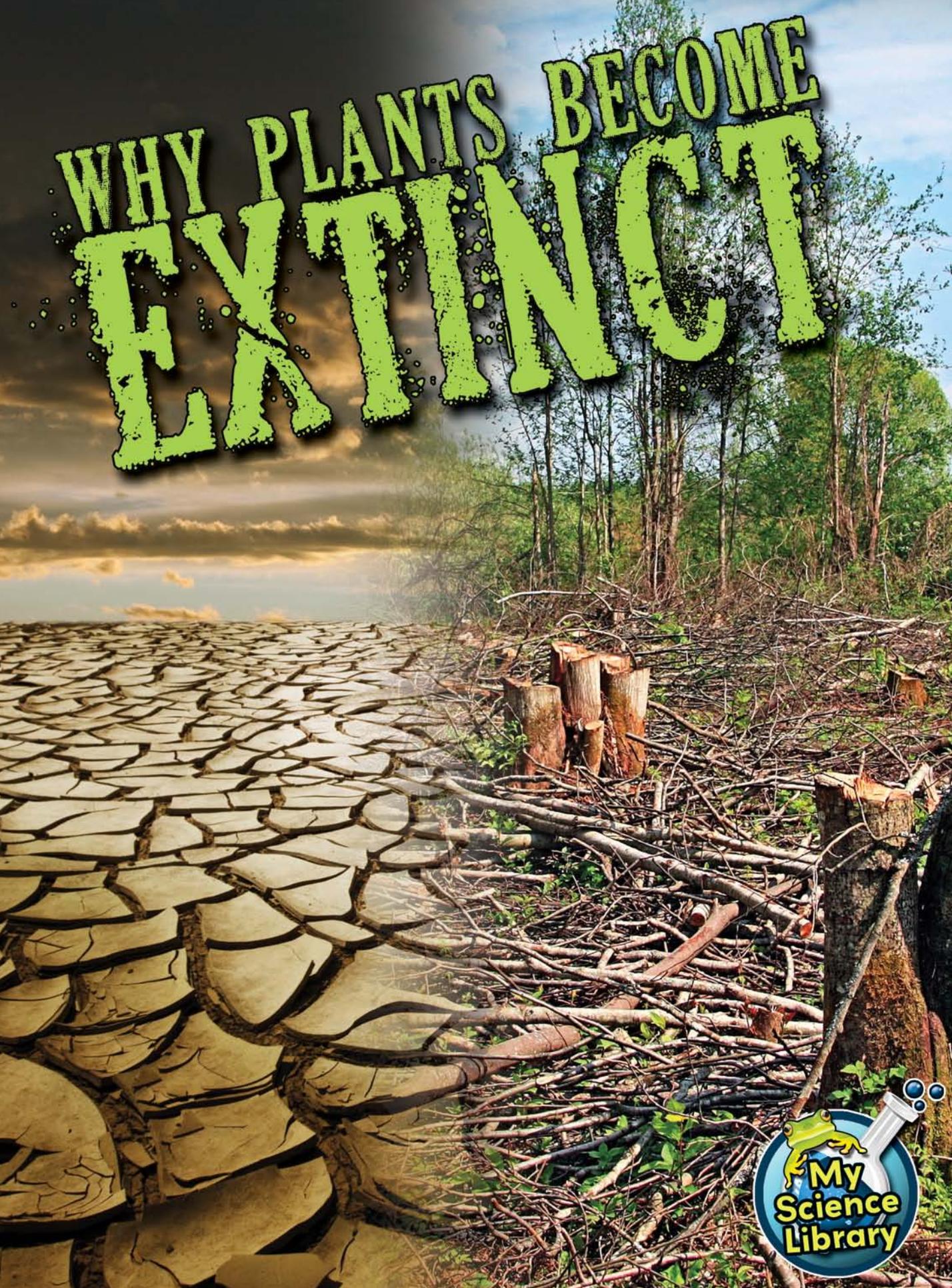


WHY PLANTS BECOME EXTINCT



Level: Q Word Count: 509
100th Word: *nutrients* (page 5)

Teaching Focus:

Text Features: Captions

A caption gives the reader more information about the photograph in the book. How does a caption help you to understand the topic of this book? Look for more captions in this book as you read about plants.

Tips on Reading This Book with Children:

1. Read the title and make predictions about the story.

Predictions – after reading the title have students make predictions about the book.

2. Take a picture walk.

Talk about the pictures in the book. Implant the vocabulary as you take the picture walk.

Have students find one or two words they know as they do a picture walk.

3. Have students read the first page of text with you.

4. Have students read the remaining text aloud.

5. Strategy Talk – use to assist students while reading.

- Get your mouth ready
- Look at the picture
- Think...does it make sense
- Think...does it look right
- Think...does it sound right
- Chunk it – by looking for a part you know

6. Read it again.

7. Complete the activities at the end of the book.



Why Plants Become Extinct

by Julie K. Lundgren

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Shirley Duke

Rourke
Educational Media

rourkeeducationalmedia.com



Teacher Notes available at
rem4teachers.com

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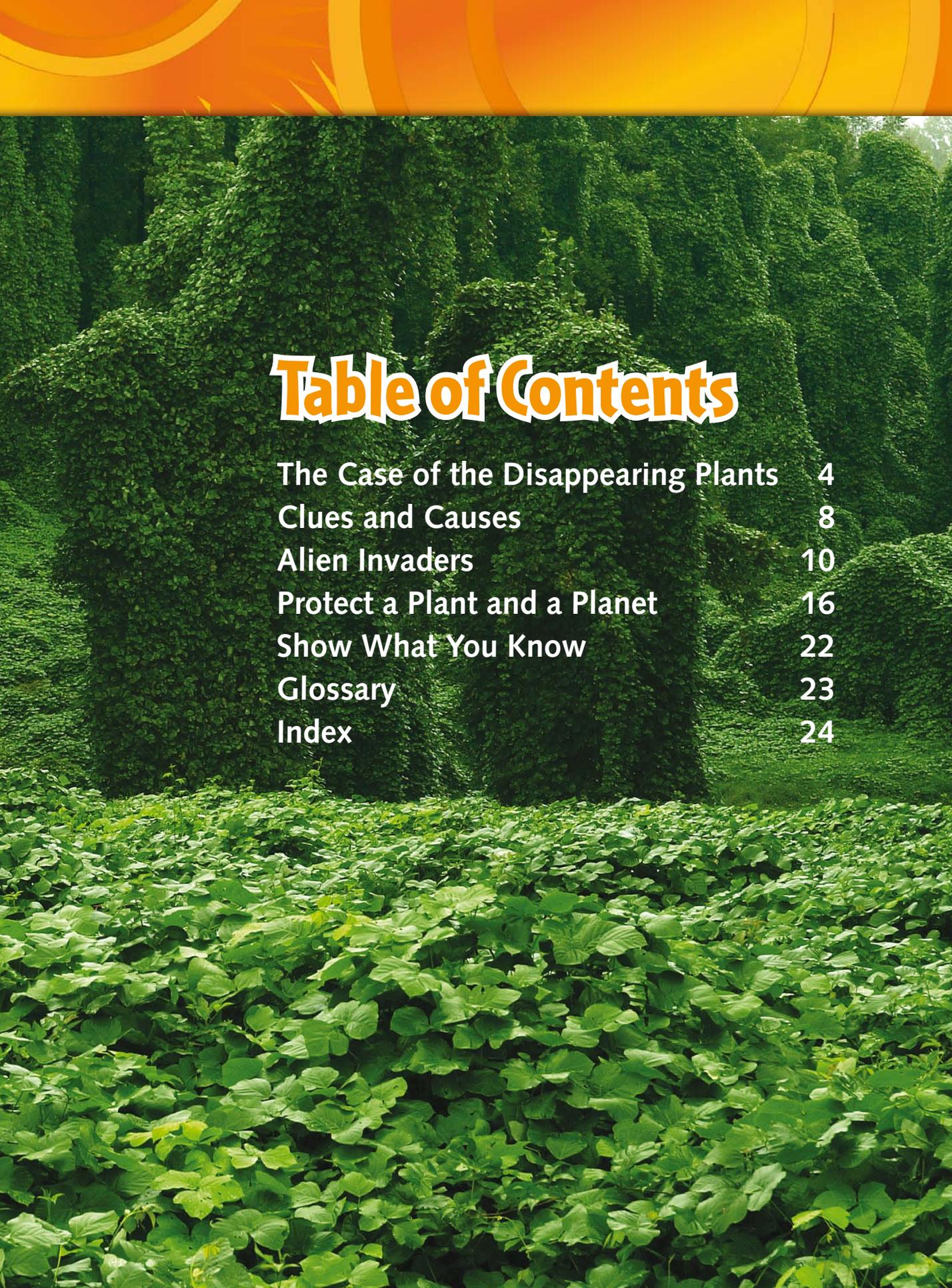


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The Case of the Disappearing Plants

Calling all detectives! Plants everywhere have gone missing. **Extinction** threatens many others. **Habitats** containing hundreds of plants found nowhere else on Earth face danger, particularly plants in rainforests, on islands, and along shorelines. One in five of Earth's plant **species** is at risk of extinction.



4

Plant fossils give scientists clues about what Earth's climate was like when the plants lived.



The overall increase in Earth's temperature causes ocean water levels to rise, flooding shoreline plants.

Throughout Earth's history, plant extinctions have happened as a natural part of a changing planet. Vast seas containing prehistoric saltwater plant life once covered most of central North America where grasslands and forests now grow. As Earth's land and **climate** changed over millions of years, plants changed, too. They developed new ways to reproduce, take in **nutrients**, and gather sunlight more efficiently.

Slow habitat changes give plants time to develop new **adaptations**. Recent changes have happened much too quickly for many plants to adapt.

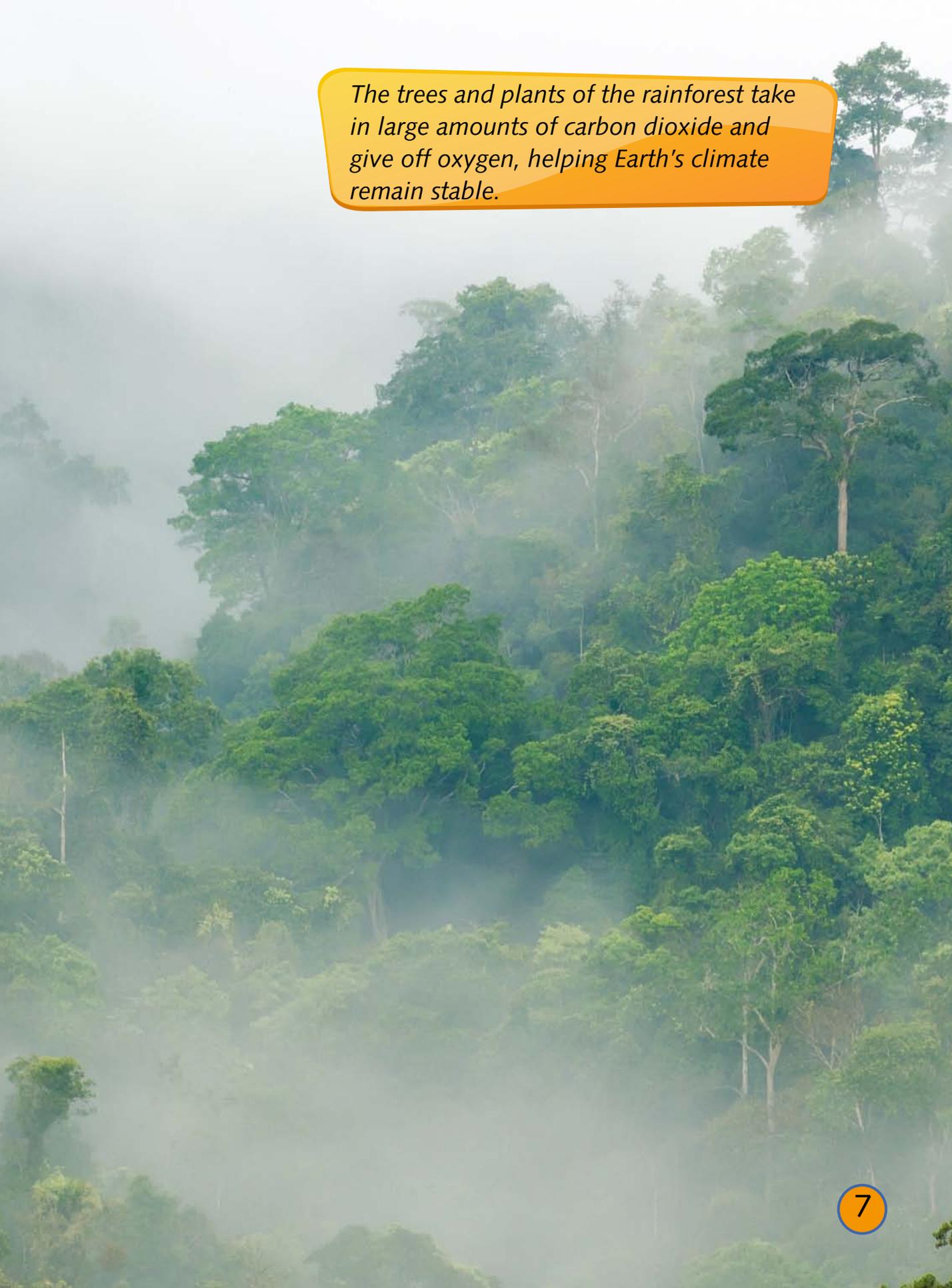
We depend on plants for food and oxygen. We use plants for fuel, building materials, and medicine.

RED ALERT! We need to solve the mystery of the disappearing plants quickly before more become extinct.



The bark of the rare Florida yew, a tree found only along a short stretch of a single river in northwestern Florida, contains an ingredient that may fight cancer. When plant species disappear, we lose their special ingredients.





The trees and plants of the rainforest take in large amounts of carbon dioxide and give off oxygen, helping Earth's climate remain stable.

Clues and Causes

Ecologists, the scientists who study the connections between plants, animals, and the places they live, study changes in the populations of living things. They have identified several main reasons for plant losses, all caused by people.

Found only on the island of St. Helena, the St. Helena olive tree became extinct because of deforestation and overgrazing by cattle.





Deforestation, or the widespread practice of harvesting a forest without replanting, occurred frequently in early America. Today's deforestation more often occurs in places like tropical rainforests.

The number of people on Earth increases each year. People remove forests and grasslands for farming and for timber to meet increasing human needs. Deforestation and overgrazing by cattle cause major plant habitat loss.

Alien Invaders

People sometimes bring plants from one place to another. **Native** species cannot compete against these alien invaders.

Case Study 1



Americans introduced purple loosestrife, a European species, into their gardens. Seeds from this plant easily wash into rivers and lakes where it crowds out native plants and clogs waterways.

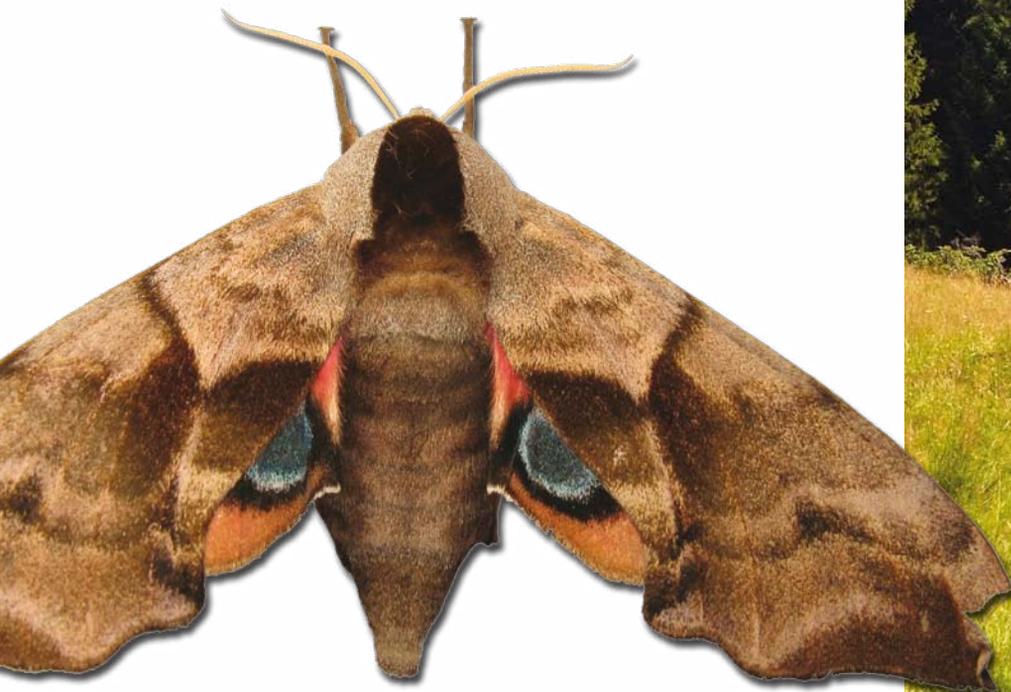
The worst invaders grow quickly, spread easily, and grow well in many habitats, killing many native species in the process.

Case Study 2



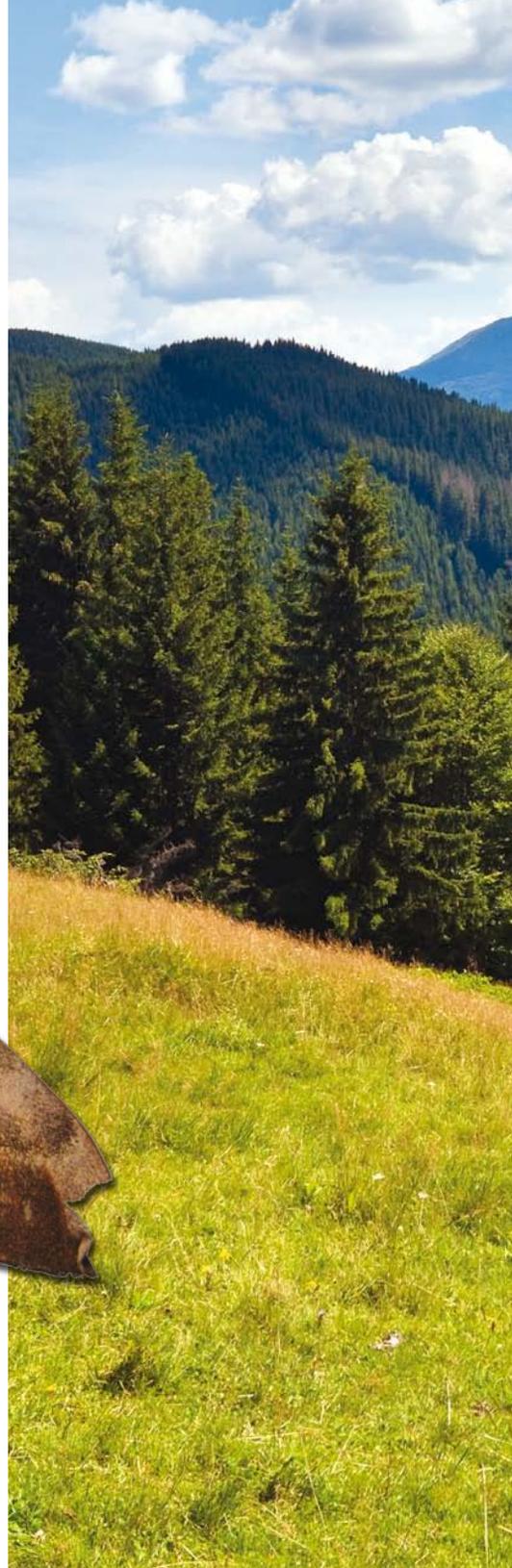
In 1876, farmers began growing Japanese kudzu as possible food for cattle. The vines now cloak forests in the southeastern United States, blocking sunlight from native plants.

Sometimes a decline in one species endangers another species. **Endangered** prairie fringed **orchids** rely on hawk moths for pollination. **Pesticides** and pollution threaten hawk moths, causing their populations to decline.



The loss of hawk moths makes the orchids' future uncertain.

Global climate change affects habitats and plant survival. Coastal areas containing rare plants may flood due to rising oceans.





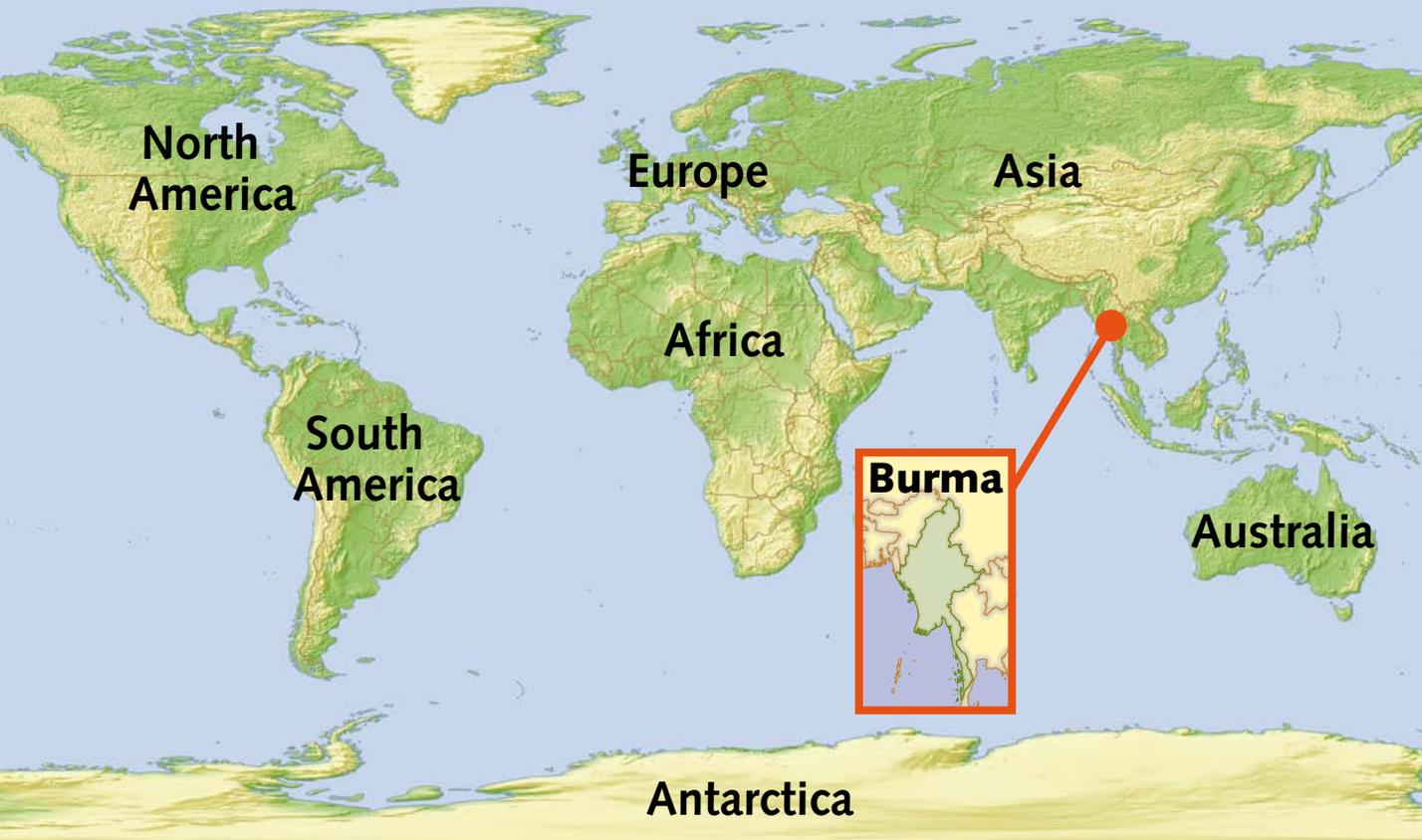
Conifer forests grow better in cooler temperatures in the United States, but temperate forests and grasslands push these pine forests north as seasonal temperatures warm.

Nepenthes rajah pitcher plant



Poachers collect
and sell endangered
carnivorous plants.

Plant collectors contribute to the decline of some plants. In Burma, a country in southeast Asia, people steal rare orchids from the wild to sell. Because of this, Burma's forests no longer contain rainbow orchids.



rainbow orchid

Collectors seek rainbow orchids for their healing properties and beauty.



Protect a Plant and a Planet

Lady's Slipper Orchid



The U.S. Fish and Wildlife Service catches plant smugglers taking plants like rare orchids. They send captured plants to rescue teams who have places and skills to care for the plants. Even with care, many rescued plants die.

Countries may save special habitats as parks. In the United States, western national parks protect some of the lands where giant redwoods grow.



In 2011, Chile created a new national park to protect endangered alerces trees. Before this, loggers could cut down as many of these conifers as they wished.

Rescue sites like the Como Zoo Conservatory in St. Paul, Minnesota, take in smuggled plants, care for them, and seek to return them to their home countries.

You can join a group to help save endangered plants. Volunteers in Illinois have worked successfully to help the fringed prairie orchid in their state. They plant seeds, pollinate flowers by hand, manage habitats, and count these plants yearly.



Instead of leaving it to Mother Nature, people increase the chance of successful plant reproduction by pollinating flowers by hand. Using a fine paintbrush, they transfer pollen from one flower to another.



Landowners concerned about the prairie fringed orchid have set aside land for habitat protection.

People need to farm, build houses, and harvest trees, but we must learn to keep these activities in balance with the needs of plants and their natural habitats. We also need to investigate whenever native plants begin to disappear. Solving the case could save a plant species from extinction!

With so many plants in danger, we cannot wait. Every person and country must work together to protect Earth's **biodiversity**. Learn about endangered plants and habitats in your area. Understand what causes plants to die out. Tell others what you have learned.



Write a letter to government officials explaining your concerns about endangered plants in your state. They may be able to help you raise awareness about this important issue.





As people create manmade beaches and build houses, hotels, and other shoreline developments, natural habitats change. Plants like the dwarf lake iris become threatened.

Show What You Know

1. Name some causes of plant extinction.
2. How do nonnative plants contribute to the loss of native plants?
3. What can we do to protect endangered plants?

Glossary

adaptations (ad-ap-TAY-shunz): ways groups of animals change over time to help them survive, including changes in the way they look and act

biodiversity (bye-oh-duh-VUR-suh-tee): the condition of nature in which a wide variety of species live in a single area

climate (KLYE-mit): the usual temperature, rain, or snowfall, and weather in a place

endangered (en-DAYN-jerd): at risk of becoming extinct

extinction (ek-STINGKT-shun): the complete loss of a species of plant or animal from the Earth

habitats (HAB-uh-tats): homes for living things where they can find everything they need to live, including food and shelter

native (NAY-tiv): naturally occurring, living in the place where it originated

nutrients (NOO-tree-uhnts): things needed for healthy growth, like vitamins and minerals

orchids (OR-kidz): a group of plants, often collected and grown for their showy and unusual flowers

pesticides (PESS-tuh-sydz): chemicals used to kill insects harmful to people or crops

species (SPEE-sheez): a category or kind of organism grouped together by their shared traits

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Websites to Visit

www.ecokids.ca/pub/kids_home.cfm
www.globio.org/glossopedia/article.aspx?art_id=20&art_nm=Conservation
www.mbgnet.net/sets/rforest/index.htm

About the Author

Julie K. Lundgren has written more than 40 nonfiction books for children. She gets a kick out of sharing juicy facts about science, nature, and animals, especially if they are slightly disgusting! Through her work, she hopes kids will learn that Earth is an amazing place and young people can make a big difference in keeping our planet healthy. She lives in Minnesota with her family.



Ask The Author!

www.rem4students.com

Comprehension & Extension:

- Summarize:

Why do plants become extinct? How do people contribute to plant extinction?

- Text to Self Connection:

Do you see plants around your home or school? What can you do to prevent plants from disappearing?

- Extension: *Create a Pamphlet*

Create a pamphlet that tells about the dangers of plant extinction. Describe how plants become extinct and give suggestions of how people can help save plants from extinction.

Sight Words I Used:

danger
develop
gather
habitat
identify
invaders
missing
risk
solve

Vocabulary Check:

*Use glossary words
in a sentence.*



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