



# WILD Kids



7-12

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## Introduced species: Are we sorry we invited them?

The introduction of non-native plants and animals in Arizona is not a recent event; it's been going on for thousands of years. Native Americans introduced a small number of species, but species introductions increased rapidly with the arrival of Europeans in the Southwest. Livestock, food crops, landscape plants, and animals for sporting opportunities for hunters and anglers were intentionally introduced to benefit people. Other species were accidentally introduced or

were introduced with good intentions, but turned out to be bad choices.

Not all introduced species are harmful, but some are causing serious problems for native plants and animals, especially those that are already threatened by habitat loss, disease or other threats. Introduced species that are so well adapted to their new environments that they interfere with and displace native species, are called *invasive*.

### Who are the problems?

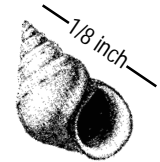
**Giant salvinia** is an aquatic fern from South America that was probably introduced as an ornamental pond or aquarium plant. This fast-growing fern can double in size in a few days. It is now found in the lower Colorado River, where it forms thick floating mats that block sunlight and oxygen, choking out aquatic life. Giant salvinia is an invasive plant.

**Hydrilla**, native to Eurasia and North Africa, is an aquatic plant that spreads quickly through waterways, diminishing water quality and degrading aquatic habitat. Hydrilla and giant salvinia spread by fragmented plant parts, which are dispersed by human activities such as boating and fishing. Both plants are included on the *Arizona Department of Agriculture's List of Noxious Weeds* - plants that are prohibited from entry into the state unless accompanied by the appropriate federal and state permits.

**Red brome**, an invasive grass, is native to the Mediterranean region, but is now found throughout the Sonoran Desert. Whereas red brome grows back vigorously after a fire, Sonoran desert vegetation is not adapted to fire and can be destroyed by even a single fire.

**Crayfish**, were introduced in the 1960s to control aquatic vegetation. They compete with, and prey upon, native fish and other aquatic wildlife, which evolved without such predators.

The **New Zealand mudsnail** is only 1/8 of an inch in length, but has rapidly spread through U.S. waterways. First discovered in the 1980s, in rivers in Idaho and Montana, this tiny snail is now found in the Colorado River, around Lees Ferry. It reproduces asexually - meaning one snail can reproduce offspring on its own, and can reach very high densities, *as many as a half a million per square meter!* This snail competes with other native wildlife for nutrients, food, and space. It provides very little or no food value to fish and other aquatic life and is an invasive species.



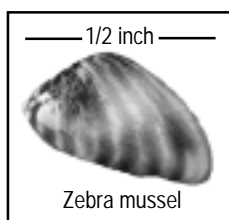
New Zealand mudsnail

*The addition or removal of a species from an ecological community will create positive and/or negative influences within the environment.*

**Bullfrogs** were introduced into Arizona waterways as a food animal in 1926. They quickly multiplied and spread, before people realized the damage they could do. Bullfrogs are prolific breeders that eat anything they can catch, including fish, other frogs, turtles, snakes, and small rodents.

The **zebra mussel**, originally from the Caspian Sea, has not yet found its way into Arizona waterways. It was first discovered in North America in 1986, and by 1990 it was observed in all of the Great Lakes. It probably arrived there as a result of ballast water introduction. Zebra mussels reproduce at a phenomenal rate; a fe-

male can release up to one million eggs each season! They spread on boat hulls and on aquatic plants, and can have devastating effects on industrial/public drinking water supplies and power plants, costing billions of dollars to control.



To prevent the spread of zebra mussels, inspect your boat and boating equipment and remove any plants or animals before leaving any water access. Public assistance in reporting zebra mussel sightings is necessary to help prevent its spread into our waters. If you see a boat or other equipment encrusted with these striped clam shells, get a good description, and the location, and call the Arizona Game and Fish Department's Fisheries Branch right away! To read about other things you can do to help, read this issue's WILD Kids, 4-6.

Species of Arizona Wildlife		
	Native	Non-native
Fish		
Freshwater	30	50
Saltwater	2	0
Amphibians	25	4
Reptiles	95	4
Birds		
Raptors	42	0
Nonraptors	460	5
Mammals	134	11
Total	788	74

## What's being done about invasive and nuisance species?

The *National Invasive Species Act of 1996* re-authorizes and amends the Non-indigenous Aquatic Nuisance Prevention and Control Act of 1990 (the "Zebra Mussel Act"). It expands the scope of the Act beyond the zebra mussel and ballast water, and begins to "address introductions and infestations of non-indigenous aquatic species that may be as destructive as the zebra mussel."

The *Arizona Game and Fish Department's Wildlife Laws and Rules* include restrictions on transporting and releasing certain types of wildlife. For example, crayfish can be used as bait, but individuals must capture them at the lake or stream where they will be using them. If crayfish are transported, they should be transported dead. This applies to all areas of the state, except for a small area in southwestern Arizona. Anglers are still encouraged to harvest crayfish, but must transport them dead. (website: [azgfd.com](http://azgfd.com))

The Arizona Game and Fish Department has also placed signs along the Colorado River, from Yuma to Bullhead City, to warn boaters and other recreational users about aquatic nuisance species. The signs are designed to inform boaters, anglers and other water recreators about the "do's" and "don'ts" that will help

keep nuisance species from entering and spreading throughout Arizona. Some of Arizona's nuisance species include the plants giant salvinia, hydrilla and Eurasian water milfoil and animals like the New Zealand mudsnail.

The U.S. Fish and Wildlife Service's *Invasive Species Program* monitors invasive species. Check their website: <http://invasivefws.gov/>.

The Arizona Department of Agriculture is responsible for preventing the introduction and spread of noxious weeds and dangerous plant pests in Arizona. Their website is <http://agriculture.state.az.us/PSD/quarantine2.htm>.

The *Arizona State Aquatic Nuisance Management Plan* website provides a list of non-native species of concern in Arizona, <http://ag.arizona.edu/azaqua/extension/ANS/ArizonaPlan.htm>.

1. Write a report on an invasive species or noxious weed in Arizona. Include where the species came from, how it got here, why it is so successful in Arizona, its impacts on native species, and what actions, if any, are being taken to control it. Use the websites listed above or other resources.