

# The Invasion of the Organisms

# **Invasive Species**

Alien invaders are pouring into America. But they aren't from outer space. They are Earth **organisms**, or life forms, that move into new areas and take over. We call them **invasive species**.

Invasive species are harmful organisms that are new to an area. Once they enter a new place, their numbers explode, wiping out native wildlife and destroying habitats.

The Mini Page talked with an invasive species expert from the USDA Forest Service to learn more about these destructive forces of nature.



Elm trees used to decorate America's city streets. Now most elms are gone. They were destroyed by Dutch elm disease, which was spread by an invasive species. It probably was carried to America from Asia in the 1930s. Experts believe it was brought here by beetles living in wooden furniture.



In the 1990s, Burmese pythons started damaging the Everglades in Florida. After pet owners released their snakes into the wild, the pythons began destroying the habitat. They eat endangered species and other animals such as dogs and cats, and they threaten people.

## The invaders

Invasive species are not native to an area. When they come into a new place, they can hurt people, the environment, wildlife or the economy. Many harmless species also come into new areas. But we do not call new species invasive unless they are harmful.

Invasive species can be animals, plants, fungi, insects, bacteria, viruses, seeds, spores or eggs. Harmful new species are invasive when they reproduce or spread quickly. Native organisms don't have a chance to develop defenses.

### Web of life

A healthy habitat contains many different species. Native plants and animals provide protection and food for one another. They help control the spread of other species, keeping everything in balance.

Invasive species can wipe out almost all other types of life. They upset the balance of nature.

Because they did not develop in the new lands, invasive plants don't provide shelter or food for native wildlife. Some are even poisonous. Invasive plants damage native plants that have supported local animals for hundreds of years.

Invasive species often prevent shrubs and trees from growing. This hurts the environment because large shrubs and trees take carbon dioxide from the atmosphere and release oxygen back into the atmosphere. This helps control global warming.



The purple loosestrife has invaded huge areas of wetlands. It pushes out native plants and forms tight groups that offer no cover or nesting spots for wildlife. The warming climate is allowing it to spread to new areas.

# Inviting in the Invaders

## **Damage**

Experts say that about 40 percent of threatened or endangered species are at risk because of invasive species. They are the second-greatest threat to marine and coastal ecosystems. (Habitat loss is the biggest threat.)

Sometimes non-native species can be helpful, even if they spread forcefully. For example, honeybees that farmers brought from Europe now pollinate many crops in the United States. But experts say that most wildly spreading non-native species cause more harm than good.



Zebra mussels came to the Great Lakes in ships from Europe about 30 years ago. They eat the food that native fish need. They damage water pipes, boats and beaches.



In 1890, a group released 60 European starlings in New York. They wanted to bring all the birds named in Shakespeare's writings to America. Now there are millions. Their droppings are breeding grounds for disease. They eat crops, and flocks can even cause airplanes to crash.

## How you can help

Be responsible. Don't take home pets such as snakes or baby alligators that will grow too big to keep. Take unwanted pets to a shelter; don't release them in the wild. Don't flush aquarium plants down the toilet. Do save energy and recycle.

## The human problem

Most invasive species come to new lands because humans bring them there. Sometimes humans bring them in accidentally. Invasive species can come on ships or planes or in wood products.

But often, people bring invasive species on purpose. They bring plants that remind them of their native lands, that can be used for familiar herbal remedies or that are pretty.

People buy non-native animals as pets, and the pets escape or people let them loose. Sometimes, people bring invasive species to do a job, but the new species gets out of hand and takes over. For example, people planted the multiflora rose as a hedge to keep in cattle, but it took over nearby habitats.

Climate change is causing species to move to new lands. As the climate warms, many insects are spreading north. For example, the mountain pine beetle is destroying forests.

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# Ready Resources

The Mini Page provides ideas for websites, books or other resources that will help you learn more about this week's topics.

### On the Web:

- glerl.noaa.gov/res/Programs/glansis/kids.html
- invasive.org
- bit.ly/1gjuDKh

## At the library:

- "Aliens From Earth: When Animals and Plants Invade Other Ecosystems" by Mary Batten
- "Planet Ark: Preserving Earth's Biodiversity" by Adrienne Mason

# Invasive Species N. N. W. E. N. N. H. S. E. S. N. E. E. D.



Words that remind us of invasive species are hidden in the block above. Some words are hidden backward or diagonally. See if you can find: BALANCE, BUG, CROP, DEFENSES, EAT, ELM, ENVIRONMENT, HABITAT, HURT, INVASIVE, KUDZU, LAND, LIFE, NATIVE, NEW, NUTRIA, ORGANISM, PET, PLANT, PYTHON, RISK, SPECIES, SPREAD, WEB.

The Mini Page®

Mini Spy

Mini Spy and the Dot twins are near a field of

kudzu. See if you can find: □ word MINI

 $\square$  dragon  $\square$  car  $\square$  squirrel  $\square$  letter D

 $\square$  basket  $\square$  frog  $\square$  number 6  $\square$  umbrella

□ elephant □ number 3 □ chicken □ ring



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# The Mini Page

Standards Spotlight: Invasive Species

Mini Page activities meet many state and national educational standards. Each week we identify standards that relate to The Mini Page's content and offer activities that will help your students reach them.

#### This week's standard:

• Students understand the relationship between organisms and the environment. (Science: Life Science)

#### **Activities:**

- 1. Make a poster with a large "No!" in the center. On the poster, paste newspaper words or pictures that describe invasive plants or animals.
- 2. In newspaper ads, find chemicals or equipment that are used to capture or destroy unwanted plants and/or animals. Does your family use any of these? Why?
- 3. Find three people in your newspaper whom you would go to for help with invasive species. Explain your choices.
- 4. How are these invasive: (a) kudzu, (b) rabbits, (c) starlings and (d) zebra mussels?
- 5. Write a story about an animal or plant that moves into your community and destroys the natural environment.

(standards by Dr. Sherrye D. Garrett, Texas A&M University-Corpus Christi)

# Rookie Cookie's Recipe Vegetable Edamame Salad

#### You'll need:

- 1 cup cooked edamame (shelled soybeans)
- 1 (16-ounce) bag frozen mixed vegetables (any kind)
- 1/2 cup light Italian dressing
- 1/3 cup sliced almonds

#### What to do:

- 1. Cook edamame in microwave according to directions.
- 2. Combine edamame with bag of frozen mixed vegetables (the vegetables will thaw as they chill in the refrigerator).
- 3. Pour light Italian dressing over mixture and stir to mix. Top with sliced almonds.
- 4. Chill for 4 hours to blend flavors. Stir again before serving. Makes 6 to 8 servings.

You will need an adult's help with this recipe.

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# **Meet Rico Rodriguez**



Rico Rodriguez is the voice of Olli in the PBS TV production of "The Cyberchase Movie." "Cyberchase" is a PBS TV series that explores math through animated adventures. The movie will also explore the impact of habitat loss. It will first air on PBS stations in April and will be at **pbskids.org.** 

Rico has acted in several commercials, in the video "How the Grinch Stole Christmas" and in movies such as "Opposite Day," "The

Muppets" and "The No-Sit List." TV shows he has acted in include "Modern Family" and "iCarly."

Rico, 15, was born in College Station, Texas. When he was 6, his family moved to Los Angeles so his sister Raini could work as an actress. When he was 7, he enrolled in acting classes himself.

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™ Mighty
Funnv's

# Mini Jokes

All the following jokes have something in common. Can you guess the common theme or category?

Carl: What did the doctor say to the patient who swallowed his camera? Cathy: "Let's just see what develops!"

**Cheryl:** What is the best way to borrow a camera?

Charles: Ask someone to lens it to you!

**Casper:** What do you get when you cross a mirror and a camera?

Carla: A camera that takes pictures of itself!



# **Horror Stories**

### Battle of the bunnies

One of the scariest stories about an invasive species concerns gentle little rabbits. In 1859, a man released 24 wild rabbits in Australia so people could hunt and eat them.

Ten years later, there were millions of rabbits. Rabbits reproduce rapidly, and there were no natural predators to keep them in check.

Experts say the rabbits caused the extinction of many mammal species in Australia and the extinction of huge numbers of plant species.

The rabbits damaged the environment. Because they ate the plants that held the soil in place, the rabbits sped up soil erosion.



Rabbits are still a major problem in Australia.

The Mini Page thanks Dr. James H. Miller, emeritus research ecologist, Invasive Plant Research, USDA Forest Service, for help with this issue.



Kudzu grows over anything in its path, including trees. It now covers about 7 million acres in the Southeast. As the climate warms, it is spreading north.

## Attack of the pretty plant

In the 1920s and 1930s, extreme farming and building had **eroded**, or worn away, the soil. Huge clouds of dust blew through the Midwest during the Dust Bowl.

Government officials knew a vine called **kudzu** (CUD-zoo) grew fast. Hoping its roots would stop soil erosion, they brought in enough seeds for farmers to plant 3 million acres of kudzu. What they didn't know was that it would take over everything around it, killing trees and other plants.

An insect that can help control kudzu entered the country accidentally in about 2009, probably in packing material. The kudzu bug does get rid of kudzu. But unfortunately, it is also invasive.

The kudzu bug also feeds on soybeans. During the winter, it settles on white houses, cars and trucks. It smells bad and is hard to get rid of.

## Controlling invasive species

Most attempts to control invasive species fail. Insecticides and herbicides often poison native plants and animals and may harm crops and people. Controls such as insects can become pests themselves.

Sometimes people try many different solutions. For example, the **nutria** (NEW-tree-uh) is destroying wetlands on the East Coast. Fur traders brought it from South America in about 1940.

In Louisiana, officials brought in a chef to create tasty nutria recipes. In Great Britain, a huge trapping effort captured all the nutria. In Maryland, officials are trying to find ways to disrupt the nutria's life cycle.



The nutria, a giant rodent, eats the roots of marsh plants. It destroys thousands of acres of wetlands every year.

Look through your newspaper for stories about invasive species.

Next week, The Mini Page celebrates Mother's Day with a story about America's founding mothers.