INVASIVE SPECIES STATION

Overview

An invasive species is a non native organism that has been introduced into an ecosystem or geographic region. Invasive species often cause large changes to the ecosystems they are introduced to due to a lack of predation or resource competition. In Oregon, many terrestrial and aquatic invasive species have impacts on the salmon population and salmon habitats. In this lesson, students will be introduced to the following invasive species: Himalayan Blackberry, New Zealand Mudsanails, Northern Pikes, Quagga Mussels, and Zebra Mussels. Japanese Knotweed, Eurasian Milfoil, Scotch Broom, and English Ivy. Students will move their bodies to answer questions about the impacts they have on salmon ecosystems.

Time: 30 Minutes

Learning Goals: By the end of this station, students will be able to:

- Identify one terrestrial and one aquatic invasive species that impacts salmon habitat and populations.
- Explain the impacts that these invasive species have on salmon habitat and populations.
- Describe two actions that can be taken to lessen the impacts of invasive species around the tributaries to the Columbia River.

Materials: The Salmon Biology Station Kit should include:

- Invasive Species Cards

Background Information

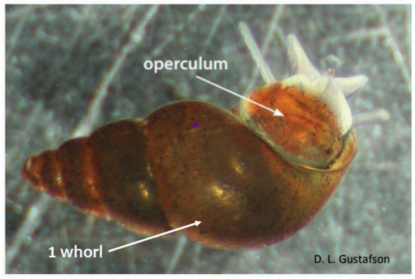
Non-native species are not originally from this place. They have been introduced accidentally or on purpose, but don't necessarily harm the native species. If they can compete with native species, they are considered invasive.

Invasive Species are plants, animals, or pathogens that are nonnative (or alien) to an ecosystem and whose introduction causes or is likely to cause harm (National Invasive Species Council). Invasive plants are a significant threat to the health and production of ecosystems. An invasive species is a nonnative species that can cause significant environmental and economic losses. Invasive species are said to be the second leading cause of biodiversity loss, after habitat loss. They can disturb a forest ecosystem by displacing native species and outcompeting native species for resources and habitat. In addition, many invasive species, especially invasive plants, have advantages such as rapid reproduction, production of many offspring, and high tolerance to a wide range of weather conditions. Many invasive plants also have an advantage in the new habitat,

because they have no evolved predators in this new environment. In contrast, the native plants compete with the invasive plants while being preyed on by predators.
Invasive species can modify the environment. This sometimes comes at the detriment of wild salmon. Invasive species can damage spawning habitat, make waterways unnavigable, or act as novel predators. These effects can be either direct or indirect.

Aquatic Invasives:


D.L Gustafson



New Zealand Mudsnails *Potamopyrgus antipodarum*

Location: Native to lakes in New Zealand

Initial Introduction: Introduced in the belly of trouts that were stocked in the Snake River in Idaho in 1987.

Traits: New Zealand Mud Snails have a valve called an operculum that allows them to close off their shell. This allows them to survive being eaten.
They reproduce asexually, so the introduction of 1 snail could lead to a complete colonization of a river or stream.

Impacts: These invasive snails consume algae and other primary producers at the base of the food web, competing directly with native invertebrates that are important food sources for juvenile salmon. Salmonids, including juvenile salmon, may inadvertently consume New Zealand Mud Snails. However, these snails provide little nutritional value due to their hard shell and low caloric content. If salmonids consume these snails in significant quantities, it could lead to poor growth and condition, making them less fit for survival and migration.

Northern Pike

· Olive green color
· Horizontal, bean- shaped spots
· 1-5 sensory pores
· Duck-bill shaped snout
· Sharp teeth
· Average 26 inches and 4 pounds

United States Fish and Wildlife Service, Timothy Knepp

Northern Pike - *Esox Lucius*

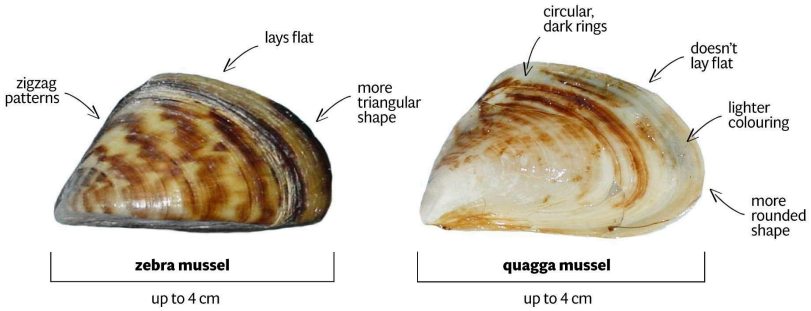
Location: Originally from the Great Lakes region, Alaska, Canada, and rivers and lakes of the Americas north of 40° latitude.

Initial Introduction: Northern Pike were illegally introduced into the Montana River in the 1950s and the Coeur d'Alene River in the 1970s for trophy fishing. Since their introduction, the fish have established themselves in the connecting Columbia River Basin all the way from Montana to the coast of Oregon.

Traits: Northern Pike can grow more than 45 pounds and live up to 20 years. They have large, long mouths and sharp teeth.

Impacts: Currently occurs in the northern reaches of the Columbia River in north eastern Washington and a lake in the San Juan Island in western Washington. Northern pikes are voracious predators. They are known to eat astonishing numbers of juvenile salmon and grow to an impressive size.

Quagga Mussels - *Dreissena rostriformis bugensis*



Location: Native to the Dnieper River of Ukraine and the Ponto-Caspian Sea.

Initial Introduction: These mussels were introduced initially to the Great Lakes through ballast water discharged from ocean ships that were unaware of their presence. Ballast water is used to keep ships stable in the water. The amount of water carried is dependent on the amount of cargo on board. A ship will carry large amounts of ballast water when there is no cargo and will dump it in port as cargo is loaded.

Traits: Quagga mussels are very good at filtering water to use plankton as their food source. Quagga mussels release a waste product called pseudofeces that, when decomposed, removes a lot of oxygen from the water and decreases pH, making the water more acidic.

Impacts: They will remove so much plankton from a water source that they can completely deplete the food source available for other zooplankton and macroinvertebrates. They also change the water clarity by removing algae. They cause more sunlight to enter the water column, which can cause other aquatic invasive plants, such as milfoil, to take over.

Zebra Mussels - *Dreissena polymorpha*

Native Location: Zebra mussels are native to freshwater rivers and lakes in Eastern Europe and western Asia.

Initial Introduction: Zebra mussels were first discovered in Lake St. Clair in 1988. Lake St. Clair is located east of Detroit, Michigan, between Lake Huron and Lake Erie. These mussels were introduced initially to the Great Lakes through ballast water discharged from ocean ships that were unaware of their presence. Ballast water is used to keep ships stable in the water.

Traits: The zebra mussel gets its name because of the dark, striped pattern on each valve. Usually, the shell is a light color (tan, beige) with zig-zag stripes. However, some are almost entirely brown, and the stripes are not pronounced.

Impacts: These are highly prolific and known to clog waterways and thickly colonize over most substrates and surfaces. They can filter tremendous amounts of water, removing nutrients and particles needed for macroinvertebrates and young fish to survive. Furthermore, these mussels prefer rocky, hard environments to live in and can cover stream beds, affecting available spawning habitat and even attaching themselves to native mussels in the river, making it impossible for native mussels to function.

Milfoils *Myriophyllum spicatum L*

Native Location: Europe, Asia, and northern Africa

Initial Introduction: It is likely to have been intentionally introduced into the United States for aquariums and plant nurseries. Invasive milfoil was intentionally planted along river streams all across the US.

Traits: There are many types of milfoil, but invasive Eurasian milfoil grows along slow-moving rivers and streams and can grow in both fresh and salty water, as well as acidic waters with pH levels. Milfoil can spread to new areas through small plant fragments transported on boats or equipment from one body of water to another.

Impacts: This noxious weed has the potential to block fish passage in waterways and choke out native plants as it develops thick mats. Overcrowding from Milfoil has also been known to result in large amounts of dead plant material, which consumes oxygen during decomposition, lowering water oxygen levels. Lower oxygen levels may be directly harmful to salmon eggs as well as indirectly harmful to organisms like macroinvertebrates that need dissolved oxygen to breathe. Invasive Milfoil is one of the most widely distributed invasive aquatic plants and can be found in 48 of the 50 states.

Terrestrial Invasives:

Knotweed *Fallopia japonica*

Location: Native to eastern Asia and invasive to almost all of the United States and parts of Canada.

Initial Introduction: Introduced to North America through the sales of seeds and plant catalogs.

Traits: A tall, dense shrub that grows rapidly to a height of up to 3 meters, about 9 feet tall. It grows from deep-rooted creeping rhizomes that allow it to form expansive patches that disperse during flood events.

Impacts: Knotweed can form dense canopies that block out tree seedlings, which are essential for fish habitat and survival. Knotweed can create monocultures that exclude native plants,

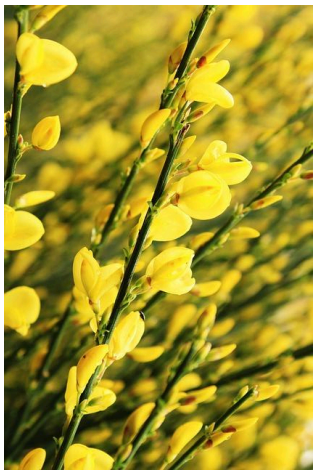
Invasive Blackberry *Rosaceae Rubus armeniacus Focke*

Location: Native to the Caucasus region in Eurasia

Initial Introduction: Introduced to North America in the late 1880s as a cultivated crop.

Traits: A rambling perennial, woody shrub native to western Europe. It can grow up to 4 meters, about 13 feet tall, with hooked prickles and dense, thick stems.

Impacts: Invasive blackberries can dominate the riparian area and significantly decrease native plant diversity. Many native riparian plants help with sediment deposition as well as the filtration of heavy metals and pollutants out of the water. Native plants provide shade, provide diversity, and support macroinvertebrates that juvenile salmon rely on. Rhizome mass can be two times greater below ground than the plant's size above ground.



Scotch Broom *Cytisus scoparius*

Location: Native to Northern Africa and parts of Europe, including the British Isles, Sweden, and Ukraine.

Initial Introduction: It was initially introduced to North America as an ornamental plant for gardens.

Traits: A perennial shrub of the pea family. Broom seeds have hard coats that allow them to survive being transported in rivers during flood events. These rapidly growing plants can take over and change whole ecosystems, especially in clear-cut forested areas.

Impacts: Scotch Broom forms dense stands in the riparian area that crowd out native species. It can prevent conifer trees from seeding, leading to total domination of the land. The extensive root systems of conifer trees play a significant role in stabilizing river banks. The loss of stable river banks leads to erosion, which can wash away fish habitat, including redds and the eggs salmon have laid. It modifies the soil and inhibits germination for other plants.

English Ivy *Hedera helix*

Location: Native to Europe

Initial Introduction: Introduced to North America as an ornamental vine for landscape design.

Traits: An evergreen perennial vine that can grow up to 30 meters or 99 feet in length. It spreads by shooting out long stems that can root into the soil. This aggressive invasive threatens most forest types in Oregon as it kills large trees over time by unevenly weighing tree branches and crowding out leaves for sunlight.

Impacts: When English ivy takes over trees in a riparian area, slowly killing native trees, rivers lose their shade and cover. More direct sunlight on rivers can cause an increase in water temperature, affecting fish habitat. When ivy causes trees to die and fall, the loss of their root structure can lead to significant erosion affecting the riparian area from soaking and filtering rain and snow melt**.**

Cumulative Impacts:

Many invasive species pose individual, direct threats to salmon populations and their habitats. However, the combined effects of multiple invasive species can lead to more significant, indirect impacts, often altering various aspects of the ecosystem. For example, when quagga and zebra mussels colonize an aquatic environment, they increase water clarity by filtering out suspended particles like algae and organic matter. This disrupts the base of the food chain, directly impacting salmon by reducing the algae that supports other aquatic organisms. Additionally, the increased sunlight penetration due to clearer water can promote the growth of invasive aquatic plants, such as milfoils, which further degrade salmon habitats.

Lesson Plan - Invasive Species

Objective: Students will be introduced to 9 different invasive species that impact salmon habitats.

Introduction (7 Mins)

1. Introduce yourself to the group and ask students to share their names and introduce themselves.
2. Ask the group what they already know about things that impact salmon. Have them turn to a partner and share before asking someone to share with the whole group.
    a. *What do salmon need to survive in a river?*
        i. Cold, clear water. Rocks to lay their eggs, macroinvertebrates for juvenile salmon to eat.
    b. *What are some reasons a salmon might die in a river?*
        i. Predation (humans or other organisms could eat them), Lack of resources like food, changes to water quality that make it difficult to survive (muddy water, warm water, not enough oxygen)
    c. *What does it mean for a salmon to be a native species?*
        i. Native species are organisms that are from the region or land, they either evolved or arrived there and were established without human assistance.
    d. *What might we call an organism that is not a native species?*
        i. D*efine **native species**: species that evolved in or arrived naturally in an area without human assistance.*
        *ii. Define **non-native species**: species not originally from an area, introduced directly or indirectly by humans.*
        *iii. Introduce **invasive:** A non-native species that causes harm to the environment, economy, or human health.*
3. Describe to the learners what they will be doing today: We will read about an invasive species to learn where they are native to, how they got here, and the impacts they can have.
    a. Ask the group if they know any examples of invasive species here in Oregon.

Invasive Species Cards (5 Minutes)

1. Hand each student an **invasive species card**. Give 2 minutes to read it.
2. Have them wear the necklace with the organism name facing outward so others can read it.
3. Students line up shoulder-to-shoulder.
4. **Explain:** *I'll read a statement. If you think it's true for your organism, take one step forward. If you think it's false, take one step back. After each statement, we'll pause for a quick discussion about who moved and why, and then we will return to the starting line before the following statement.*

True / False Statement Activity (12 minutes)

1. Read the following 10 statements one by one. After students step quickly, ask both sides to turn to a neighbor or small cluster on their side and talk for 30–45 seconds.
    a. **Ask:** *Why did you step here? What words or clues from your card support it?*
        i. If you have a group of <5 students, then have them pair up with someone from the opposite side and talk for another 30-45 seconds to answer: *What's different about your organism's situation? How does it connect to salmon?*
2. Ask 1–2 volunteers from each side to share with the whole group.

This structure gives every student a reason to talk in every round. There are additional discussion questions to help guide students each round if needed.

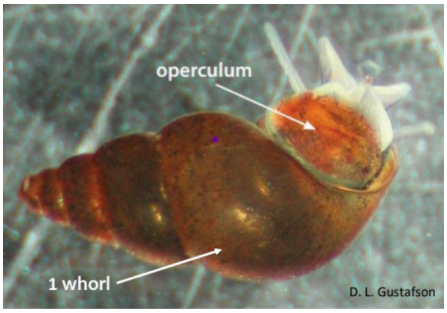
Statement	True	False	Discussion Questions:
1. I am a living organism	Everyone		- Why did you step here? - What traits on your card make you clearly a living organism?
2. I was introduced here intentionally by humans.	Blackberry Northern Pike Scotch Broom English Ivy Knotweed	Quagga Muscle Zebra Muscle Eurasian milfoil New Zealand Mudsnail	- How and why was your organism brought here? - If you weren't brought here on purpose, how did you arrive?
3. I am an aquatic invasive species. *I live in rivers, streams, estuaries, or other bodies of water.*	Quagga Muscle Zebra Muscle Eurasian milfoil New Zealand Mudsnail Northern Pike	Blackberry English Ivy Scotch Broom Knotweed	- What does it mean to be an "Aquatic Invasive" - True: What part of the salmon's life cycle could you affect most? - False: How might you still influence salmon, even if you don't live in the water?
4. I impact the water temperature or the river shade. *Examples: filtration, turbidity, bank erosion.*	Blackberry English Ivy Scotch Broom Knotweed	Quagga Muscle Zebra Muscle Eurasian milfoil New Zealand Mudsnail	- True: What changes do you cause that affect temperature or shade? - False: Even if you don't affect shade or temperature, what other habitat changes might you cause?
5. I impact water clarity or sediments. *Examples: filtration, turbidity, bank erosion.*	Quagga Zebra Eurasian Milfol blackberry Scotchbroom Ivy Knotweed	Northern Pike New Zealand Mudsnail	- True: How does your species change sediments or clarity - False: If you don't, what environmental change do you cause instead?
6. I impact river organisms that salmon rely on for food. E.g., insects, plankton, macroinvertebrates.	Eurasian Milfoil Quagga Mussels Zebra Mussels New Zealand Mudsnails	Northern Pike Ivy Knotweed Scotch Broom Blackberry	- Which organisms do you most directly affect? - False: How might your impacts still ripple into the food chain indirectly?

Statement	True	False	Discussion Questions:
7. I harm salmon egg habitats or juvenile salmon in rivers and estuaries. *E.g., by predation, competition, or disease*	Everybody		- True: How do you harm eggs or juveniles? - False: What other part of the salmon life cycle might you affect?
8. I am already established here in Oregon's streams or rivers.	Everyone but Quagga and Zebra mussels should step forward		- True: Where in Oregon is your species found? - False: If not here yet, where is it, and how might it get here?
9. People can slow my spread by cleaning, draining, and drying boats/gear.	Quagga Zebra New Zealand Mudsnail Eurasian Milfoil	English Ivy Blackberry Scotch Broom Knotweed	- What gear is most likely to spread your species? - False: What's a more important prevention method for your species?
10. People can slow my spread by removing me from soil/shorelines and restoring natives.	English Ivy Blackberry Scotch Broom Knotweed	Quagga Zebra New Zealand Mudsnail Eurasian Milfoil	- True: What's one challenge in removing your species? - False: What's a more effective management method for your species? - Did anyone not say yes for either the last two (Pike) - What action can people take to remove or slow the impact of Northern Pike?

Wrap up (5 minutes)

1. **Tell students**: *Imagine there's an invisible line across the room. This end is 'Directly impacts salmon' — species that affect salmon immediately and obviously. The other end is 'Indirectly impacts salmon' — species that affect salmon in less obvious, ripple-effect ways.*
    a. *Think about your species and where you might fit on this spectrum*
    b. Give students 2–3 minutes to choose a spot and chat with nearby classmates about their reasoning.
    c. Ask a few students from different parts of the line to share their explanation for the spot they chose.
2. Give students time to change their position after hearing from one another.
3. **Ask the whole group:** What did you notice about the types of species at each end?
    a. What patterns do you notice about the types of species at each end of the line?
    b. What does this show us about the different ways invasive species can harm salmon?"
    c. How might thinking about both direct *and* indirect effects help us prevent the spread or reduce the impacts of invasive species?

Invasive Mudsnail



Traits:

- Small — only 4–6 mm long (less than 0.2 inches)
- Shell opens on the right side
- Has a special "trapdoor" (operculum) that seals the shell, letting it survive out of water for days — even after being eaten
- Reproduces by cloning itself (no mate needed!)

Native Location: Lakes in New Zealand

How they got here: Introduced in trout stocked for trophy fishing in Idaho's Snake River during the 1980s.

Kletr/Adobe Stock

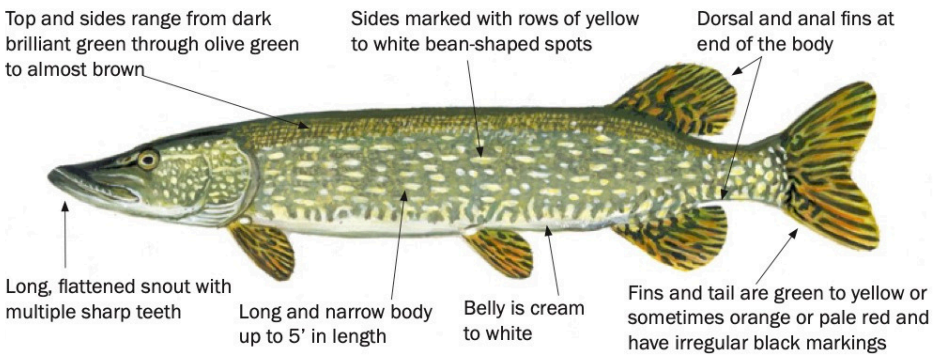
Invasive Northern Pike

Traits:

- Large predatory fish — up to 4.5 feet & weight up to 63 lbs
- Live between 7-15 years (some even to 20!)
- Olive green color with bean shaped spots
- Large mouth & sharp teeth
- Adult Pikes are voracious predators

Native Location:

Originally from the Great Lakes region, Alaska, Canada, and rivers and lakes of the Americas north of 40° latitude.



How they got here:

Northern Pike were illegally introduced into the Montana River in 1950s and the Coeur d'Alene river in the 1970s for trophy fishing. They have made their way throuout the Columbia river.

Invasive Mudsnail

Ecosystem Impacts:

- Eat algae and other tiny plants, competing with native macroinvertebrates and other small animals that salmon rely on for food.
- Juvenile salmon sometimes eat mudsnails — but they're hard to digest and can provide very litte energy.
- Eating too many mudsnails can make salmon weaker and less prepared for survival and migration.

Why these invasive species matter:

- Even tiny species can harm salmon by taking away good food sources or replacing them with low-quality ones.

Invasive Northern Pike

Large mouth and sharp teeth make pikes vicious predators.

Ecosystem Impacts:

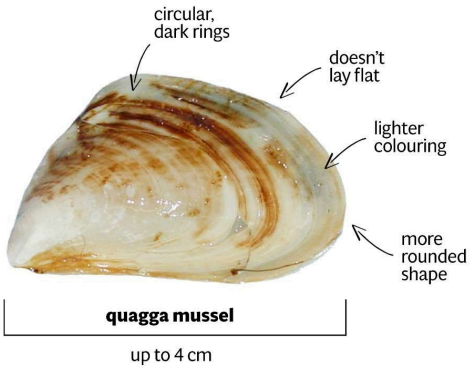
- Eat juvenile salmon, trout, lamprey, and other native fish.
- Eat or outcompete native predator fish, changing the balance of the food web.
- Can reduce populations of other fish that salmon depend on for a healthy ecosystem.

Why these invasive species matter:

- A single large Northern Pike can eat dozens of young salmon, and their presence can change the entire food chain in a river or lake.

Juvenile pike have yellow stripes along a green body

Invasive Quagga Mussel



Traits:

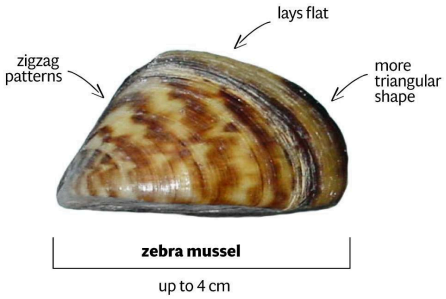
- Tiny freshwater mussel - 1 inch
- Light and dark orange & brown banding on the shell.
- Excellent filter feeders — remove plankton (tiny floating plants and animals) from the water.
- Release waste called pseudofeces that uses up oxygen when it decomposes and makes water more acidic.

Native Location: Dnieper River (Ukraine) and Ponto-Caspian Sea

How they got here: Arrived in the Great Lakes in ballast water from ocean ships.

Not yet in Oregon but will eventually travel through the Columbia river from the Snake

Invasive Zebra Mussel



Traits:

- Small freshwater mussel - .5 - 2 inches
- Light and dark stripes on the shell
- Excellent filter feeders — remove plankton (tiny floating plants and animals) from the water.
- Release waste called pseudofeces that uses up oxygen when it decomposes and makes water more acidic.

Native Location:
Freshwater rivers and lakes in Eastern Europe and western Asia.

How they got here:
Arrived in the Great Lakes in ballast water from ocean ships.

Not yet in Oregon but will eventually travel through the Columbia river from the Snake.

Invasive Quagga Mussel

Quagga mussels take over habitats very quickly.
It only took 3 months for this shoe to be covered!

Ecosystem Impacts:

- Clear the water by removing algae, which lets more sunlight in. This can help invasive plants like milfoil grow and take over.
- Remove so much plankton that there's less food for zooplankton and macroinvertebrates — important salmon food sources.
- Reduce the base of the food web, which impacts other macroinvertebrates that juvenile salmon rely on for food, growth, and survival.

Why these invasive species matter:

Quagga mussels can dramatically change water ecosystems, taking away food for salmon and making it easier for other invasive species to spread.

Invasive Zebra Mussel

Quagga mussels take over habitats very quickly.
It only took 3 months for this shoe to be covered!

Ecosystem Impacts:

- Clear the water by removing algae, which lets more sunlight in. This can help invasive plants like milfoil grow and take over.
- Remove so much plankton that there's less food for zooplankton and macroinvertebrates — important salmon food sources.

- Can cover stream beds affecting available spawning habitat and even attaching himself to native mussels in the river making it impossible for native mussels to function.

Why these invasive species matter:

Zebra mussels spread quickly and take over waterways, taking away food sources that salmon and other species depend on. By changing food webs and clogging habitats, they make ecosystems less healthy and less supportive for salmon.

Invasive Milfoil

Traits:

- Aquatic plant with long stems (up to 20 feet) and feathery leaves in whorls around the stem.
- Forms dense mats at the water surface
- Can reproduce from tiny stem fragments — even a small piece can grow into a new plant.
- Grows quickly and can spread by clinging to boats, trailers, or fishing gear.

Native Location: Europe, Asia, and northern Africa.

How they got here:

Likely introduced to the U.S. through the aquarium trade and by boats carrying plant fragments. Now found across lakes, rivers, and reservoirs in many states.

Scotch Broom

Eric Coombs
Oregon Dept. of Agriculture

Traits:

- Shrub with bright yellow flowers, grows up to 10 feet tall
- Produces thousands of seeds each year that can survive in soil for decades
- Spreads quickly in open areas and disturbed soils

Native Location:

Europe

How they got here:

Brought to North America in the 1800s for ornamental gardens and erosion control.

Invasive Milfoil


J. Parsons

Eurasian watermilfoil taking over a lake.

Ecosystem Impacts:

- Dense mats block sunlight, crowding out native aquatic plants that provide better habitat for salmon and macroinvertebrates
- Reduces oxygen in the water when thick mats die and decompose
- Juvenile salmon and other fish may struggle to find food and safe places to hide when milfoil takes over
- Can also tangle with boats, fishing lines, and swimmers — making waterways harder to use

Why these invasive species matter:

When milfoil spreads, it changes whole waterways — making it harder for salmon to find food and shelter, and easier for other invasive species to take over.

Scotch Broom

Ecosystem Impacts:


Columbia Gorge CWMA

- Crowds out native plants by forming dense thickets
- Reduces open meadow and forest habitat that native pollinators and wildlife need
- Highly flammable — increases wildfire risk
- Indirectly harms salmon by reducing the diversity of riparian plants that shade and stabilize streams


John Gussman

Why these invasive species matter:

Scotch Broom changes whole landscapes by pushing out native plants and making salmon streams hotter and less stable.

Invasive Ivy

Oregon State University

Traits:

- Evergreen vine that climbs trees, fences, and buildings
- Can grow up to 90 feet long
- Spreads by both seeds and rooting stems

West Multnoma Soil & Water Conservation District

Native Location:

Europe and western Asia

How they got here:

Introduced as an ornamental garden plant for gardens and homes.

Invasive Knotweed

Tualatin Soil & Water Conservation District

Traits:

- Tall perennial plant (up to 10 feet) with bamboo-like stems
- Grows in dense patches along streams and roads
- Spreads aggressively from tiny root fragments

Native Location: East Asia (Japan, China, Korea)

How they got here:

Brought to North America in the 1800s as an ornamental plant and for erosion control.

Tualatin Soil & Water Conservation District

Invasive Ivy

Ecosystem Impacts:

- Smothers native plants on the forest floor
- Strangles and weakens trees by climbing and adding a heavy weight to the tree
- Blocks sunlight from reaching smaller plants
- Indirectly harms salmon by reducing the diversity and strength of riparian forests that protect streams


Oregon State University


Trees taken over by ivy fall over and die from the extra weight of the ivy.

Why these invasive species matter:

Ivy may look pretty, but it weakens forests, which reduces the healthy streamside habitat salmon depend on.

Invasive Knotweed

Ecosystem Impacts:

- Outcompetes native plants, especially along riverbanks
- Creates monocultures with poor root systems — leading to erosion and unstable streambanks
- Indirectly harms salmon by reducing shade, insects, and stable banks that young salmon need


Oregon State University

Why these invasive species matter:

Knotweed takes over stream edges, leaving salmon with less food, less shade, and weaker banks to protect their habitat.

Invasive Blackberry

Traits:

- Thorny shrub that grows into dense, tangled thickets
- Canes grow up to 20 feet long and root wherever they touch the ground
- Produces large amounts of berries and seeds spread by birds and mammals
- Very difficult to remove once established

Adam Blake, 2012

Native Location: Armenia and parts of western Asia

How they got here:

Introduced to North America in the late 1800s for fruit production and as a garden plant.

Invasive Blackberry

Ecosystem Impacts:

- Outcompetes native shrubs and plants, reducing plant diversity.
- Takes over streambanks and riparian areas, crowding out willows and other trees that provide shade for salmon streams.
- Dense thickets change wildlife habitat, favoring some animals but reducing space for others.
- Indirectly harms salmon by reducing shade, food sources, and stable streamside vegetation

Blackberry can take over and smother native plants.

Why these invasive species matter:

Blackberry thickets may provide tasty fruit, but they take over streambanks and reduce the healthy riparian forests salmon need to survive.