NORTH CAROLINA NATIVE PLANT SOCIETY

Activity Book

Let's Learn About North Carolina Native Plants!

What is a native plant?

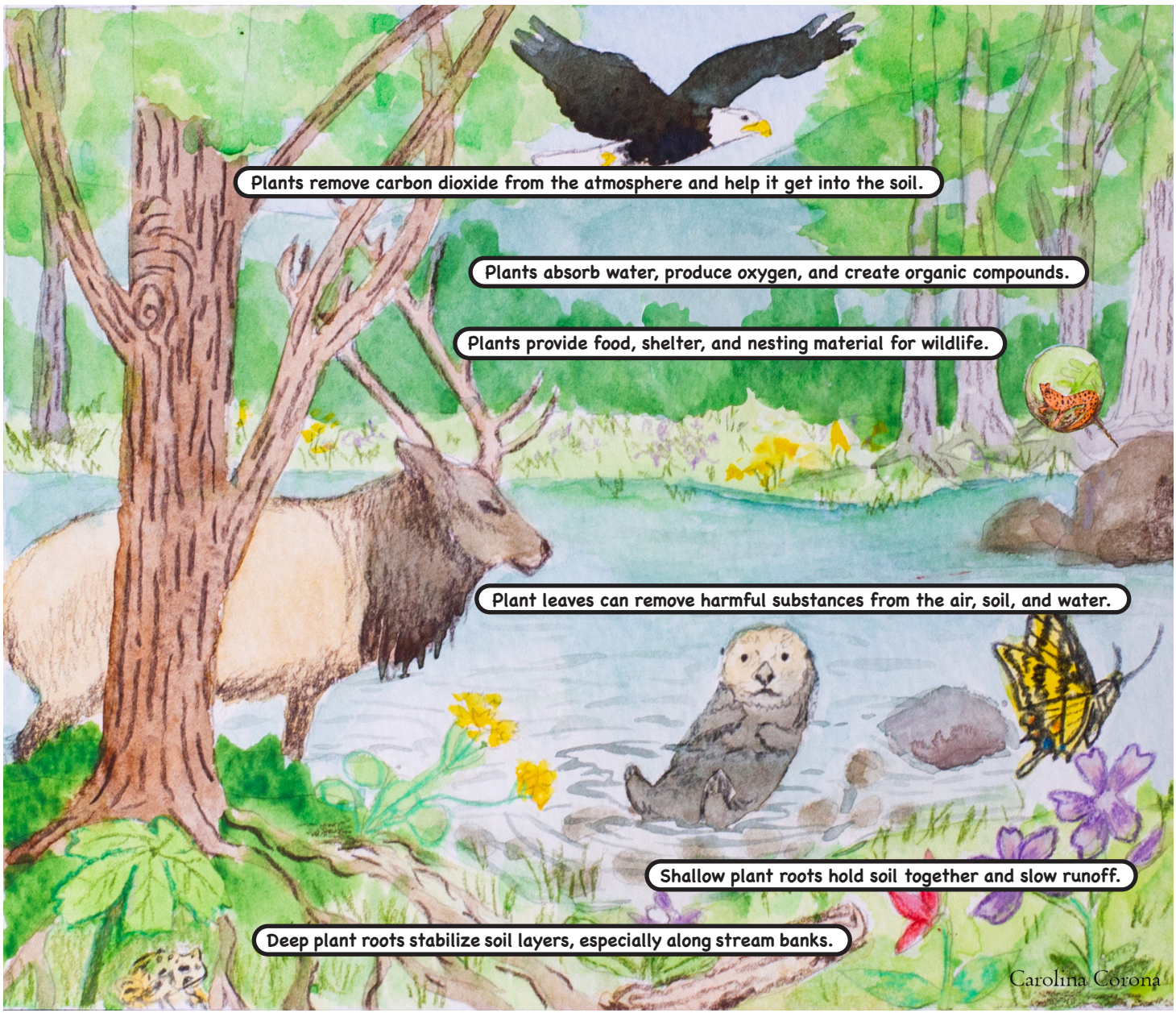
A North Carolina **native plant** evolved naturally within the state's geographic area, adapting to its specific climate, soil, and wildlife over thousands of years without human introduction.

Humans have moved plants for centuries, but most people consider a plant native to NC if it was growing before Europeans arrived during the late 15th century.

What is an ecosystem?

Native plants grow naturally with other organisms and form the critical base of food chains. This interconnected biological community found in a specific area is called an ecosystem. Each ecosystem features a variety of life forms and the relationships between them. Living things interact with each other, and also with non-living things like soil, water, and air. Plants give the primary fuels of life: oxygen, sugars, and other organic compounds. In exchange, the environment provides water, carbon dioxide, and nutrients to plants. Healthy ecosystems display a balance among organisms.

Newly introduced organisms can throw off the balance of an ecosystem. Some non-native plants can become invasive and crowd out native plants, causing ecological damage.



Search for Common Names

Scientists create unique plant names using groups called genus and species. No matter what language you speak, it is the same. Many people use a common name to refer to a plant, not the scientific name. Common names are easy to remember and are used by most people but, they can vary by region and language for the same plant. Can you find the following common names for our native plants?

J	O	E	P	Y	E	W	E	E	D	O	S	P	B
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T	L	O	T	C	E	N	Y	Y	A	V	S	V	E
R	O	G	B	E	E	B	A	L	M	T	L	A	D
R	A	T	S	G	N	I	Z	A	L	B	S	E	C

GOATS BEARD
GOLDENROD
RIVER OATS
BLAZING STAR
JOE PYE WEED
BUTTERFLY WEED
SPIDERWORT
ASTER
TURTLEHEAD
VIOLET
VENUS FLYTRAP
WITCH HAZEL
WHITE OAK
MAY APPLE
SUNFLOWER
BEE BALM
CAROLINA LILY

Fun Facts

Carolina Lily is the Official Wildflower of North Carolina

Box turtles eat ripe **Mayapple** fruits.

A **Venus Fly Trap** leaf snaps shut if an unsuspecting bug brushes its tiny hairs twice, and it may take days to digest the insect.

A single **White Oak** tree can drop up to 3 million acorns during its lifespan.

Answers on page 12

Pollinator Match-Up

Match each pollinator to the flower it will find most attractive. Read the descriptions and find the best match for each one. Draw a line from the pollinator to the flower.

A flower's size, shape, color, scent, and how it attaches to the stem are features to attract pollinators. A beneficial relationship between the pollinator and plant helps the pollinator find necessary food and helps the plant reproduce by transferring pollen from one flower to another to produce seeds for future plants.

1-Bee

I am attracted to pleasant smelling flowers that are white, yellow, blue or purple. I eat nectar and pollen.

2-Beetle

I like fruity sweet smells and large flower petals that I can eat. My favorite colors are white and green.

3-Butterfly

I prefer flat-topped flower clusters or cling to downward-facing flowers in bright colors like red, orange, or purple.

4-Fly

I look for pale purple or dull to dark brown stinky-smelling flowers. My short tongue and short hairs collect pollen.

5-Hummingbird

I use my long beak and tongue to reach nectar for food. I find flowers by their bright red or orange colors, not their smell.

6-Moth

During the night I look for sweet-scented white or pale flowers with nectar.

7-Skunk Cabbage

Flowering in late winter, I attract pollinators with my purple meat-like color and stinky smell.

8-Yucca

My clusters of strong-scented white flowers open at night to attract pollinators.

9-Cardinal Flower

My bright red tubular-shaped flower produces nectar but no scent.

10-Aster

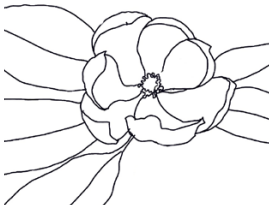
My blue, white or purple flowers produce lots of pollen to attract pollinators.

11-Milkweed

I have small, clustered flowers in bright colors such as red, orange, or purple.

12-Magnolia

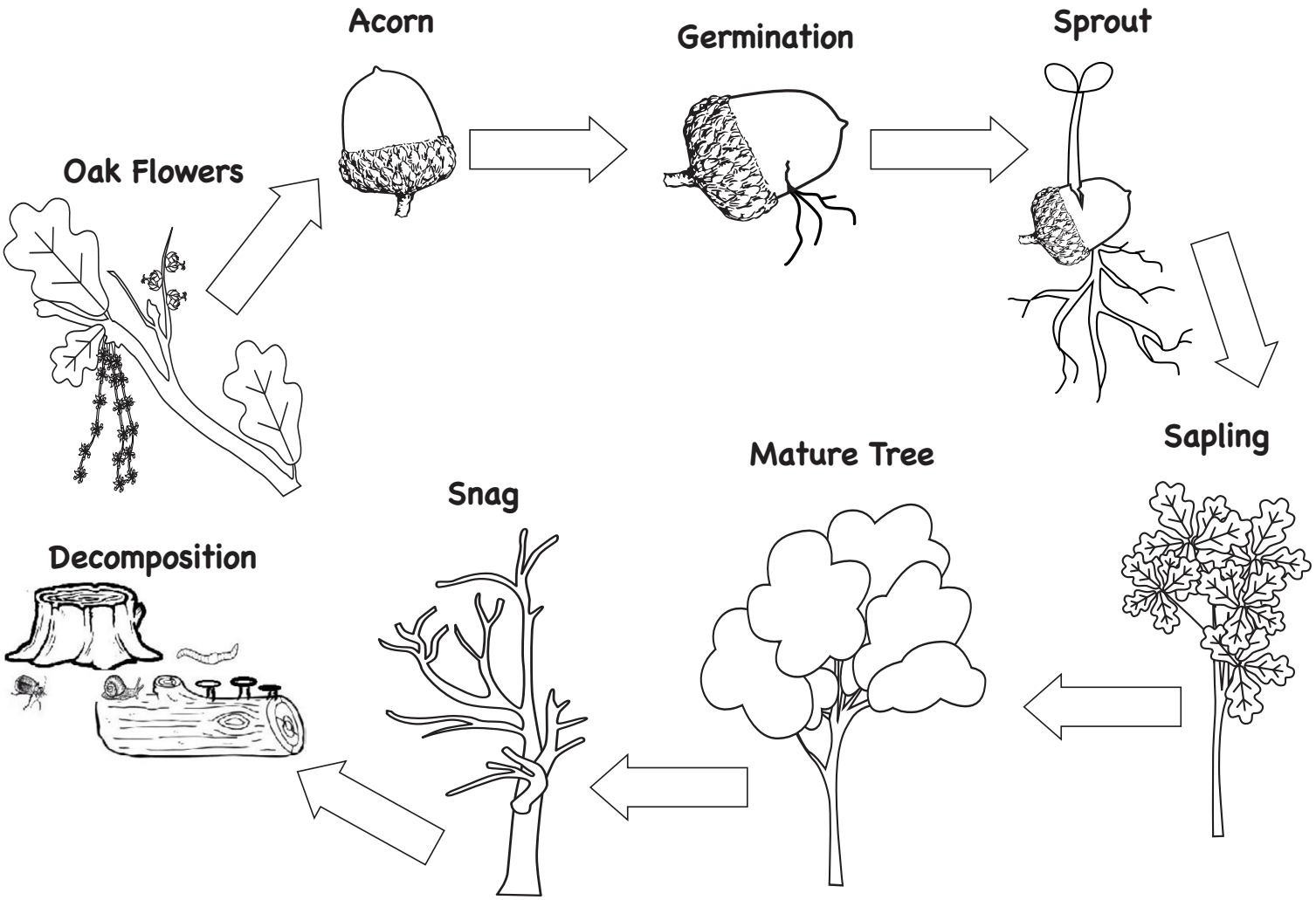
My large white flowers have a fruity smell and are sometimes eaten.



Answers on page 12

Find the Pollinators

The Life of an Oak Tree



- Oak trees produce separate male and female **flowers** on the same tree. Male flowers, on drooping clusters called catkins, release pollen to the wind. Small female flowers are often red and located on short stalks higher in the tree. After a male oak flower's pollen fertilizes a female flower, an **acorn** develops containing a seed inside. The process of producing offspring is called **reproduction** and starts in the spring, just before the leaves unfurl.

- Inside each acorn are nutrients such as protein and fat to help a new tree grow. It also provides food for many animals, such as deer, raccoons, opossums, bears, birds, and squirrels.

- When the acorn falls to the ground, and the conditions are favorable, it germinates, and a root develops, allowing the **sprout** to absorb water and nutrients from the soil. It also anchors the developing **sapling**, a young, **growing** tree. It may take many years for an oak tree to **mature** and start producing acorns.

- When a tree's life cycle ends, it becomes a snag or falls to the ground as a **log**. Standing dead trees called **snags** are used by birds for nesting and by insects as food and shelter, while fallen logs become homes for salamanders, snakes, and other ground-dwelling creatures.

- Rotting wood is good for soil because it improves soil structure, increases moisture retention, and provides a source of important nutrients for plants, fungi, and beneficial microorganisms. This process of decay is called **decomposition**.

The Life of an Oak Tree

Vocabulary Matching

Connect the words in the left column to the correct definition among the balloons on the right.

Acorn

Growing

Sapling

Mature Tree

Reproduction

Decomposition

Snag

Log

a young growing tree that does not produce fruit or flowers

a fallen dead tree

the process by which trees produce offspring

the process of tree decay or rot after death

to increase in size, to grow, develop, and mature

contains the seed from which a new oak tree grows

a standing dead or dying tree in the final stage of life

a tree that can reproduce by producing flowers and acorns

Source: K2 Learning Resources MS-OCRS-SCI

Fun Facts:

Food Source: Nationwide, oaks support 950 species of caterpillars that eat oak leaves to grow and develop, feeding many birds who depend on caterpillars to raise their young.

Overwintering: Many caterpillars overwinter on tree bark and twigs or in the leaf litter beneath the oak tree, which provides shelter from predators and the elements.

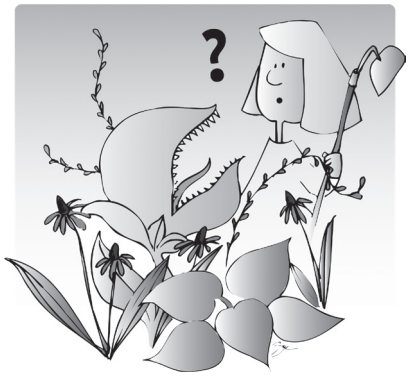
Blue Jay birds can carry up to five acorns at once while in flight.

A 90-foot oak tree started as a one-inch acorn.

Answers on page 12

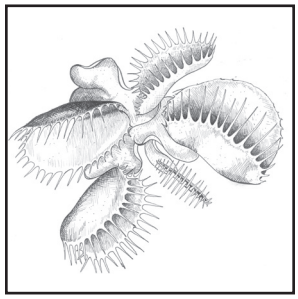
Meat-Eating Plants... For Real???

Carnivorous plants are meat-eating plants that photosynthesize with sunlight to make some of their food, but because they live in wet areas with low-nutrient soils, they need additional food to survive.

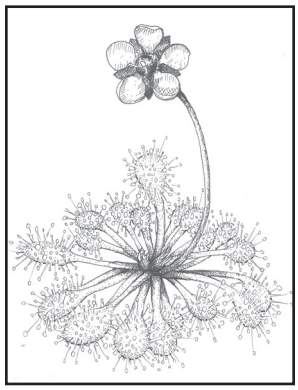


All carnivorous plants have specialized leaves that act as traps and stomachs. They capture prey and produce digestive enzymes to absorb nutrients. North Carolina's five major types of carnivorous plants include Venus Flytraps, Pitcher Plants, Sundews, Butterworts, and Bladderworts.

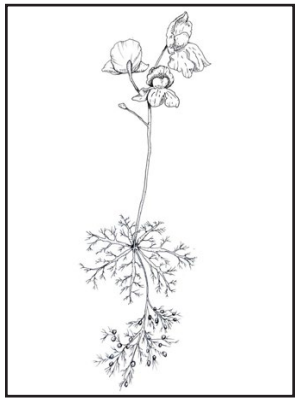
How do they do it?



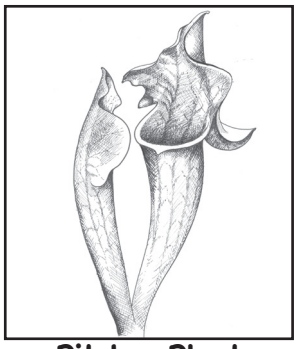
Venus Flytrap



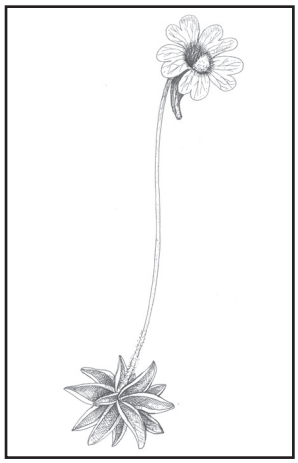
Sundew



Bladderwort



Pitcher Plant



Butterwort

Venus Flytraps close their clam-shaped, tooth-rimmed leaves around unsuspecting insects. When an insect or spider touches two of the six hairs on the inner surface, it triggers the leaf to close rapidly, creating a cage around the prey. The leaf seals shut after several hours.

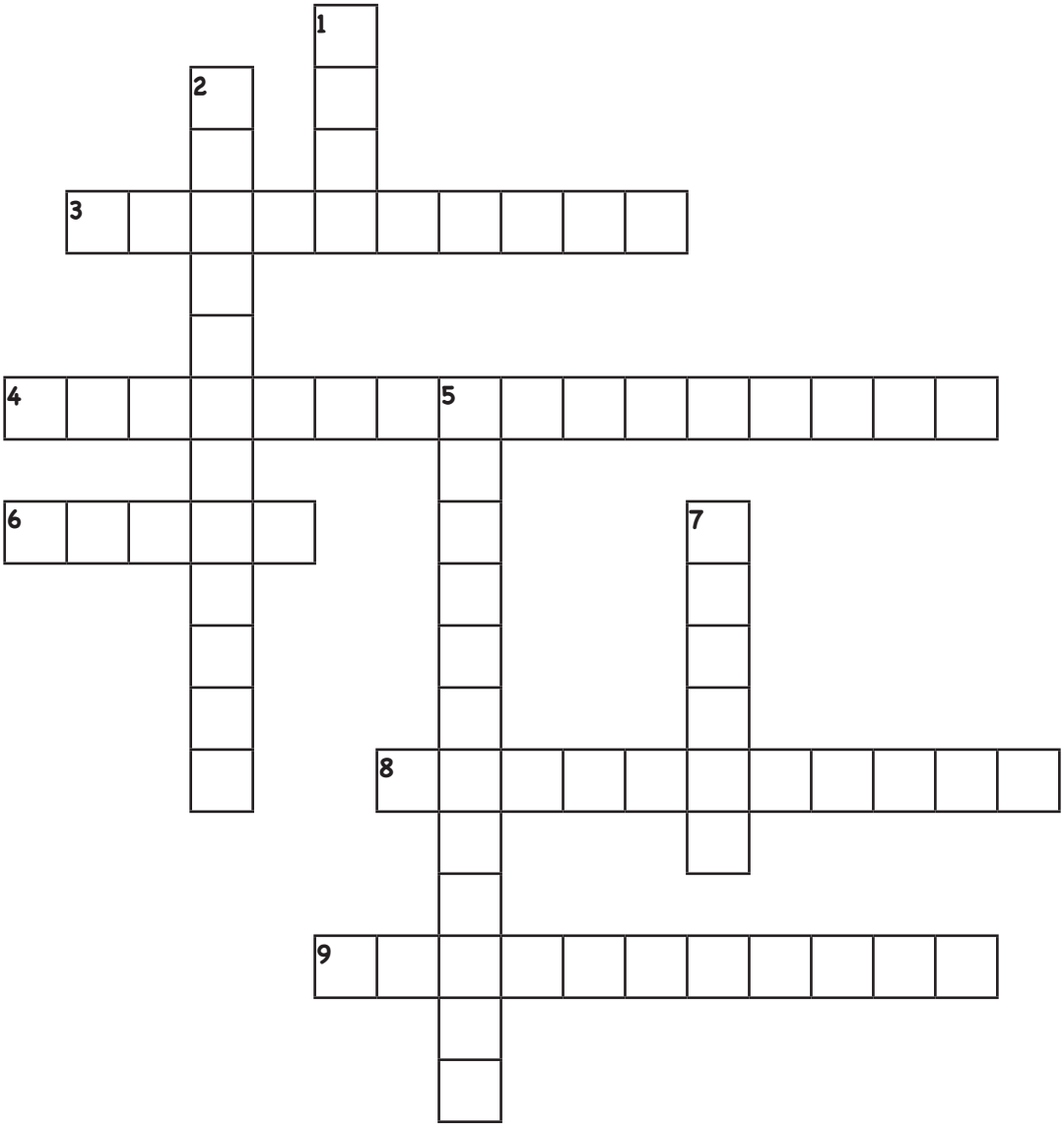
Pitcher Plants trap insects in funnel-shaped leaves that hold plant enzymes, and rainwater. The hood has nectar glands and attractive patterns to attract prey. If they should fly or fall in, a slippery, smooth surface and downward-pointing hairs prevent them from climbing out. Insects drown in the fluid.

Sundews have leaves covered with stalked glands with clear, sticky droplets that sparkle like dew. As an insect struggles to get free, it may get covered by the smothering glue that blocks its breathing. Longer-stalked glands slowly curl around the trapped insect. Gnats and ants are typical prey, but larger insects with long legs like cranefies and damselflies are also caught.

Butterworts have low, flat-lying leaves with upturned edges. Tiny hairs on the surface of the leaves make it sticky and can trap small insects like gnats and fruit flies. A struggling insect triggers the leaf to release more glue. When the insect is completely covered, the leaves release an antibacterial chemical that may prevent the prey from rotting while it is slowly digested.

Bladderworts float freely in water or grow without roots in wet soil. They use bladders to trap prey. Their upper leaves float and lower leaves contain bladders, a bulb-like structure with an opening, and a cover surrounded by trigger hairs. When aquatic prey touch the tiny hairs, the door opens inward as water and prey are sucked inside. The door snaps shut, typically trapping a water flea or a mosquito larva.

Carnivorous Crossword



ACROSS

3. I release a strong chemical-killing bacteria to prevent rotting while digesting prey

4. What our carnivorous plants have in common

6. The specialized leaves of carnivorous plants are used as _____

8. I don't have roots and can float on water

9. What meat-eating plants are called

DOWN

1. The number of major types of carnivorous plants found in NC

2. My deep cavity leaves hold rainwater

5. Trigger hairs close my leaf around insects to trap them

7. My sticky leaf pads that look like small paddles curl around prey before digestion

Answers on page 12

North Carolina's Spring Wildflowers

FLOWER FACTS: This flower is pink and has a very unusual shape, like you could slip your foot into it! It is a member of the orchid family. Did you know there are thousands of different types of orchids all over the world, or that vanilla comes from an orchid? This orchid grows in woods and is pollinated by bees!

Source: Ohio Division of Natural Areas and Preserves

UNSCRAMBLE THE WORD TO NAME THIS NATIVE FLOWER:

NKIP DYLAS PREPSIL

Answer on page 12

North Carolina's Spring Wildflowers

FLOWER FACTS: This is a white flower with a yellow center. It gets its name because it blooms in May and develops fruit that looks like little apples. It has very large leaves that look like a green umbrella!

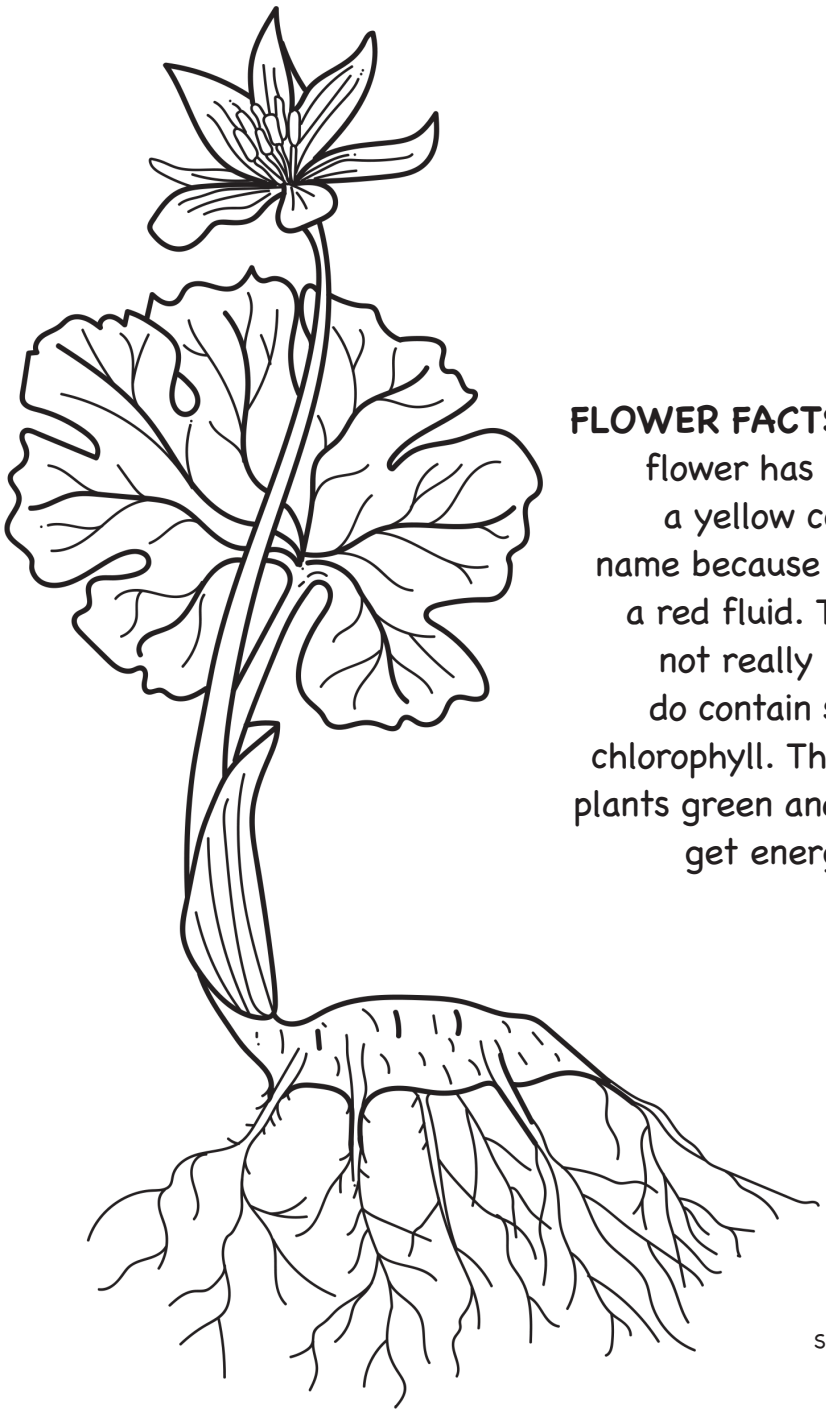
Source: Ohio Division of Natural Areas and Preserves

UNSCRAMBLE THE WORD TO NAME THIS NATIVE FLOWER:

P E L M A A Y P

Answer on page 12

North Carolina's Spring Wildflowers



FLOWER FACTS: This beautiful flower has white petals and a yellow center. It gets its name because its roots contain a red fluid. Though plants do not really have blood, they do contain something called chlorophyll. This is what makes plants green and allows them to get energy from the sun!

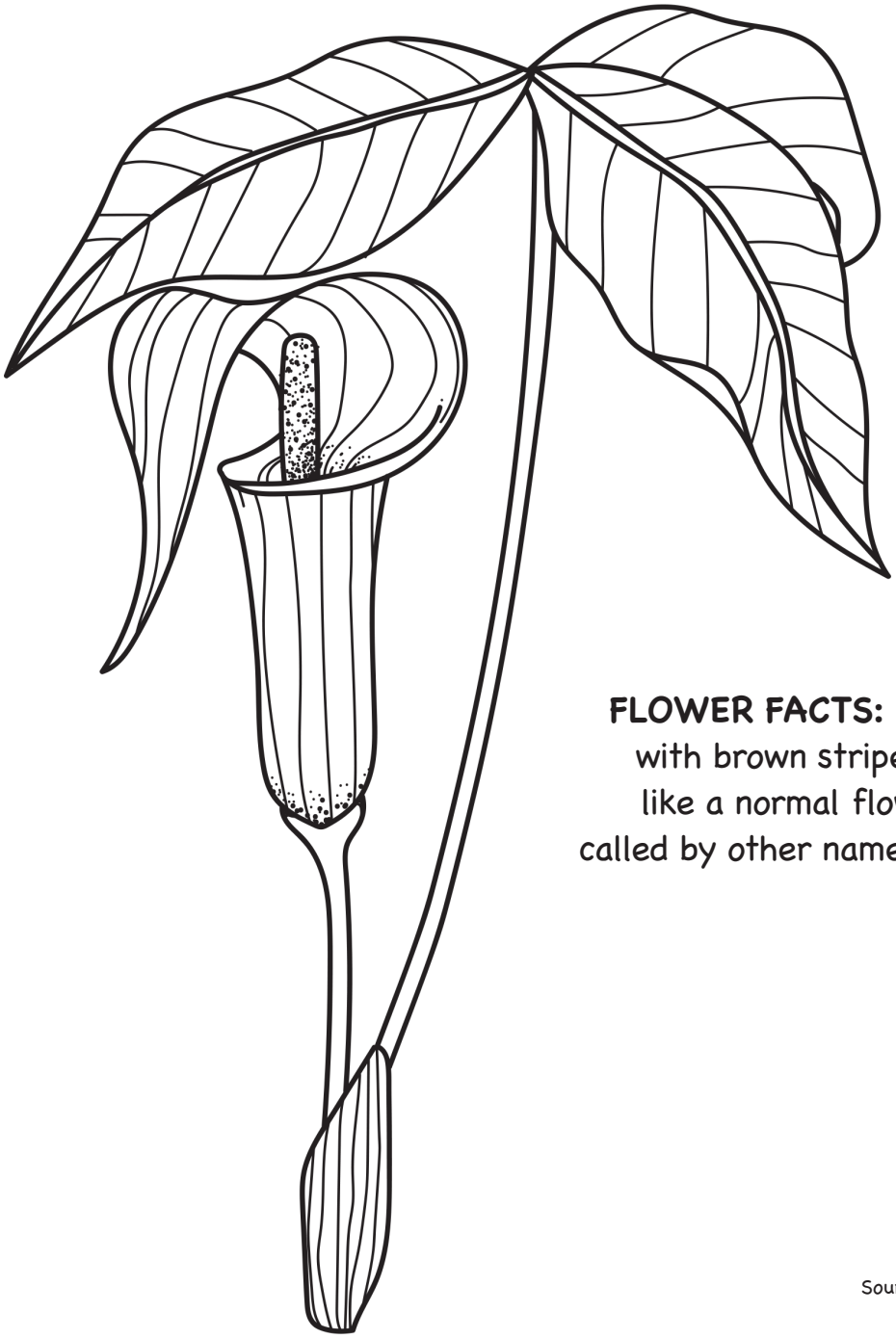
Source: Ohio Division of Natural Areas and Preserves

UNSCRAMBLE THE WORD TO NAME THIS NATIVE FLOWER:

O R O D O T O L B

Answer on page 12

North Carolina's Spring Wildflowers



FLOWER FACTS: This flower is green with brown stripes and does not look like a normal flower. Sometimes it is called by other names, like Indian turnip and bog onion.

Source: Ohio Division of Natural Areas and Preserves

UNSCRAMBLE THE WORD TO NAME THIS NATIVE FLOWER:

C A K J – N I – H E T – L U P T P I

				–			–				–						

Answer on page 12

Answer Page

Word Search, Page 1

J	O	E	P	Y	E	W	E	E	D	O	S	P	B
R	B	Z	G	L	G	T	G	T	E	R	U	A	U
S	W	E	M	I	S	U	O	P	M	W	N	R	T
P	I	N	A	L	E	R	A	L	A	H	F	T	T
I	T	D	U	A	E	T	T	T	Y	I	L	Y	E
D	C	O	R	N	E	L	S	D	A	T	O	L	R
E	H	R	V	I	T	E	B	D	P	E	W	F	F
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W	A	E	O	O	R	E	A	R	L	A	R	U	Y
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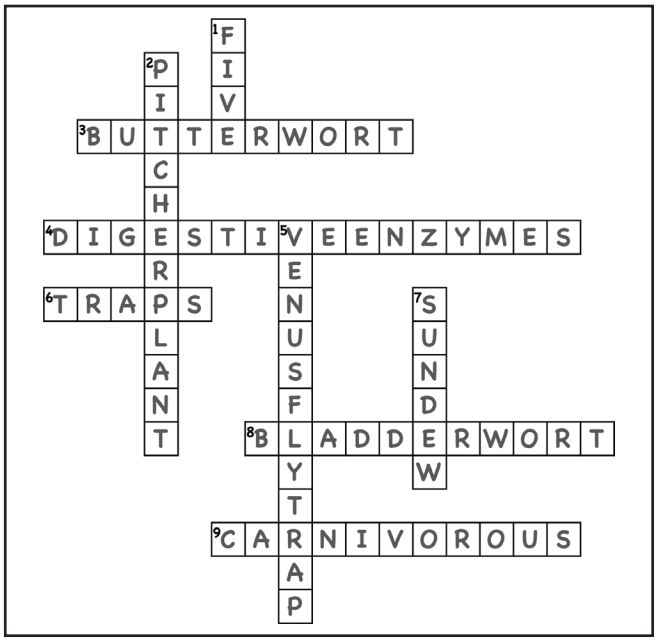
R	A	T	S	G	N	I	Z	A	L	B	S	E	C

Crossword, Page 8



Page 2: 1–10, 2–12, 3–11, 4–7, 5–9, 6–8

Page 5: Acorn – contains the seed from which a new oak tree grows
Growing – to increase in size, to grow, develop, and mature
Sapling – a young growing tree that does not produce fruit or flower
Mature Tree – a tree that can reproduce by producing flowers and acorns
Reproduction – the process by which trees produce offspring
Decomposition – the process of tree decay or rot after death
Snag – a standing dead or dying tree in the final stage of life
Log – a fallen dead tree

Page 8: PINK LADYS SLIPPER

Page 9: MAYAPPLE

Page 10: BLOODROOT

Page 11: JACK-IN-THE-PULPIT

Illustration by Katie Crawford, www.katiecrawfordart.com

- Watch for wildlife throughout the day and the seasons. Note the plants that are near and record in a notebook. Draw pictures of what you see. Birds, insects, mammals, lizards, and others in their surrounding environment.
- Add plants to your yard to provide nectar and pollen throughout the growing season for pollinators. Don't forget host plants that provide food and shelter for caterpillar development.
- Leave dead snags and leaf litter for wildlife habitat.
- Provide safe access to clean water.
- Walk through a nearby park or garden and make drawings in your notebook.

North Carolina Native Plant Society

For more information on native plants, visit ncwildflower.org

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