

Module 1 ~ Silent Invaders (MS/HS)

Invasive Plants Reading Activity



Name: _____ Class Period: _____ Date: _____

Directions: Read the passage and use the information you've learned to answer the questions below in complete sentences.

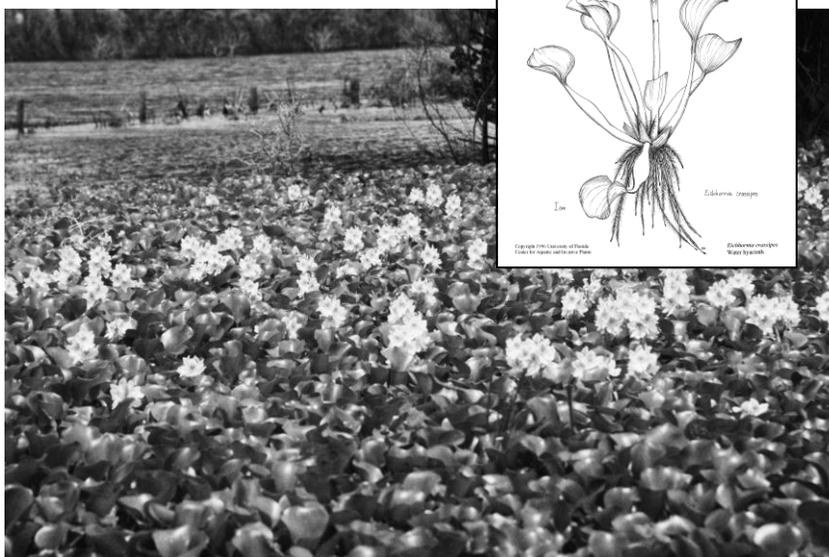
When a plant species is introduced to an area that is outside of its original or historic range, it is called a **non-native** plant. Non-native plants also are referred to as non-indigenous, alien, or exotic. Sometimes non-native plants are able to out-grow or replace native plant populations. This happens because the non-native plant has been taken away from its normal insect enemies, diseases, climate conditions and other stressors that keep it under control in its native range.

More than 1,000 non-native plant species can be found growing throughout Florida. The good news is that most of them do not cause a problem. Only about 130 non-native plant species are causing problems in our state's undeveloped (natural) areas. The bad news is that even one problem plant species can cost millions of dollars in damage. If not identified and controlled, they can spread rapidly and do a great deal of harm to our natural habitats and even to our local economies.

When a non-native plant species begins to behave like this, we consider it **invasive**. An **invasive plant** species is defined as "a non-native plant that is causing or is likely to cause economic or environmental harm, or harm to human health." For example: When left alone, **water hyacinth** reproduces and grows so fast that it can completely cover a river or lake (see the image above). When water hyacinth covers the top of a water body, it can deplete dissolved oxygen in the water, which fish and other organisms living in the water need (ecological harm). It also prevents boaters from using the lake and spending money in the community (economic harm). Water hyacinth is definitely an invasive plant!

Any species removed from its native habitat and introduced into a new ecosystem has the potential to become invasive. However, many do not. Those that **do** tend to become invasive share several common traits:

- They grow fast and spread across large areas.
- They are able to reproduce in several ways including seeds, buds, vegetative fragments, or from shoots that spread out from an underground root system.
- They can survive in a variety of different sunlight conditions and in a wide range of temperatures, water conditions, and soil types.
- They are difficult to control and nearly impossible to eradicate.



Above: Water hyacinth, an invasive plant, completely covers a portion of a lake.
Top insert: A line drawing of a single water hyacinth plant.



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Some invasive plant species plaguing Florida habitats include hydrilla, Brazilian pepper-tree, melaleuca, air potato vine, Old World climbing fern, and torpedo grass. Each of these was introduced to Florida through human activity, either intentionally or unintentionally. All are considered invasive because they damage ecosystems, displace native species, and cost businesses and governments large sums of money. **Torpedo grass**, imported from Africa and Asia, reproduces at a very high rate and quickly takes over wetlands. It spreads out along the edges of water bodies, easily out-competing and crowding out many native species. **Brazilian pepper-tree** crowds out native mangrove trees along the edges of Florida brackish water bodies and coastlines. **Melaleuca** trees, deliberately introduced from Australia to try to dry up wetlands in the Everglades for human use, are now devastating populations of native plants and disrupting flows of water.

Prevention is one of the most important tools for managing invasive plants. We can all help by being responsible land managers in our own yards and neighborhoods. It doesn't take long to learn to recognize plants that are invasive in our area, and it can be fun, too. Once we learn what they are, we can be careful not to plant them. There are lots of beautiful native plants to choose from as well as plenty of non-native, non-invasive plants. Helping to remove invasive plants from our state parks and natural areas can also be rewarding. There are a number of different organizations that work at the local level to organize volunteers for invasive-plant removal activities. These groups work in all sorts of habitats, from dry land to wetlands and water bodies – rivers, streams, lakes and swamps. Some groups focus exclusively on undeveloped or natural areas; others work in cities, towns and suburbs.

Plant managers use several control methods depending on the plant and its habitat:

- **Chemical control** is the use of specially-formulated herbicides registered with the U.S. EPA and the Florida Department of Agriculture and Consumer Services to kill or damage plants.
- **Biological control** is the use of imported insects, fish, and other organisms that eat, infect, or otherwise keep specific invasive plants at low levels. Before releasing such organisms, the United States Department of Agriculture and the Florida Department of Agriculture and Consumer Services must verify that biocontrols have proven to be host-specific, meaning they only live on and/or eat the targeted invasive plant.
- **Mechanical control** is the use of specially-made machines to harvest invasive plants by cutting them, collecting them, and transporting them to a designated place to decompose.
- **Physical control** includes hand-pulling, drawdowns (water removal), flooding, burning, dredging, and shading to control invasive plants.
- **Integrated Pest Management (IPM)** is a combination of two or more of the above methods. The integrated approach does not refer to a specific management technique, but rather a multi-strategy tactic that uses suitable and compatible techniques and methods to maintain exotic pest plant populations below levels that will cause significant economic and environmental damage.



