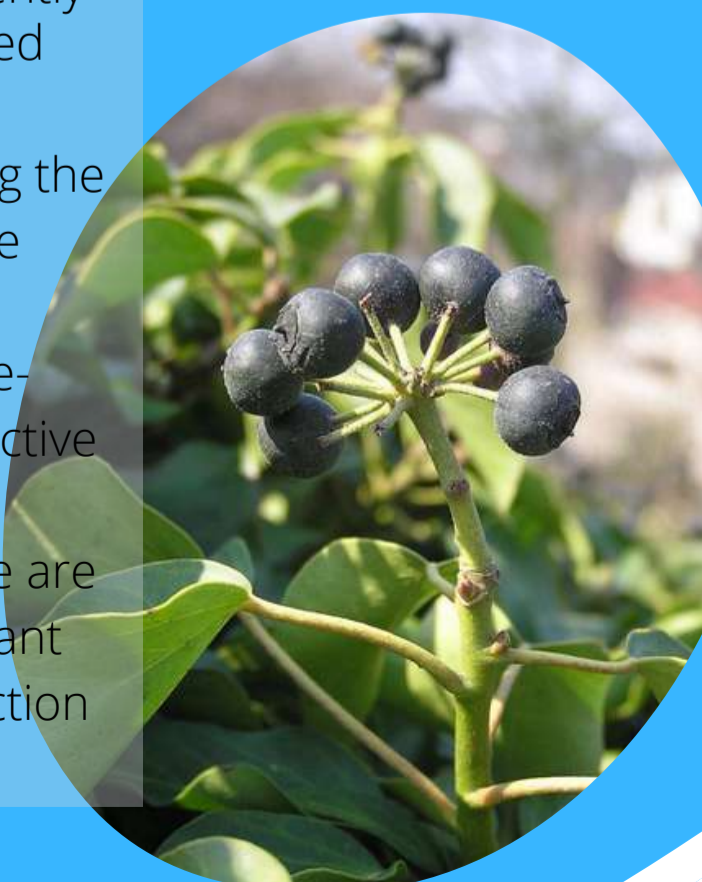


Impacts

English Ivy smothers plants by covering them so densely that they do not receive enough sunlight to photosynthesize adequately. It also weighs mature trees down, making them more susceptible to blowdown and as a ground cover it smothers successor seedlings..

Management

English Ivy is still commonly sold by nurseries and is even used as an erosion control plant in some areas allowing for further spread. Cutting the stems at their base and diligently cutting back new growth until the stored energy in the roots is depleted is an effective method to remove ivy. Digging the roots out at their base can be effective with some plants, but the entire root system must be removed to prevent re-sprouting. Mulching crawling ivy is effective but must be left in place for several growing seasons to kill the plant. There are specific herbicides which will kill the plant when applied to a freshly cut cross section of the main stem.



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REED CANARY GRASS

Phalaris arundinacea L.

Reed Canary Grass can grow up to 9 feet tall. It is very quick to colonize open disturbed areas outcompeting native species and eventually creating a monoculture.

Origins

Reed canary grass is native to the temperate regions of Europe, Asia and North America.



Impacts

Due to its vigor, this species is able to cultivate large disturbed sites with ease, making it especially difficult for other native species to grow. Unlike fibrous roots that form tightly woven nets that act to hold soil and water, rhizomes are thick and do not hold onto soil, this leads to soil erosion. One of the main concerns with Reed Canary Grass is that it forms large monotypic stands which provide very little in the way of food or habitat for wildlife. Once a large stand is established it builds up a huge seed bank making eradication very difficult.

Management

The Cowichan Valley has long faced the encroachment of Reed Canary Grass; it is not actively being managed through the current projects at the Somenos Marsh Wildlife Society. We do however remove and manage it while working to control other invasive species by cutting and installing pond liner over top. Although this is a prolific species, it has been around for decades and is the least concerning of the invasive species we are currently managing.



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YELLOW FLAG IRIS

Iris pseudacorus

Yellow Flag Iris has become wide spread throughout the wetlands and waterbodies of Southern Vancouver Island. You will find this species growing along the edges of lakes, rivers, wetlands, and floodplains. It can grow up to 1.5m tall producing large yellow flowers in the late spring/early summer. This species spreads by seed and by fragmentation of the rhizome root system. Each flower Produces 3 seed pods each with 120 seeds packed inside, pods are designed to float on water for further dispersal.

Origins

introduced to North America in the 1800's and used in ponds and water gardens. It is native to Europe, Western Asia, and North Africa.



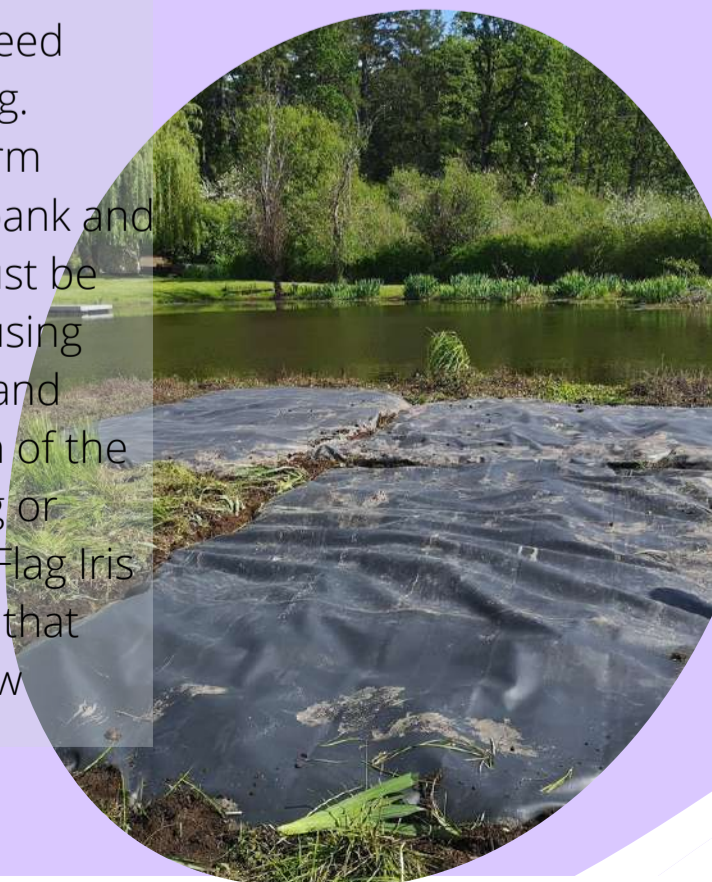
Impacts

Yellow Flag Iris can have great impacts on biodiversity as it will out compete native species such as cattails, rushes, and sedges by forming thick interconnected patches. Due to its rhizome root structure, it does not aid in soil stabilization and water retention, therefore having a large growth of it can over time degrade the land and allow for erosion, and increased flooding risk.

There are economic impacts as well due to clogging ditches and irrigation canals for agriculture in addition to the cost of employing people and materials for management and removal..

Management

Management can be done by removal of seed pods or continuous cutting and smothering. Removing the seed pods is a good long-term strategy as it slowly will exhaust the seed bank and eventually lose its ability to spread, this must be done yearly to be effective. Smothering it using pond liner cuts the plant off from the sun and traps the gases expelled by decomposition of the surrounding organic matter. Simply cutting or pulling this species is ineffective as Yellow Flag Iris grows from a large rhizome root structure that when disturbed or damaged sends out new growth further perpetuating the issue.



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HIMALAYAN BLACKBERRY

Rubus armeniacus

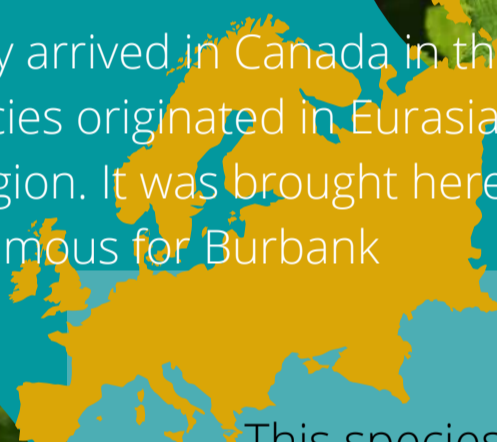
Himalayan Blackberry can be found growing in disturbed areas, riparian areas, forest edges, right of ways, and ravines.

This species spreads through root and stem fragmentation with canes growing up to 3m in height and 12m in length. A thicket can produce between 7,000 and 13,000 seeds per square meter creating seed banks that are viable for several years.



Origins

Himalayan Blackberry arrived in Canada in the mid 1880's. This species originated in Eurasia from the Armenia region. It was brought here by Luther Burbank famous for Burbank potatoes!



Impacts

This species grows rapidly and forms thickets allowing it to out compete native species through shading and leaf litter build up. It makes it especially difficult for shade intolerant species to establish. Due to the dense thickets and large thorns, larger wildlife can have a difficult time with moving through areas with heavy blackberry establishment, although the berries are an important food source for many.



Management

Himalayan Blackberry can be difficult and cumbersome to manage as the canes are equipped with large hooked thorns and the roots are deeply anchored. The only way to ensure that you will not have regrowth after removal is to remove the large tap root that anchors the canes deep in the soil. The best way to do this is to prune the long canes and dig up the roots with a shovel and pickaxe to ensure the entire root ball is removed.



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