



Junior Naturalist Activity Book

NAME _____

AGE _____ TOWN _____

WELCOME TO THE Quincy Bog Natural Area!

Quincy Bog is a special place. The 50-acre Natural Area includes the remains of a lake that was created about 12,000 years ago when the melting glacier left behind a big chunk of ice. As the climate got warmer, the ice melted and formed a pond.

If you follow the trail around the pond, you will cross sections of lowlands where the soil is very wet and higher areas of forest where the soil is dry. On the back side of the pond you'll even find ledges where the granite rock sticks up out of the ground. If you look carefully you'll see many different plants and wildlife: in the wetlands, in the woods and on the rocks.

Quincy Bog Natural Area is owned and taken care of by an organization called Rumney Ecological Systems. The land is protected so people can enjoy the Bog and learn more about the amazing world of nature.

Becoming a Quincy Bog Junior Naturalist is a special honor. You will learn interesting things about the plants and wildlife that live at the Bog. You also have new responsibilities to protect the Bog and to share what you have learned with other people!

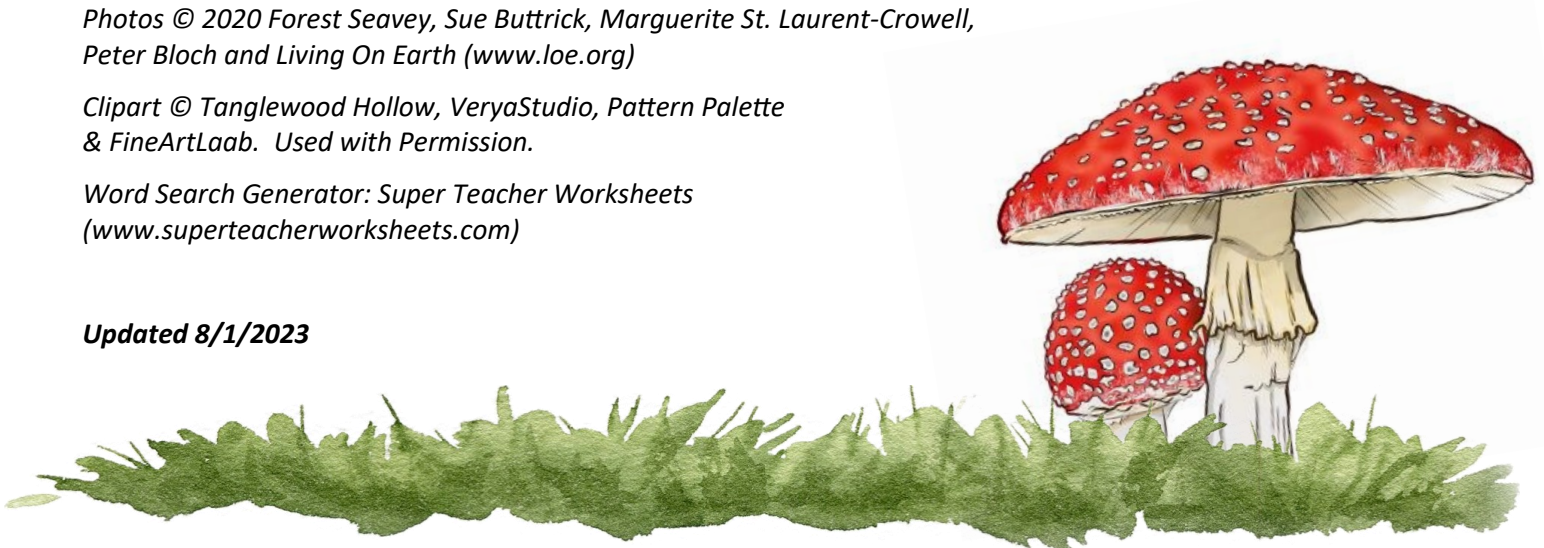
We hope you see lots of interesting things at Quincy Bog. Have fun exploring and please take good care of this beautiful area so others can enjoy it, too!

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*Word Search Generator: Super Teacher Worksheets
(www.superteacherworksheets.com)*

Updated 8/1/2023



How to Become a Junior Naturalist

SO YOU'D LIKE TO BECOME A QUINCY BOG JUNIOR NATURALIST*? HERE'S WHAT YOU NEED TO DO:

Becoming a Junior Naturalist means that you earn a special badge by learning more about Quincy Bog and by agreeing to protect special places like the Quincy Bog Natural Area. To earn your badge, ***please complete A and B below***. When you are finished, take this booklet to the Nature Center and ask the Bog Host on duty to check your work and give you your badge.

A. COMPLETE ACTIVITIES IN THIS BOOKLET

Ask a parent or other adult to initial each page you do to show that you've completed the activity.

- ⇒ K-2nd graders: complete at least 4 activity pages in the booklet.
- ⇒ 3-5th graders: complete at least 7 activity pages in the booklet.
- ⇒ 6-8th graders: complete at least 10 activity pages in the booklet.

B. COMPLETE A SERVICE PROJECT

Complete one of the projects below listed and then have your parents or another adult sign when it's finished.

- ⇒ Pick up 5 pieces of trash. Throw the trash in the trash can at the Nature Center; or, if the Center is closed, take it home and throw it away.
- ⇒ Pick up branches in the trail and move them to a place where they won't be in the way.
- ⇒ Give a brief talk about something you've seen at the Bog to a family member or friend.
- ⇒ Create an original Quincy Bog service project idea of your own.

FOR MY SERVICE PROJECT, I WILL:

SIGNED: _____

**A naturalist is a person who studies the world of nature by observing living things and their environment*

Habitats at Quincy Bog

ACTIVITY #1

INITIALS: ____

A habitat is the natural environment where plants, wildlife or organisms live. From the porch of the Nature Center you can catch a glimpse of the pond and the surrounding wetlands and woods, the three main habitats at Quincy Bog.

- ⇒ Some plants and wildlife live in the **pond**, the body of water in the center of the Quincy Bog Natural Area.
- ⇒ Others live in the **wetlands**, low areas near the pond where the soil is soaked with water.
- ⇒ Still others prefer to live on higher and drier ground, in the **upland forest** away from the pond.

As you walk along the trail, decide if you are looking at the pond, the wetlands, or the dry forest. Do you see any wildlife, or anything that indicates that wildlife has been here? What plants do you see? Look for signs along the trail that tell you the names of some of the plants.



DRAW A PICTURE OF A PLANT OR WILDLIFE THAT YOU SAW AT QUINCY BOG

Write the names of some of the plants and wildlife that live in each habitat. If you don't know the name of something, it's okay to just describe it.

POND

Plants

- 1. _____
- 2. _____
- 3. _____

Wildlife

- 1. _____
- 2. _____
- 3. _____



WETLANDS

Plants

- 1. _____
- 2. _____
- 3. _____

Wildlife

- 1. _____
- 2. _____
- 3. _____

UPLAND FOREST

Plants

- 1. _____
- 2. _____
- 3. _____

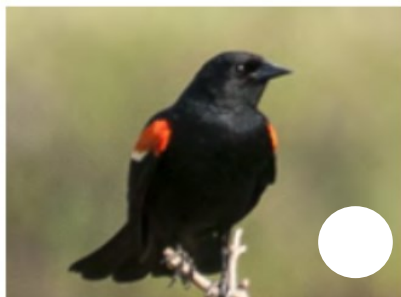
Wildlife

- 1. _____
- 2. _____
- 3. _____

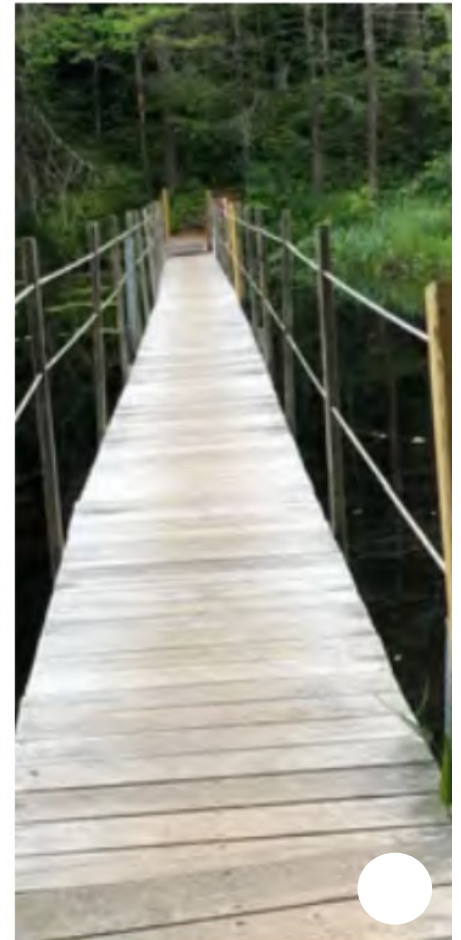
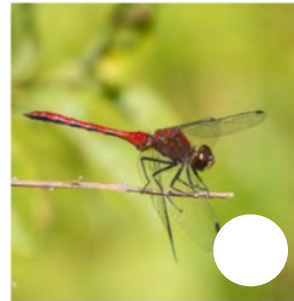
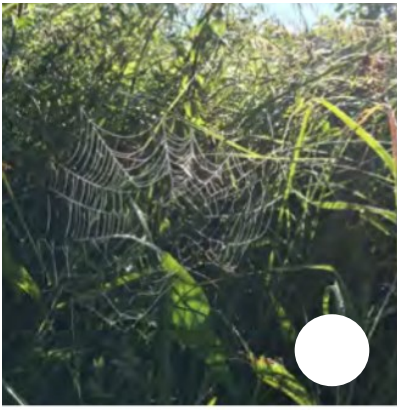




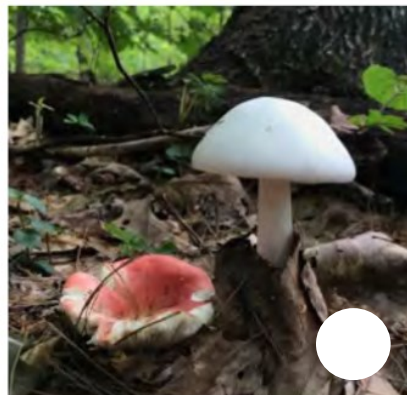
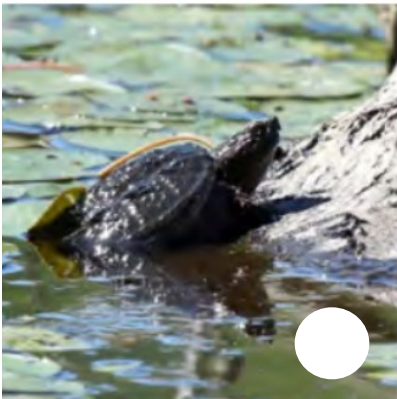
Check off
everything you saw,
smelled or heard
at Quincy Bog!



ACTIVITY #2
INITIALS: _____



DRAW A PICTURE OR WRITE A DESCRIPTION
OF SOMETHING ELSE HERE:



Know Your Watershed:

A Sense of Place

ACTIVITY #3

INITIALS: ____

Q: What is a Watershed?

A: A watershed is the area of land that drains to a common waterway such as a stream, lake, wetland or the ocean.

Quincy Bog is in the Pemigewasset River Watershed. Water leaves Quincy Bog via a stream on the southern end which flows into the Baker River and eventually meets the “Pemi” in Plymouth.

Q: Is Quincy Bog really a bog or something else? Quincy Bog Natural Area is on fifty acres of land that is made up of a pond and associated wetlands, sandy flood plain, granite outcrop, and woodland.

A: To find the answer, make observations on your walk and check the appropriate boxes below:

BOG

- ☐ A freshwater wetland
- ☐ Has spongy peat soils that come from decomposing plants
- ☐ A growth of evergreen trees and shrubs
- ☐ Receives most of its water from rain—has no inlet stream or outlet

FEN

- ☐ A freshwater wetland
- ☐ Has spongy peat soils that come from decomposing plants
- ☐ A growth of evergreen trees and shrubs
- ☐ Contain grasses, sedges, reeds and wildflowers
- ☐ Receives most of its water from streams and groundwater



'KNOW WHERE YOUR WATER IS COMING FROM, AND
WHERE YOUR WATER IS GOING TO!"



The Role that Wetlands Play in Earth's Ecology


ACTIVITY #4

INITIALS: ____

Take a few minutes to reflect and write about three of the following:

- How wetlands protect the surrounding areas of land.
- How wetlands help to keep the water clean and pure.
- How wetlands help control flooding and impact the environment.
- How animals and plants that live in the wetlands effect other parts of the eco-system.

Include your personal feelings about why the wetlands at Quincy Bog and other locations should be protected.

A cluster of green, spherical cells with black nuclei, representing a cell colony or tissue sample. The cells are of varying sizes and are densely packed together, with some cells showing more prominent nuclei than others. The overall shape of the cluster is roughly circular but irregular, with many individual cells visible at the periphery and some overlapping in the center.

Trail Etiquette

ACTIVITY #5

INITIALS: ____

1. STAY ON THE TRAIL.

Why? Because walking off the trail hurts the plants growing there, and there are roots and rocks that could cause you to fall.

2. DON'T WALK ON THE BEAVER DAMS OR CLIMB THE ROCKS.

Why? Would you want strangers to walk around your house?

3. DON'T PICK THE PLANTS OR DISTURB THE ANIMALS.

Why? Leave things as they are to grow, provide food for critters and for others to enjoy too.

4. DO NOT LITTER. PACK IT IN - PACK IT OUT.

Why? Wrappers and trash are not biodegradable and can be swallowed by animals causing serious harm.



5. DON'T HIKE ALONE, LET OTHERS KNOW WHERE YOU ARE GOING, AND BRING A WHISTLE.

Why? In case you get lost or injured it will be easier to get help. Don't rely on cell phones!



6. NO BICYCLES, TRAIL BIKES, ATVS, SNOWMOBILES OR OTHER
MOTORIZED VEHICLES!

Why? They cause soil erosion, and make it challenging for people walking.

7. NO HUNTING, FISHING, TRAPPING, BOATING, CAMPING, LIGHTING
FIRES OR LITTERING.

Why? _____

8. DOGS MUST BE LEASHED AT ALL TIMES.

Why? _____

In the space below, write your own rule that helps to protect the environment around Quincy Bog and give a reason why.

9. RULE: _____

Why? _____

"TAKE ONLY PICTURES AND MEMORIES, LEAVE ONLY FOOTPRINTS"

One, Two, Three, Four, Five Plants Alive!

ACTIVITY #6

INITIALS: ____

Can you find examples of the following plants at the Bog? **Write the names on the lines below.**

Hint: Look at the plant labels located along the trail or ask someone to help you read about different plants in the Trail Guide.

1 SEDGE

1. Tussock Sedge



2 SHRUBS

1. _____

2. _____



3 FERNS

1. _____

2. _____

3. _____



4 WILDFLOWERS

1. _____

2. _____

3. _____

4. _____



5 TREES

1. _____

2. _____

3. _____

4. _____

5. _____



FUN FACT: PLANTS PROVIDE FOOD
AND HABITAT IN ECOSYSTEMS!

What Kind of Tree is That?

ACTIVITY #7

INITIALS: ____

There are two main types of trees at Quincy Bog: broad-leafed trees and conifers.

Give three examples of each.

BROAD-LEAFED TREES

- Have broad, flat leaves.
- Are usually deciduous. That means they lose their leaves all at once in the fall.
- Can be hardwoods or softwoods.
- Produce flowers and seeds, not cones.

EXAMPLES

1. _____
2. _____
3. _____

CONIFERS

- Have needles rather than leaves.
- Are mostly evergreen; most do not lose all their needles at once.
- Are mostly softwoods.
- Produce cones that contain seeds

EXAMPLES

1. _____
2. _____



DRAW EACH MAIN TYPE OF TREE BELOW:

Nature's Engineers

ACTIVITY #8

INITIALS: ____

Beavers have lived at Quincy Bog on and off for thousands of years. They are common when the food supply is adequate, but move on when this resource is exhausted. Because they alter the environment to meet their needs, beavers are often called “nature’s engineers.” At Quincy Bog they have changed a small pond and free-flowing outlet stream into the large pond you see today.

As you walk the trail around the Bog, look for 3 things that show that beavers have lived at Quincy Bog and draw them in the boxes. Label each picture to describe what it is.

1

2

3



Do you think beavers are currently active here at the Bog? Why or why not?

Hint: Look for fresh signs of beaver activity!



More About Beavers!

ACTIVITY #9

INITIALS: ____

Find out how much you know about beavers! **If the sentence is true, circle "True"; if the sentence is not true, circle "False."** After you've finished, turn the page upside-down to see if your answers are correct.

True • False

Beavers slap their tails to warn of danger.
They do not use their tails to carry mud.

True • False

Beavers are vegetarians. They eat twigs, stems, tree bark, leaves, grasses and pond plants like lilies.

True • False

Beavers build dams to raise the water level in the pond.

True • False

Beavers store sticks under the water to eat during the winter

True • False

Beavers can stay underwater for 15 minutes before coming up to breathe.

True • False

Hawks, wolves, bears, coyotes and snapping turtles like to eat beavers.

True • False

Beavers have webbed feet and flat, scaly tails.

True • False

Beavers are related to mice.

True • False

Beavers live for approximately 10-15 years.

True • False

Beavers' front teeth are caramel colored.

All of these are true!

Bog Word Search

ACTIVITY #10

INITIALS: ____

Locate the answer to each clue in the word search.

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

- | | |
|---|--|
| 1. A plant that produces spores not seeds | 11. A person who studies nature by observing living things and their environment |
| 2. A tree with white bark | 12. The scientific study of rocks |
| 3. A tree that produces nuts that are eaten by a variety of animals | 13. The only species of conifer at Quincy Bog that sheds its needles each fall |
| 4. One of three habitat types found at Quincy Bog | 14. A common species of duck |
| 5. Building at Quincy Bog where evening programs are held | 15. A grass-like wetland plant |
| 6. Tree species that is often tapped to make syrup | 16. A structure made by beavers to impound water |
| 7. A large insect often seen flying around the bog that has a fire-breathing name | 17. Partially decomposed plant material that characterizes some wetlands |
| 8. A very small amphibian that makes a big noise in the springtime | 18. A bird that creates holes in tree trunks to find food |
| 9. An endangered species of flower in the orchid family | 19. What most of the birds found at Quincy Bog do in the fall |
| 10. An aquatic mammal | 20. An aquatic amphibian found at Quincy Bog |

FUN FACT: RED-WINGED BLACKBIRDS ARE USUALLY THE
FIRST BIRDS TO ARRIVE AT THE BOG IN SPRING!

Signs of the Past

ACTIVITY #11

INITIALS: ____

Do you think Quincy Bog always looked the way it appears today?

Look for clues along the trail that suggest that the land was not always a forest. Who lived here in the early 1800's? What kind of work did they do? Why did they build stone walls? Why did people let the land grow back into forest? **Pretend it is the early 1800's. Describe what you see around you.**



Photo courtesy of *Living On Earth* (www.loe.org)

Pond-er This!

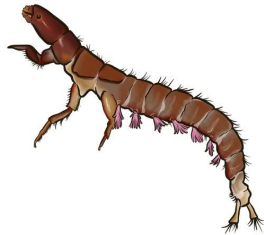
ACTIVITY #12

INITIALS: ____

Below are images of some critters that live in and around Quincy Bog. Draw a line from the picture of amphibian, insect, or aquatic worm to it's name



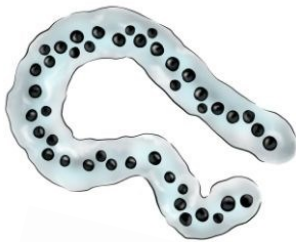
NEWT



SPRING PEEPER



WATER BOATMAN



DRAGONFLY LARVAE

CADDISFLY LARVAE



LEECH



TOAD EGGS



Listen! What Do You Hear?

ACTIVITY #13

INITIALS: ____

Position yourself in a comfortable, safe location and close your eyes for 2 minutes (K-2nd grade), 3 minutes (3-5th grade) or 5 minutes (6-8th grade). Ask an adult to tell you when the time is up. Listen to the sounds around you and think about what you hear. Are the sounds natural or human-made? What direction did they come from? After you open your eyes, write about what you heard. Next, close your eyes again and focus on the sun and air. Where is the sun? What direction is the wind blowing? Does the air feel warm or cool, gentle or brisk? **Write down some of your observations.**



Attend a Program

ACTIVITY #14

INITIALS: ____

Attend a Quincy Bog evening program (best suited for middle school and up depending on the topic), a nature walk or school field trip. For information about programs, please see our *Bog Notes* newsletter, the program schedule at the kiosk, FaceBook or our website: www.quincybog.org.

TITLE OF PROGRAM:

SPEAKER OR LEADER:

FIVE THINGS I LEARNED FROM THE PROGRAM:

1. _____

2. _____

3. _____

4. _____

5. _____



Dear Parent or Mentor,

We hope you and your child, students, or young friend have enjoyed visiting the Quincy Bog Natural Area and participating in the Junior Naturalist Program. If you would like to know more about the Quincy Bog Natural Area or our sister organization, the Pemi-Baker Land Trust, please visit our website at www.quincybog.org. If you would like to support our efforts to protect special places like Quincy Bog and to educate children and adults about the wonderful world of nature, we invite you to become a Friend of Quincy Bog. Funds raised by our Friends of the Bog Annual Appeal support the summer programs, summer volunteers, the Junior Naturalist Program, trail maintenance, printing of the Trail Guide, Bird and Fern Checklists and other interpretative literature, mailing of the twice yearly Quincy Bog Notes newsletter, electricity and telephone at the Nature Center, and research to learn more about the Bog. Quincy Bog Natural Area is entirely run by volunteers and has no paid administrators—your entire contribution is used to support the Bog's projects, programs and upkeep.

If you would like to become a Friend of the Bog, please mail your check made out to Quincy Bog Natural Area to:

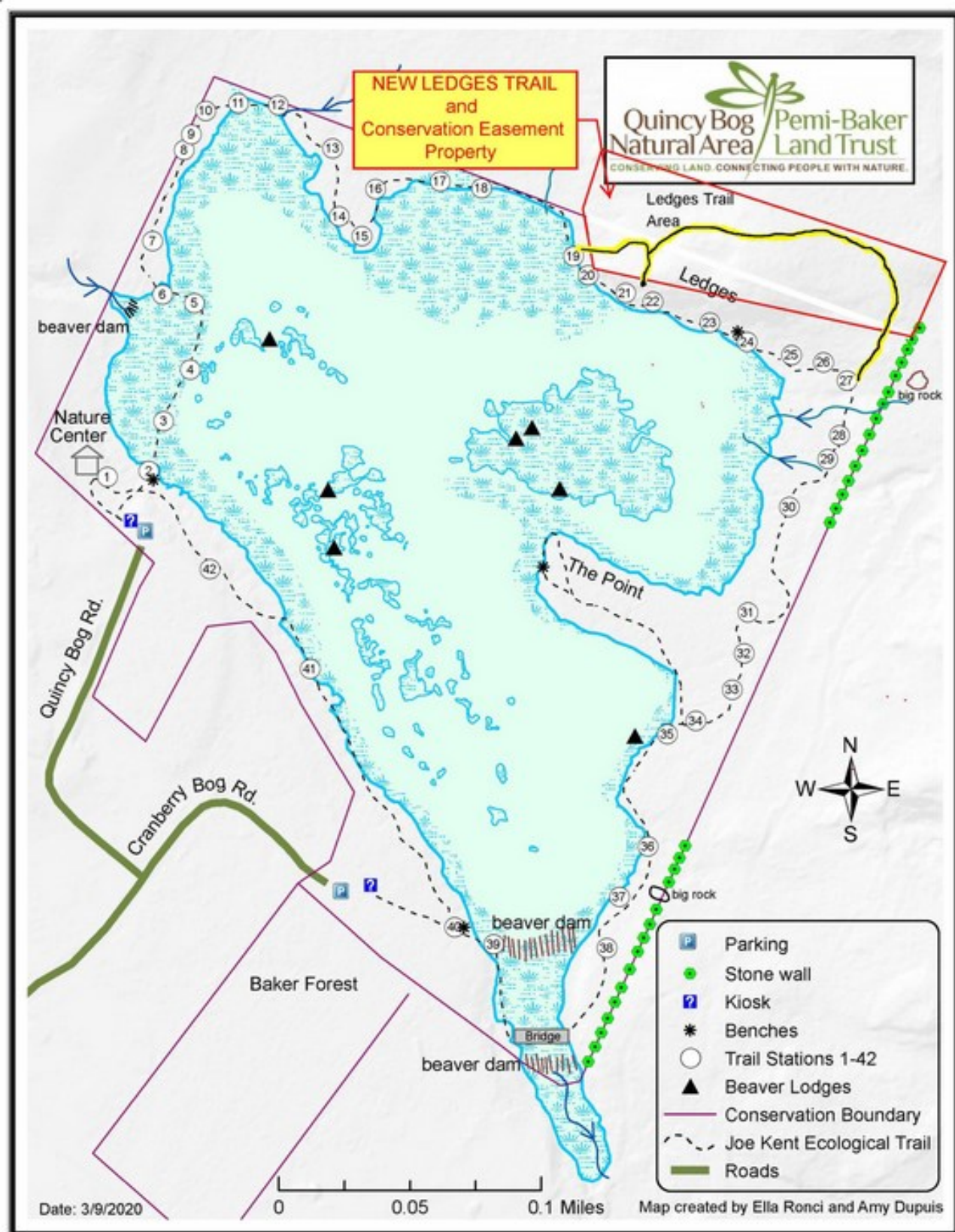
Rumney Ecological Systems
P.O. Box 90
Rumney, NH 03266

Please include your name and complete mailing address. Family memberships are \$25, Individuals are \$15, Friends are \$50, Sponsors \$100, and Patrons \$250. You may also donate online at <https://t99.990.myftpupload.com/basic-page-2/>

Thank you very much—we appreciate your support!

Rumney Ecological Systems is recognized by the United States Internal Revenue Service as a non-profit, 501(c)(3) organization. All donations are tax deductible within the context of the law.

Trail Map



Name

HAS COMPLETED ALL THE REQUIREMENTS TO BECOME A QUINCY BOG

Junior Naturalist

As a Quincy Bog Junior Naturalist, I pledge to

1. To do all I can to protect special places like Quincy Bog
2. To continue learning about nature
3. To share my knowledge of the natural world with family and friends

Jr. Naturalist's Signature

Date

Certified on behalf of Quincy Bog

Date