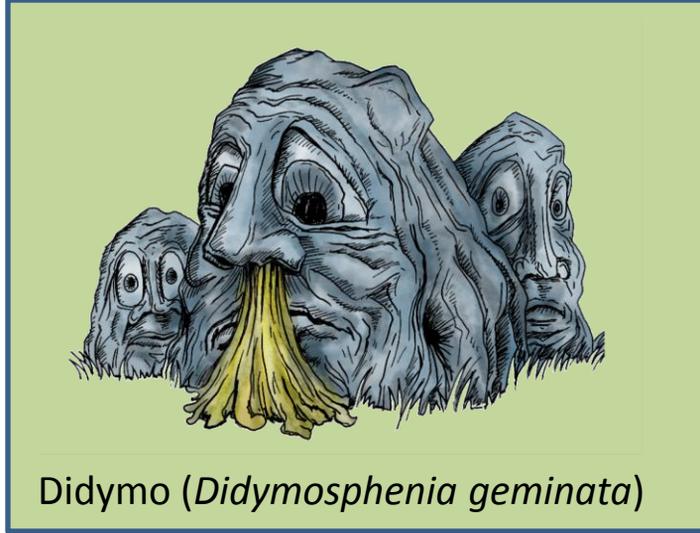
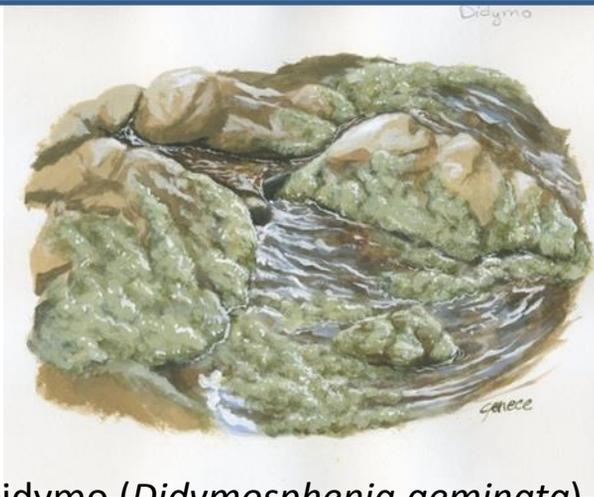


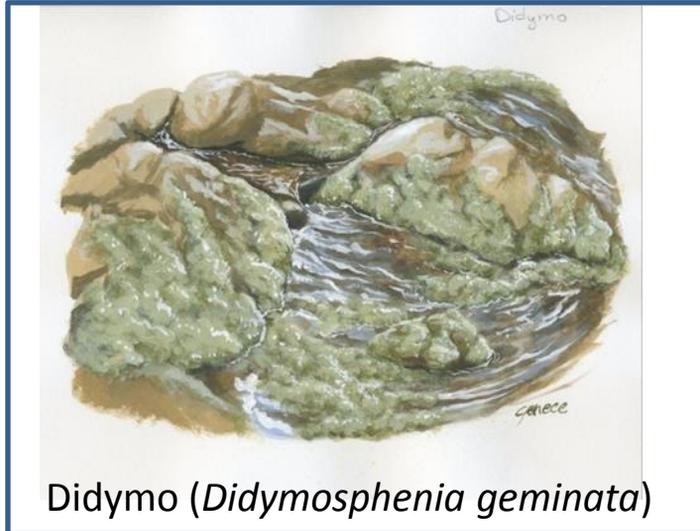
Didymo (*Didymosphenia geminata*)



Didymo (*Didymosphenia geminata*)



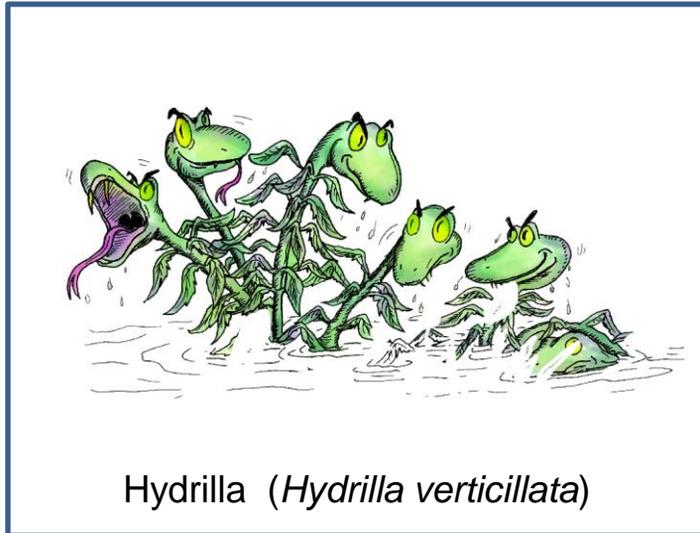
Didymo (*Didymosphenia geminata*)



Didymo (*Didymosphenia geminata*)



Hydrilla (*Hydrilla verticillata*)



Hydrilla (*Hydrilla verticillata*)

Native to: Northern regions of Europe (Faroe Islands, Sweden, Finland) and Asia (Kanchou region of China)

Also known as rock snot. Didymo is a freshwater diatom (type of algae) that uses a stalk to attach itself to rocks and plants in rivers and streams.

Introduced to: Chile

Didymo can survive outside of water in a damp cool environment for at least 40 days. Only one individual cell is needed to spread Didymo into a new water body.

Introduced to: New Zealand

The original introduction pathway is unknown, but likely spread by transporting the plant material in recreational gear (boats, fishing equipment) and clothing (life jacket, waders or boots).

Introduced to: South Dakota

The stalk material of Didymo forms thick mats that can completely cover substrate and take over the stream bottom smothering aquatic plants, insects and mollusks, reducing fish habitat and food.

Introduced to: Florida

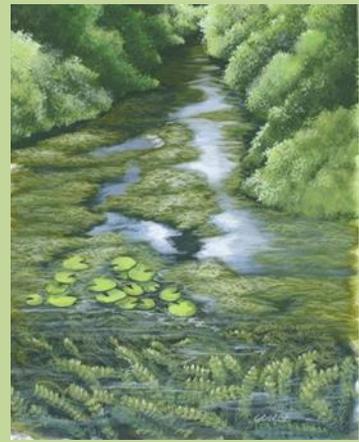
Hydrilla is named after the nine-headed serpent of Greek mythology because it can grow a new plant from a tiny stem fragment.

Introduced to: California

Boating, fishing, bait shipment, irrigation and aquaculture are secondary pathways that spread hydrilla.



Hydrilla (*Hydrilla verticillata*)



Hydrilla (*Hydrilla verticillata*)



Bullfrog (*Lithobates catesbeiana*)



Bullfrog (*Lithobates catesbeiana*)



Bullfrog (*Lithobates catesbeiana*)



Bullfrog (*Lithobates catesbeiana*)

Native to: Asia (India, Korea)
and Australia

Hydrilla is a popular aquarium plant. The dumping of household aquariums has introduced Hydrilla to aquatic ecosystems throughout the world.

Introduced to: Washington

Hydrilla produces dense mats and spreads rapidly, crowding out native vegetation, reducing water quality, disrupting the aquatic food chain and ecology.

Native to: Central and eastern U.S.

An aquatic frog that can be found in streams, rivers, ditches, marshes, ponds, lakes and reservoirs. The bullfrog prefers water with thick vegetation.

Introduced to: Western U.S.
(including OR & WA)

Introduced to Oregon in early 1900's as a food item (frog legs). Also introduced through aquarium trade, pet releases, intentionally stocked as a biocontrol agent of insect pests and released accidentally during trout stocking.

Introduced to: Cuba

Adults are voracious predators and will consume anything that will fit in their mouth including: birds, rodents, frogs, snakes, crayfish, turtles, lizards, bats and their own young.

Introduced to: Jamaica

Bullfrog prey on and/or compete with native frog species for food and habitat. They can out-reproduce native populations and may transmit disease to native species.



Nutria (*Myocastor coypus*)



Nutria (*Myocastor coypus*)



Nutria (*Myocastor coypus*)



Nutria (*Myocastor coypus*)



Chinese mitten crab (*Eriocheir sinensis*)



Chinese mitten crab (*Eriocheir sinensis*)

Native to: Argentina

The nutria is a large semi-aquatic rodent that lives in colonies along rivers, lakes and wetlands. The word "nutria" is Spanish for otter.

Introduced to: Texas

Nutria can grow to 15-20 pounds and are opportunistic herbivores, consuming roughly 25 percent of their body weight in vegetation each day.

Introduced to: Portland, OR

Nutria were originally introduced for fur production in 1889. When the fur market collapsed in the 1940's, 1000's of nutria were released into the wild.

Introduced to: Italy

Nutria feeding habits can destroy native aquatic vegetation, crops and wetland areas. Nutria burrowing and riparian grazing cause streambank instability and erosion. They also are host to a variety of parasites and pathogens.

Native to: South Korea

The mitten crab is named for the dense patches of hairs on its two front claws.

Introduced to: England

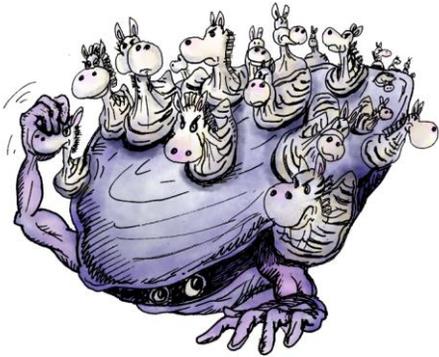
The mitten crab was introduced through ballast water discharge and/or intentionally as a food source.



Chinese mitten crab (*Eriocheir sinensis*)



Zebra mussel (*Dreissena polymorpha*)



Zebra mussel (*Dreissena polymorpha*)



Zebra mussel (*Dreissena polymorpha*)



Zebra mussel (*Dreissena polymorpha*)

Native to: Caspian Sea

Zebra mussels are striped, fingernail-sized mussels. They reproduce quickly - females can produce 40,000 eggs in one spawning and up to a million eggs annually.

Introduced to: San Francisco Bay

Mitten crabs migrate in late spring, often very long distances. They are adept walkers on land and will leave the water to walk around barriers.

Introduced to: Lake Michigan

Zebra mussels were introduced to the Great Lakes as planktonic larvae in the ballast water of cargo ships. Other vectors of spread include aquarium dumping, transport of contaminated boats and recreational gear, fish stocking and aquaculture.

Introduced to: Louisiana

Zebra mussels produce a strong threadlike material called "byssal threads". These threads enable them to attach to many surfaces such as boat hulls or the shells of other animals.

Introduced to: Spain

Zebra mussels have cost millions of dollars in damage in areas where they clog facilities at power plants, water utilities, fish ladders, navigation locks and dams.



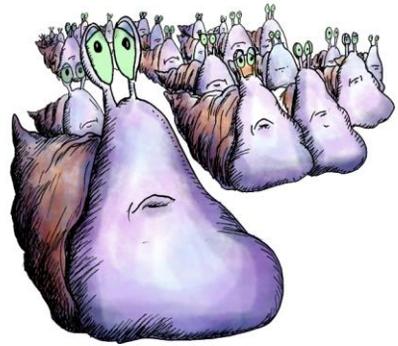
New Zealand mudsnail
(*Potamopyrgus antipodarum*)



New Zealand mudsnail
(*Potamopyrgus antipodarum*)



New Zealand mudsnail
(*Potamopyrgus antipodarum*)



New Zealand mudsnail
(*Potamopyrgus antipodarum*)



Common carp (*Cyprinus carpio*)



Common carp (*Cyprinus carpio*)

Native to: New Zealand

The New Zealand mudsnail is a tiny aquatic snail (3-6 mm in length) that is adaptable to diverse climatic and environmental conditions.

Introduced to: Australia

The New Zealand mudsnail is often introduced through ballast water discharge or the transport of live fish or eggs for the commercial aquaculture industry.

Introduced to: Idaho

New Zealand mudsnail populations in the United States are made up entirely of females that reproduce by cloning themselves. A single female has the reproductive potential to establish a new population.

Introduced to: England

The New Zealand mudsnail has a thick shell wall and rigid operculum that is used to seal off the shell opening which may allow the snail to pass through the digestive tract of predators alive and unharmed.

Native to: Caspian Sea

The common carp is considered a nuisance species because of its tendency to destroy vegetation and increase water turbidity by dislodging plants and rooting around in the substrate.

Introduced to: California

The common carp was widely introduced as a food fish.



Common carp (*Cyprinus carpio*)



Purple loosestrife (*Lythrum salicaria*)



Purple loosestrife (*Lythrum salicaria*)



Purple loosestrife (*Lythrum salicaria*)



Purple loosestrife (*Lythrum salicaria*)

Introduced to: Mexico

The common carp is omnivorous feeding on aquatic plants, algae, insect/fish larvae, crustaceans, mollusks and even small fish.

Native to: Europe and Asia

Purple loosestrife is a tall, perennial herb with pretty purple flowers that can be found in wetlands, marshes, along river and stream banks, pond edges, reservoirs and ditches.

Introduced to: Ethiopia

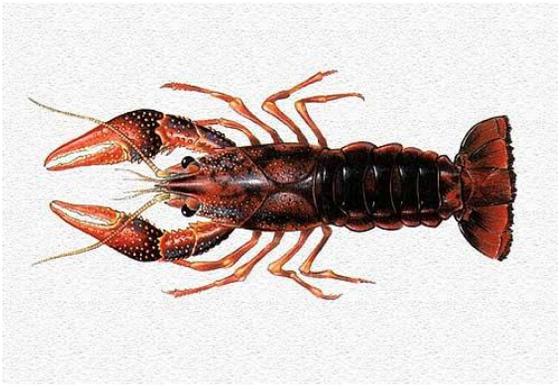
Purple loosestrife is a highly competitive plant that is capable of rapid growth and spread. Purple loosestrife displaces native plant species, reduces biodiversity, degrades wetland habitats and chokes irrigation channels and waterways.

Introduced to: Australia

Purple loosestrife was brought to North America by settlers for medicinal purposes, for flower gardens, and in the ballast holds of European ships that used soil to weigh down the vessels for stability in the ocean.

Introduced to: Pennsylvania

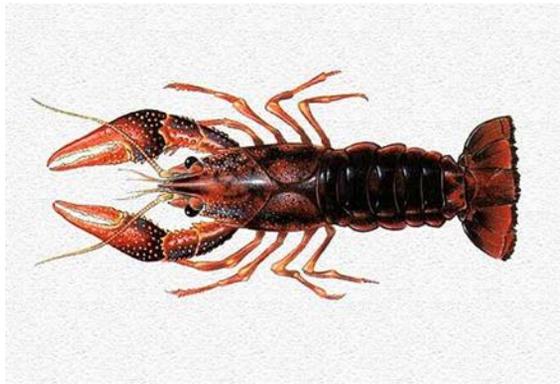
Purple loosestrife is a popular ornamental plant. Garden horticulture has frequently introduced it to nearby natural areas.



Red swamp crayfish
(*Procambarus clarkii*)



Red swamp crayfish
(*Procambarus clarkii*)



Red swamp crayfish
(*Procambarus clarkii*)



Red swamp crayfish
(*Procambarus clarkii*)



Red-eared slider
(*Trachemys scripta elegans*)



Red-eared slider
(*Trachemys scripta elegans*)

Native to: Southeastern U.S.

The red swamp crayfish is a large warm-water crayfish that is most commonly found in slow flowing rivers and streams, marshes, lakes, reservoirs and irrigation systems.

Introduced to: Kenya

Red swamp crayfish are dark red with raised, bright red spots covering the body and claws.

Introduced to: Japan

Red swamp crayfish may outcompete native crayfish for food and habitat. Red swamp crayfish are also known to weaken stream banks through extensive burrowing, leading to erosion and stream sedimentation.

Introduced to: Western U.S.
(including OR & WA)

The red swamp crayfish was introduced intentionally to create a food source. Red swamp crayfish have also been released from personal aquariums, classroom science projects or released as live bait by fishermen.

Native to: South-central U.S.

The red-eared slider is a medium-sized turtle with a noticeable red or orange stripe behind each eye.

Introduced to: The Middle East

The red-eared slider is generally introduced to new areas by pet owners "setting them free".



Red-eared slider
(*Trachemys scripta elegans*)



Red-eared slider
(*Trachemys scripta elegans*)



Introduced to: South Africa

Red-eared sliders compete with smaller native turtle species for nesting areas, basking sites and food sources. Pet turtles often carry parasites or disease that can devastate native turtle populations if released into the wild.

Introduced to: Western U.S.
(including OR & WA)

The red-eared slider's lifespan can exceed 20 years, and it can reach a shell length of nearly 30 cm (12 inches).

