

NOBLE NEWS & VIEWS



PONDS

Think Before Putting Fish, Plants, Water and More in a Pond



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People unintentionally harm pond environments by releasing inappropriate fish, dumping aquarium organisms, transferring water from a river or using contaminated equipment. Inappropriate organisms, or the microscopic hitchhikers on them, in associated water or on equipment can create havoc in a pond, such as harming desired fish populations, introducing diseases or establishing invasive species.

KNOW YOUR SOURCE

Sources of fish or aquatic plants should be carefully evaluated before stocking a pond. Unseen harmful organisms might be attached to fish or plants, or be present in the associated water. Examples include largemouth bass virus, golden algae, zebra mussels, undesirable bacteria, ich (white spot disease), tapeworms,

anchor parasites, fish lice and many others. Fish acquired from reputable hatcheries seldom have these unwelcome hitchhikers because such organisms interfere with fish production in a hatchery, so most hatcheries actively work to prevent them. Fish transferred from a private pond might represent acceptable risk when a pond manager is familiar with the history of the source pond. However, such hitchhikers are common in public water sources such as lakes and rivers. Thus, transferring fish, plants or water from public lakes or rivers into naïve pond environments is generally not recommended. When such unwanted problems become established in a pond, elimination of the problematic organisms can be very difficult, sometimes nearly impossible. Therefore, prevention of these problems is very important.

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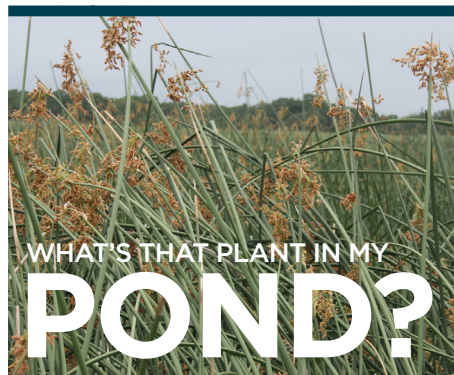
CONSIDER PREDATOR-PREY BALANCES

Fish stockings into a pond should be carefully planned and conducted only when approved by the pond's manager. Unplanned stockings can upset relatively delicate predator-prey balances.

Establishing another predator in a pond ecosystem (green sunfish, warmouth, crappie, blue catfish, flathead catfish, spotted gar, longnose gar, etc.) usually reduces biomass of largemouth bass and bluegill through competition by the additional predator and its predation on bass and bluegill. This may be an acceptable outcome when the additional predator fits the manager's goals for the pond. Otherwise, negative impacts on largemouth bass and bluegill usually are undesirable consequences of the additional predator.

DON'T RELEASE SEINED MINNOWS

When golden shiner or fathead minnow are healthy, sourced from a reputable hatchery and desired by the pond's manager, releasing them as leftover bait might be acceptable. However, a manager might not want golden shiner in a pond because it can grow to 9 inches long and compete with bluegill for food. Minnows seined from a river or another impoundment should not be released into a pond because they often include undesirable microscopic hitchhikers and fish species other than golden shiner or fathead minnow. Several undesirable



Proper identification is the first step in making proper management decisions about aquatic vegetation. You can find help in identifying plants in your pond by using two Noble Research Institute resources available at bit.ly/aquatic-plant-images.

- Noble's Aquatic Plants Image Gallery
- Common Aquatic Vegetation in the Southern Great Plains

fish species, such as common carp, resemble typical bait minnows and can be unintentionally established in a pond by releasing seined bait into a pond.

TAKE CAUTION WITH NON-NATIVES

Many fish and plant species sold in the aquarium and water garden trade are not native to the United States. Non-native organism introductions typically cause

problems. Many aquatic invasive species problems probably were established in the United States via release of live aquarium or water garden organisms. Examples include goldfish, northern snakehead, armored catfish, walking catfish, Mozambique tilapia, oscar, hydrilla, water hyacinth, Brazilian egeria, parrot's feather and several others.

EXAMINE SOURCE IMPOUNDMENTS

Sometimes pond managers collect desired plants from local impoundments to establish them in their ponds. Source impoundments should be carefully examined to make sure they do not contain undesirable plant species because transfers of target plants usually transfer other plant species with the plant materials, soil and water transferred from the source impoundment.

CLEAN EQUIPMENT

Nets, waders, boats, trailers and equipment used in other water bodies should be cleaned and thoroughly dried for several days before using them in a pond because they also can transfer undesirable organisms into a pond.

KNOW YOUR RISK

People should consider risks when placing or releasing something into a pond and minimize the risks of introducing undesirable organisms. A little forethought and prevention can prevent many problems. 🐸