



Decomposition

Check out our website!

- All of the information in this presentation can be found online on our website at:

- <https://www.alabamawildlife.org/>

ALABAMA WILDLIFE FEDERATION
WORKING FOR WILDLIFE SINCE 1915

HOME ABOUT CALENDAR SHOP

CONSERVATION EDUCATION RESOURCE STEWARDSHIP HUNTING & ANGLING

WHO IS THE ALABAMA WILDLIFE FEDERATION

AWF is dynamic, citizen-based conservation organization with over 25,000 members and supporters dedicated to creating and promoting a balance between use, management and protection of Alabama's wildlife and related natural resources through education, community involvement, and boots-on-the-ground assistance. To achieve that mission, we channel our efforts into three major focus areas:

CONSERVATION EDUCATION | RESOURCE STEWARDSHIP | HUNTING & ANGLING HERITAGE

LEARN MORE

- Alabama Nature Center**
Teachers: Plan a Field Trip
What is the NaturePlex?
Weekend Activities
Join Us For One of Our Day Camps
ANC Homeschool Program
Seasonal Programs
FAQ: Know Before You Go
- Outdoor Classroom** (circled in red)
What is an Outdoor Classroom?
Teachers: OC Planning Guide/Checklist
Check Out the OC Schools Map
Teachers: Join Us for a Workshop
Teachers: Free Hands-on Activities
Grant Opportunities
OC Maintenance Tips
- Resource Stewardship**
How Can Our RS Biologist Help You?
Learn About Native Warm Season Grass
Develop Your Longleaf Pine Ecosystem
Gulf Coast Conservation Grants Program
Receive the Alabama Wildlife Magazine
AWF Governors Conservation Achievement Awards
Report Black Bear Sightings in AL
- Hunting & Angling Heritage**
Attend a Wild Game Cook-Offs
Sponsor a Wild Game Cook-Off
Operation GameWatch: Report a Poacher!
Alabama Quail Trail
Join Us at the Youth Fishing Rodeo
Baiting is Bad
Reef Project

ALABAMA WILDLIFE FEDERATION
WORKING FOR WILDLIFE SINCE 1915

HOME ABOUT CALENDAR SHOP

CONSERVATION EDUCATION RESOURCE STEWARDSHIP HUNTING & ANGLING

Alabama Outdoor Classroom Schools

Alabama Outdoor Classroom Program

The Alabama Outdoor Classroom Program provides free technical and organizational assistance for schools who wish to create a sustainable outdoor classroom site to be used as an effective educational tool for hands-on, outdoor learning opportunities.

Click on the orange links below or the Quick Links on the right for more info.

About the Program | Enroll | Planning Guide | Contact a Consultant | Certify

Quick Links

- Alabama Outdoor Classroom Program
- Activities & Lesson Plans
- Student Exploration Links** (circled in red)
- OC Grant Opportunities
- Educator Workshops
- Outdoor Learning Stations & Signs
- OC Plants & Signs
- Maintenance Tips & Resources
- Alabama OC Schools Map
- Outdoor Classroom eNewsletter

Outdoor Classroom News

"NEW" Student Exploration Links - Plants, Wildlife, and Learning Stations
These new webpages are packed with educational information about species of plants and wildlife that are commonly found in outdoor classrooms as well as topical information related to the various learning stations in your outdoor classroom. [Learn more...](#)

Plant Identification Signs with QR Codes Connected to Educational Webpages "NEW"
Create permanent plant identification signs for the plants in your outdoor classroom with customized QR Codes that link to webpages on AWF's website for common plant species. Each plant ID webpage includes a description of the plant, photos, the ecological benefits it provides, and maintenance tips for this plant species. [Learn more...](#)

"NEW" Why Plant Native Species Webpage
What is a native species? An invasive species? Why should you choose one over the other? Learn about why it is important to plant native plant species instead of non-native species and find out which species are native in your area. [Learn more...](#)

ALABAMA WILDLIFE FEDERATION
WORKING FOR WILDLIFE SINCE 1915

HOME ABOUT CALENDAR SHOP

CONSERVATION EDUCATION RESOURCE STEWARDSHIP HUNTING & ANGLING

Alabama Outdoor Classroom Conservation Education Programs

Student Exploration Links: Wildlife, Plants & More

Click on the buttons below to explore the animals, plants, and learning stations in your outdoor classroom!

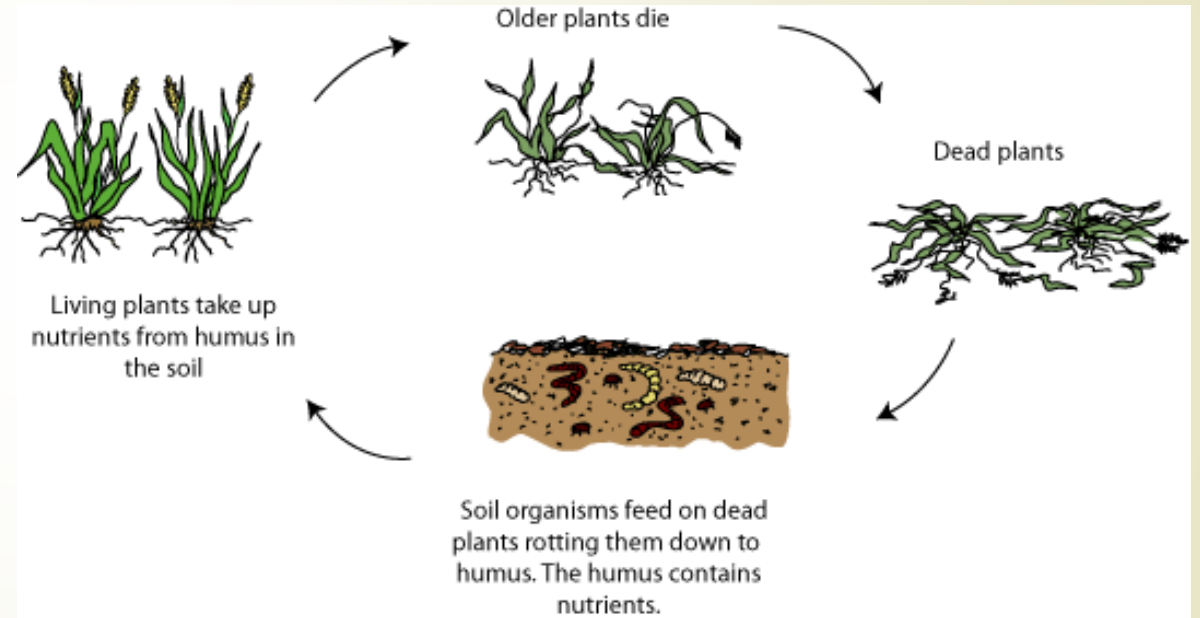
- Wonders of Wildlife
- Dig into Plants
- Learning Station Investigations

Quick Links

- Alabama Outdoor Classroom Program
- Activities & Lesson Plans
- Student Exploration Links
- OC Grant Opportunities
- Educator Workshops
- Outdoor Learning Stations & Signs
- OC Plants & Signs
- Maintenance Tips & Resources
- Alabama OC Schools Map
- Outdoor Classroom eNewsletter

What is decomposition?

- ▶ The breaking down of organic material over time
 - ▶ Complex molecules in organic materials are broken down
- ▶ Nature's way of recycling
 - ▶ Plants are able to use the simpler forms of the molecules



Photograph Source: [Socratic Q&A](#)

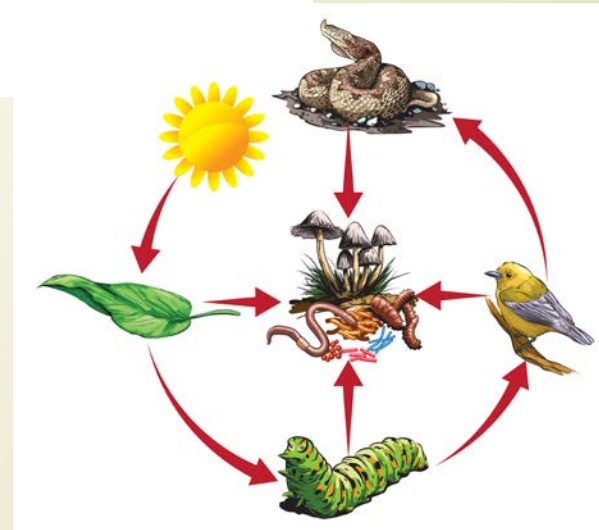
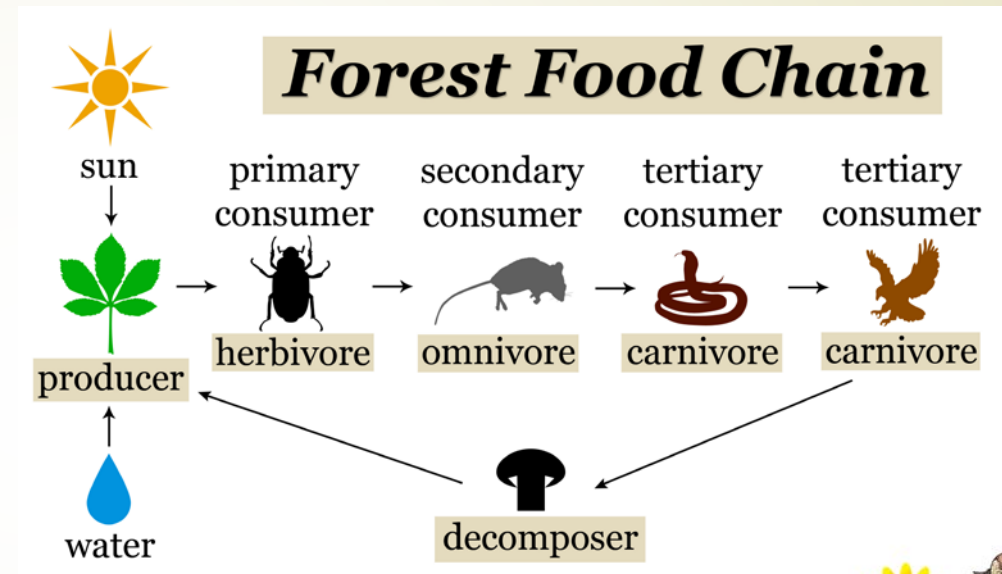
Why is decomposition important?

- ▶ Can you imagine what the world would look and smell like without decomposers?
- ▶ **Decomposers** help keep the environment clean
 - ▶ Reduce disease transmission
 - ▶ Keeps soil well nourished
 - ▶ Reduces bad smells



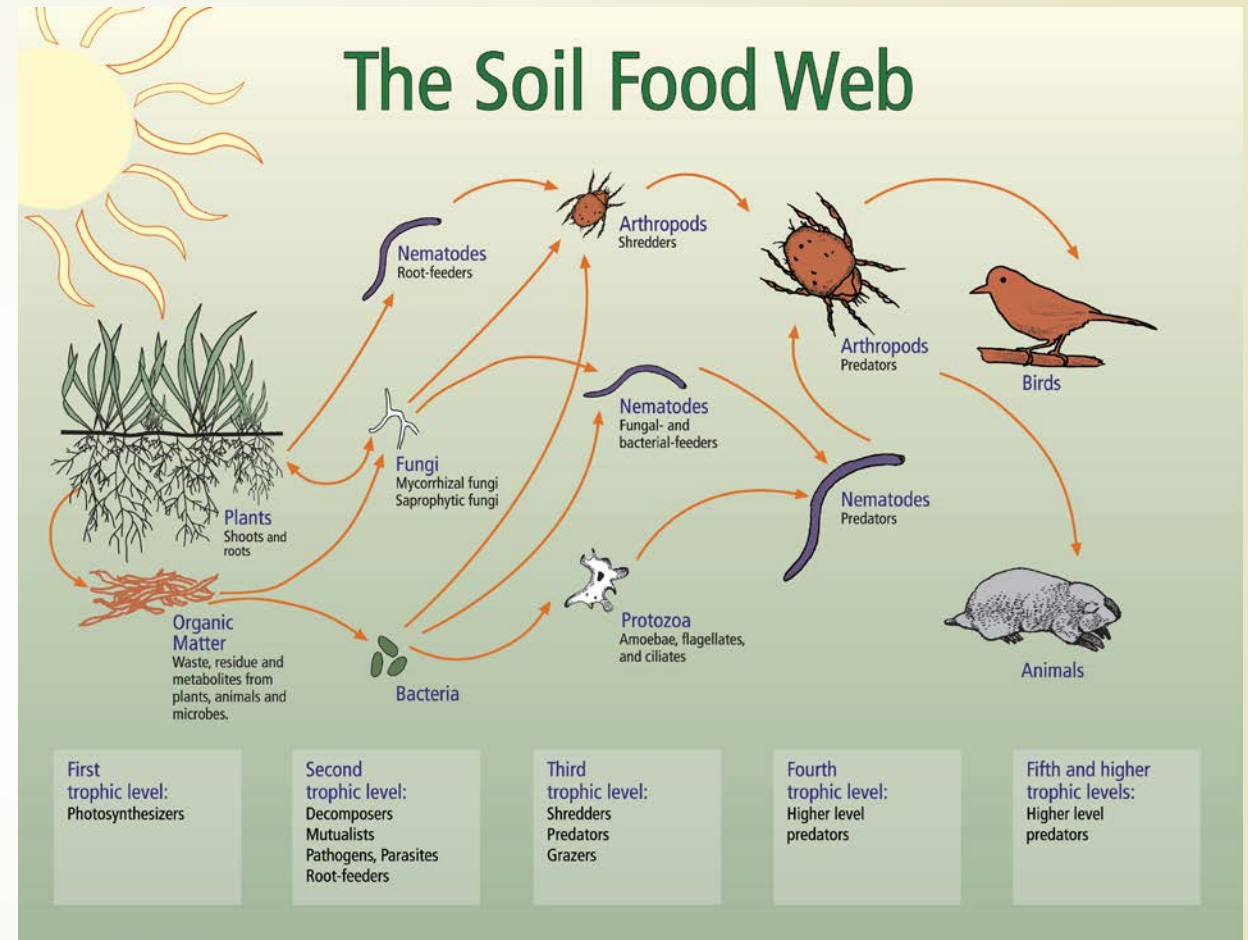
Decomposition and the Food Chain

- ▶ Link between beginning and end of the food chain/web
 - ▶ The process of decomposition provides nutrients that plants (producers) can use during photosynthesis
- ▶ Any organism in a food chain or food web that does not survive is recycled through decomposition

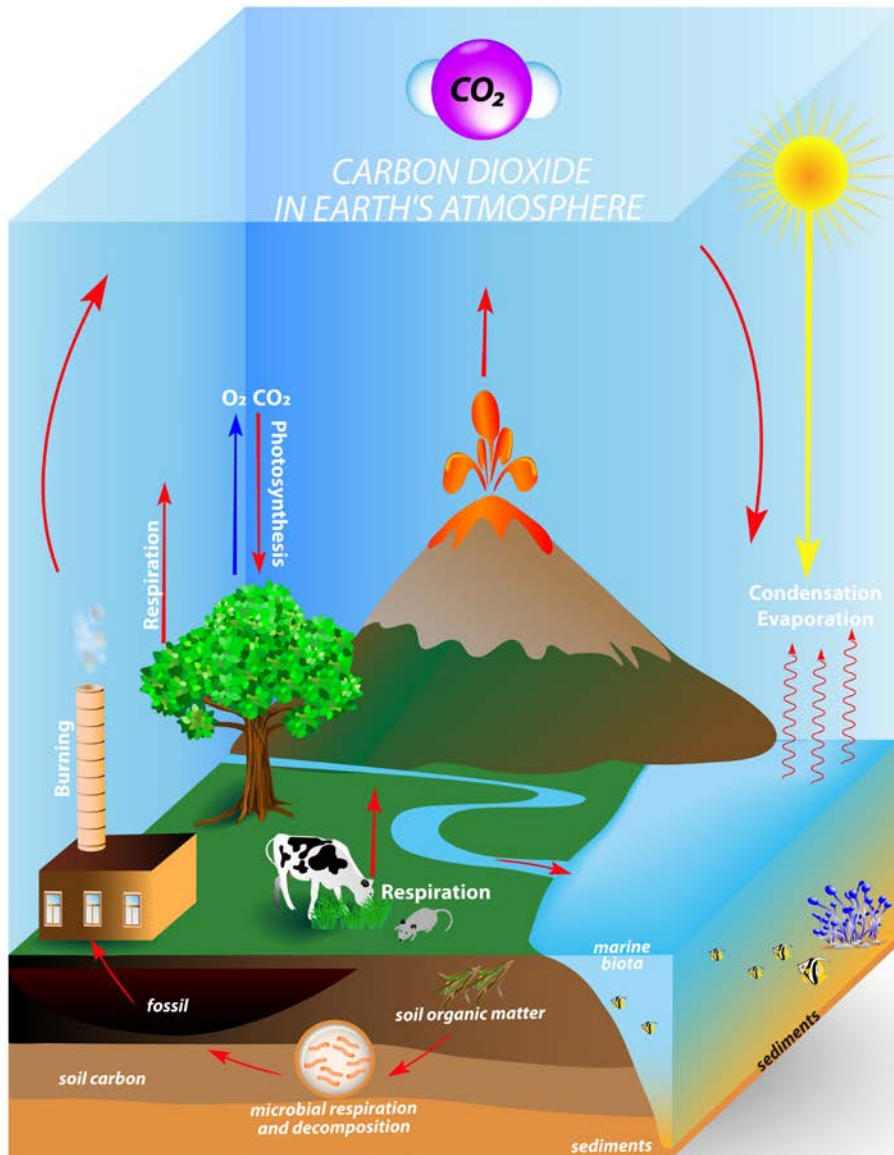


Soil Food Web

- Organisms within the soil interact with each other and are part of a food web
- Decomposers obtain nutrients from decaying material
- Organisms such as centipedes and spiders will feed on decomposers



GLOBAL CARBON CYCLE

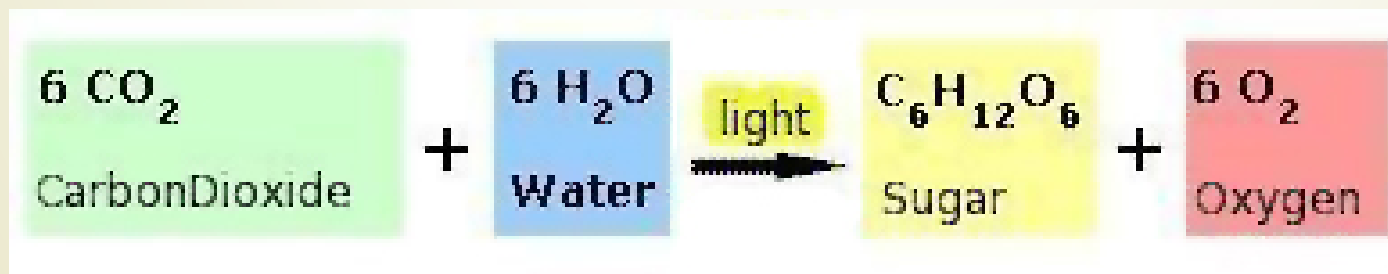
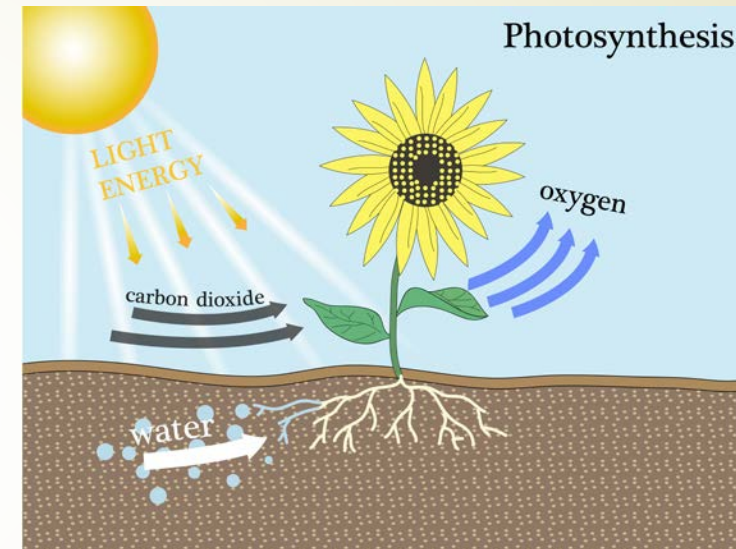


Decomposition and the Carbon and Nitrogen Cycles

- The food chain is a component of a cycle
- Elements like carbon and nitrogen move through living and nonliving components of the ecosystem

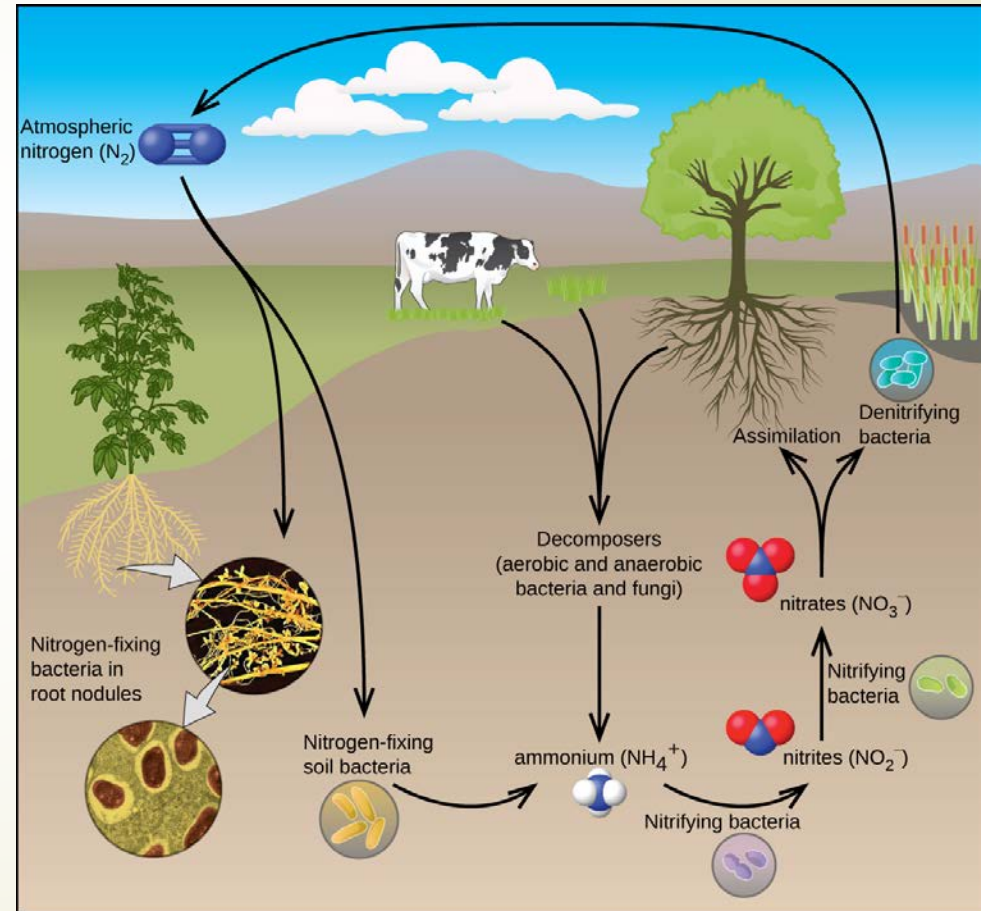
Decomposition and the Carbon Cycle

- ▶ These elements are transferred through the food chain from one trophic (feeding) level to the next
- ▶ As these elements move through the food chain, they become more complex
 - ▶ Example: **photosynthesis**



Decomposition and the Nitrogen Cycle

- ▶ Within the Nitrogen cycle, Nitrogen from atmosphere (simple form) is converted into more complex molecules that plants can use
- ▶ As animals feed on plants, these molecules are passed along the food chain
- ▶ When plants and animals die, these molecules are broken down and released into the soil



Where can you see decomposition in action?



Where might you see decomposition in action?

- ▶ Fallen log/ stump



Where might you see decomposition in action?

- ▶ Fallen log/ stump
- ▶ Leaf litter



Where might you see decomposition in action?


- ▶ Fallen log/ stump
- ▶ Leaf litter
- ▶ Soil



Where might you see decomposition in action?

- ▶ Fallen log/ stump
- ▶ Leaf litter
- ▶ Soil
- ▶ Compost





Where might you see decomposition in action?

- ▶ Fallen log/ stump
- ▶ Leaf litter
- ▶ Soil
- ▶ Compost

Microhabitat:

A smaller habitat within another one that supports a distinct flora/fauna (i.e. a rotting log in a forest; the log houses decomposers and plants but the forest houses the log itself)

Fallen Log: A (Micro) Habitat for Many



Fallen Log: A (Micro) Habitat for Many

- ▶ Insects live in bark



Fallen Log: A (Micro) Habitat for Many

- ▶ Insects live in bark
- ▶ Birds eat bugs



Fallen Log: A (Micro) Habitat for Many

- ▶ Insects live in bark
- ▶ Birds eat bugs
- ▶ Small mammals use runway



Fallen Log: A (Micro) Habitat for Many

- ▶ Insects live in bark
- ▶ Birds eat bugs
- ▶ Small mammals use runway
- ▶ Reptiles bask and hunt



Fallen Log: A (Micro) Habitat for Many

- ▶ Insects live in bark
- ▶ Birds eat bugs
- ▶ Small mammals use runway
- ▶ Reptiles bask and hunt
- ▶ Salamanders hide underneath



David J. Hand

Fallen Log: A (Micro) Habitat for Many

- ▶ Insects live in bark
- ▶ Birds eat bugs
- ▶ Small mammals use runway
- ▶ Reptiles bask and hunt
- ▶ Salamanders hide underneath
- ▶ Decomposers





Who does
the dirty work?



Common Decomposers (& Scavengers)

Ants



Common Decomposers (& Scavengers)

Ants

Beetles



Common Decomposers (& Scavengers)

Ants

Beetles

Crows



Common Decomposers (& Scavengers)

Ants

Beetles

Crows

Flies



Common Decomposers (& Scavengers)

Ants

Beetles

Crows

Flies

Maggots



Common Decomposers (& Scavengers)

Ants

Beetles

Crows

Flies

Maggots

Millipedes



Common Decomposers (& Scavengers)

Ants

Beetles

Crows

Flies

Maggots

Millipedes

Roaches



Common Decomposers (& Scavengers)

Ants

Beetles

Crows

Flies

Maggots

Millipedes

Roaches

Pill bugs



Common Decomposers (& Scavengers)

Ants

Beetles

Crows

Flies

Maggots

Millipedes

Roaches

Pill bugs

Slugs



Common Decomposers (& Scavengers)

Ants

Beetles

Crows

Flies

Maggots

Millipedes

Roaches

Pill bugs

Slugs

Snails



Common Decomposers (& Scavengers)

Ants

Beetles

Crows

Flies

Maggots

Millipedes

Roaches

Pill bugs

Slugs

Snails

Termites



Common Decomposers (& Scavengers)

Ants

Beetles

Crows

Flies

Maggots

Millipedes

Roaches

Pill bugs

Slugs

Snails

Termites

Vultures



Common Decomposers (& Scavengers)

Ants

Beetles

Crows

Flies

Maggots

Millipedes

Roaches

Pill bugs

Slugs

Snails

Termites

Vultures

Worms



Common Decomposers (& Scavengers)

Ants

Beetles

Crows

Flies

Maggots

Millipedes

Roaches

Pill bugs

Slugs

Snails

Termites

Vultures

Worms

Mushrooms



Common Decomposers (& Scavengers)

Ants

Beetles

Crows

Flies

Maggots

Millipedes

Roaches

Pill bugs

Slugs

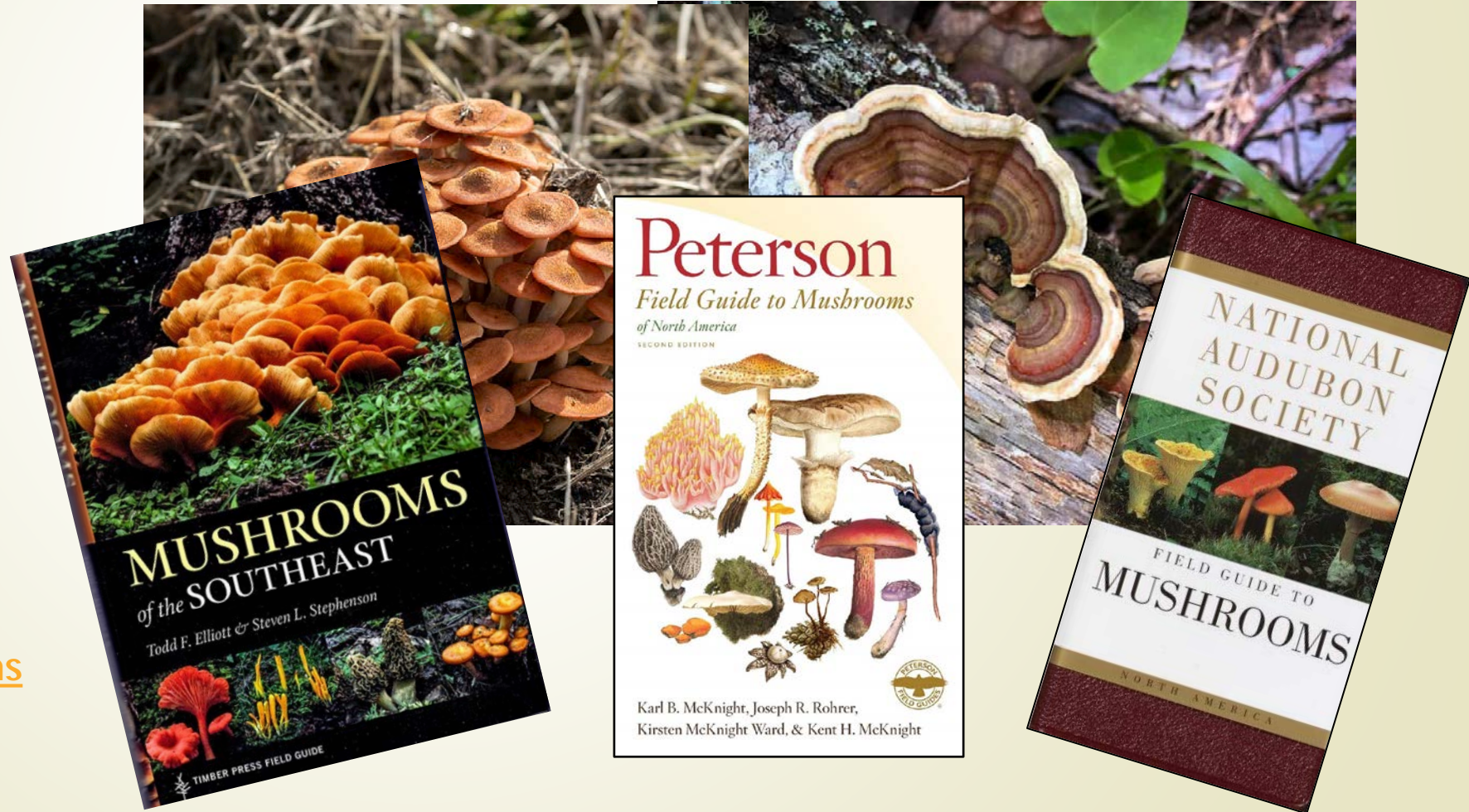
Snails

Termites

Vultures

Worms

Mushrooms



Common Decomposers (& Scavengers)

Ants

Beetles

Crows

Flies

Maggots

Millipedes

Roaches

Pill bugs

Slugs

Snails

Termites

Vultures

Worms

Mushrooms

Lichens



Foliose



Fruticose



Crustose

A photograph of a mushroom with a light-colored, slightly curved cap and a thick, pale stem, growing in a lush green forest. The background is filled with various green plants and trees, creating a natural, outdoor setting.

**WHAT DO THEY SAY ABOUT A
MUSHROOM THAT TELLS JOKES?**

HE'S A FUNGI.