

U.S. Fish & Wildlife Service

Edwin B. Forsythe National Wildlife Refuge

*Junior Refuge Manager Activity Guide
Dragonfly Edition (Ages 4-7)*



You can be a JUNIOR REFUGE MANAGER!

You can be a Junior Refuge Manager by doing the activities in this book. You will learn all about the Edwin B. Forsythe National Wildlife Refuge as you explore its many habitats, plants, and animals.

Just like Refuge Managers, Jr. Refuge Managers value the homes that refuges give wildlife. Refuges are special places for you to experience the joy, awe, adventure, and mystery of the world we live in.

To become a Jr. Refuge Manager, you have to complete **at least 6** activities, read and sign the pledge, and then show your booklet to a refuge staff member or volunteer. Then you will receive a certificate and badge showing you are an official Edwin B. Forsythe Junior Refuge Manager!

A Note to Parents:

This is an activity book designed for children, but we encourage families to discuss the topics together. There are two books designed for different age groups, but many of the activities overlap so do not worry if you have children in both groups. Please allow children to self-select activities and use their own words. Take your time—it is not required to complete this book in one visit.

As always, take care to stay on marked paths, avoid poison ivy, and place trash in garbage cans. Ticks occur all year (they are most active during warmer months); when hiking tuck pants into socks, use insect repellent, and do a tick check after returning home.

Table of Contents

<u>Activity Name</u>	<u>Page</u>
Refuge Maps.....	4-5
Seasonal Delight.....	6
Inspect an Insect.....	7-8
Pishing.....	9
Shadow Catching.....	10
Got Cones.....	11
Close Encounters.....	12-13
Animals and Their Habitats.....	14
Bird Olympics.....	15
Bird Safari.....	16
Color Walk.....	17
Scavenger Hunt.....	18
Snap Adventure.....	19-20
Know Your N.W.R.....	21
Jr. Refuge Manager Pledge.....	22

Borrow an Adventure Backpack while you're here!

If either the Headquarters Building or Friends of Forsythe Shop are open during your visit, you can sign out an Adventure Backpack filled with supplies such as binoculars, tape measure, pencils, sketch paper, bug boxes, and more!

Backpacks are available during normal business hours:

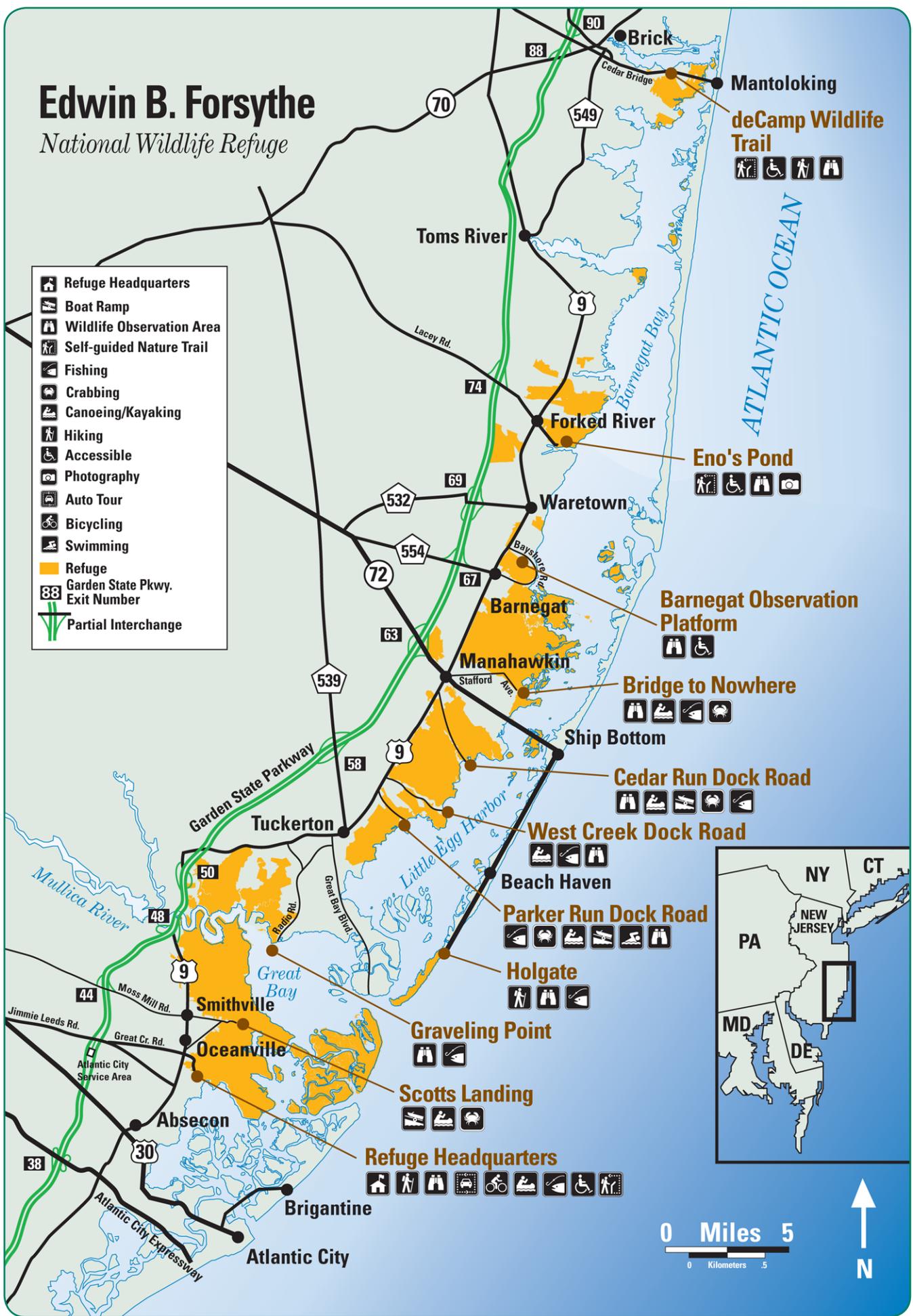
- Headquarters Building: Monday-Friday 10 a.m.-3 p.m.
- Friends of Forsythe Shop: Weekends Spring and Fall 9 a.m.-5 p.m.



(**Backpacks are helpful but not required for completing activities)

Edwin B. Forsythe National Wildlife Refuge

- Refuge Headquarters
- Boat Ramp
- Wildlife Observation Area
- Self-guided Nature Trail
- Fishing
- Crabbing
- Canoeing/Kayaking
- Hiking
- Accessible
- Photography
- Auto Tour
- Bicycling
- Swimming
- Refuge
- Garden State Pkwy. Exit Number
- Partial Interchange



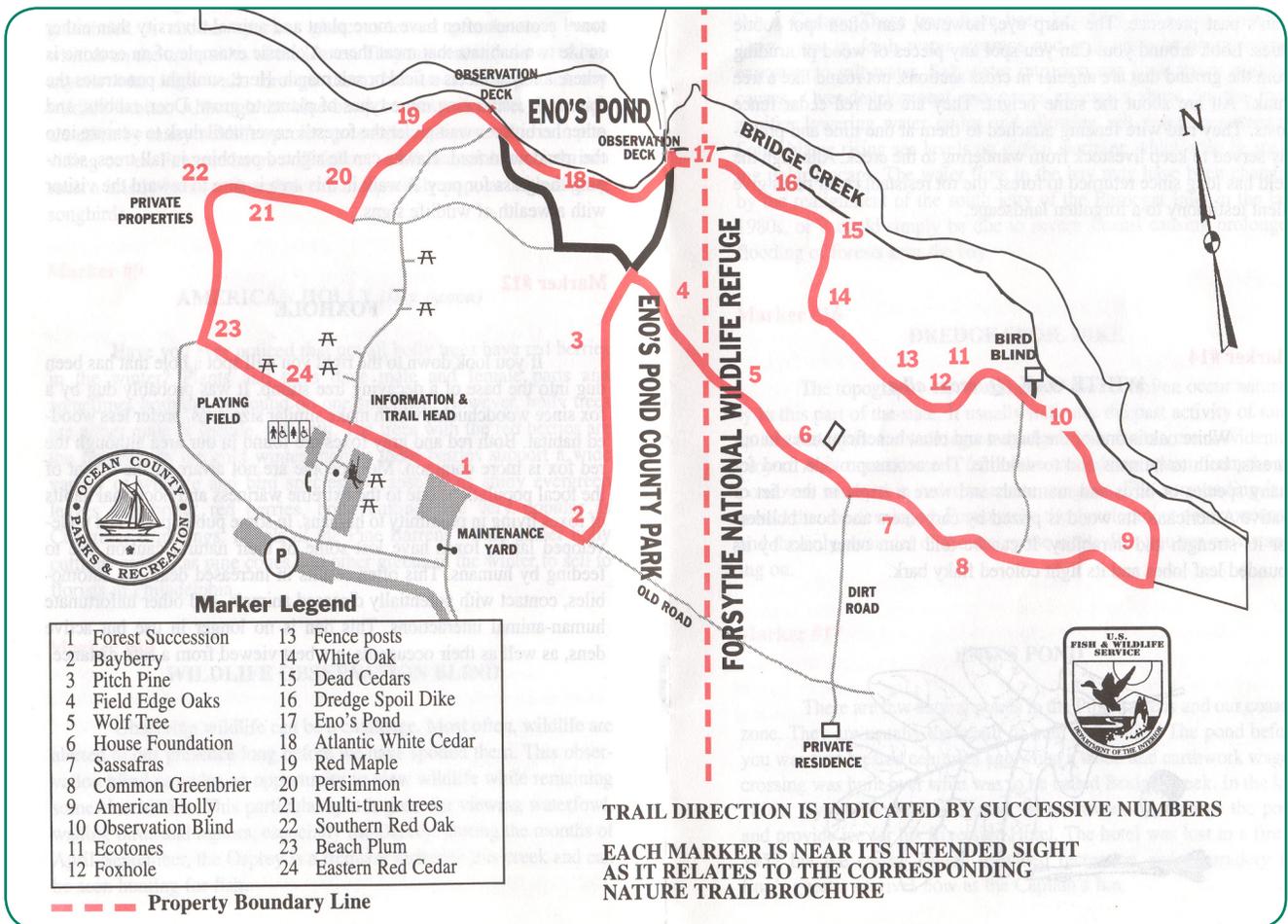
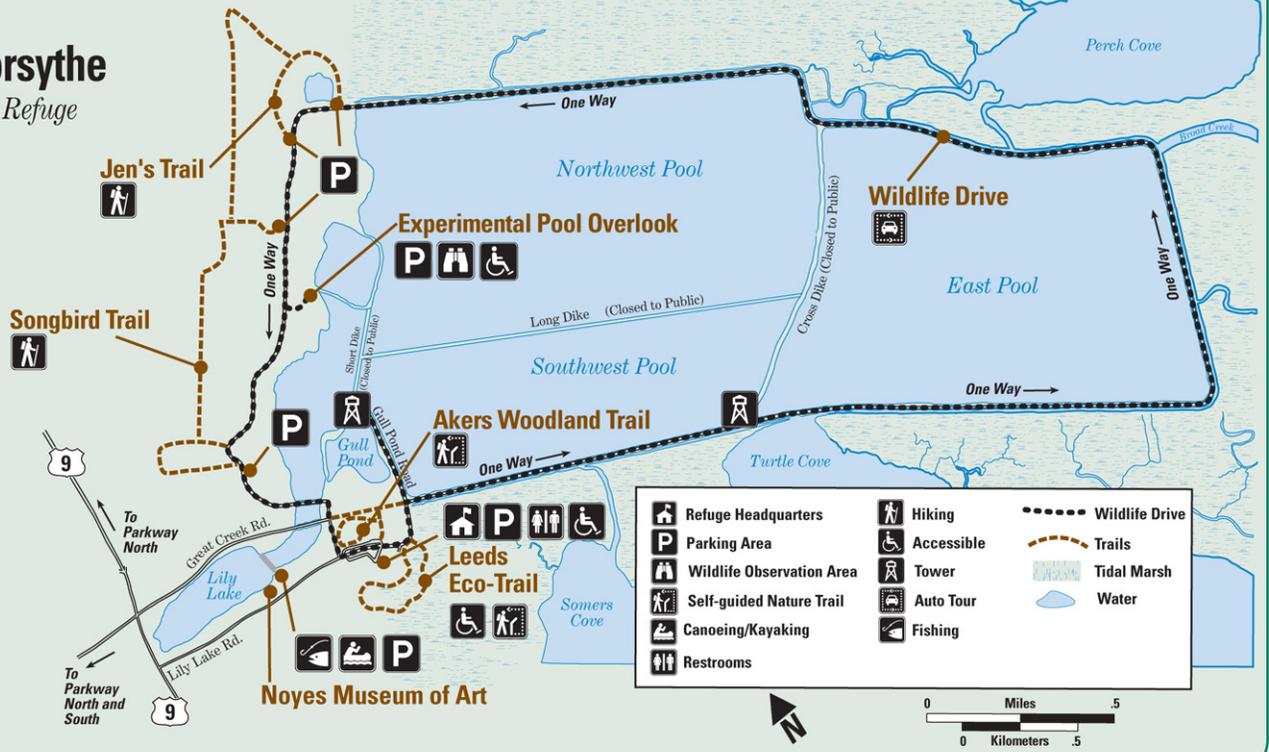
ATLANTIC OCEAN



Trail Maps

Edwin B. Forsythe

National Wildlife Refuge
Headquarters



Seasonal Delight

Tools: pencil



‘Tis the season to connect with nature...

• What season is it at Edwin B. Forsythe National Wildlife Refuge now?

Winter Spring Summer Fall

• What are your favorite things about **this** season?

• Draw yourself doing your favorite thing outside for **this** season:

• What do you think the place you are at now will look like in the other seasons? Draw them below.

“And forget not that the Earth delights to feel your bare feet and the winds long to play with your hair.” ~Kahil Gibran, The Prophet

Inspect an Insect

View bugs in their natural setting...

- Gently collect one bug in your bug box, and view it through the magnifying lid.



Tools: pencil, insect ID book, bug boxes

Spot: Aker's Trail, Jen's Trail, Songbird Trail, Eno's Pond, deCamp Wildlife Trail

Some hints for finding and collecting bugs:

1. Listen carefully for bug noises and look for movement to find where they are hiding.
2. Turn over rocks, leaves, and logs that look like they have been in the same spot for a while. Is there a bug hiding under it?

Where did you find your bug?

What is it doing?

What do you think it eats?

What would you like to know about this bug?

1. _____

2. _____

3. _____

• What do you see in your bug box?



Draw what you see here:

If you can, label the insect's body parts on your picture!

Do you see wings? _____

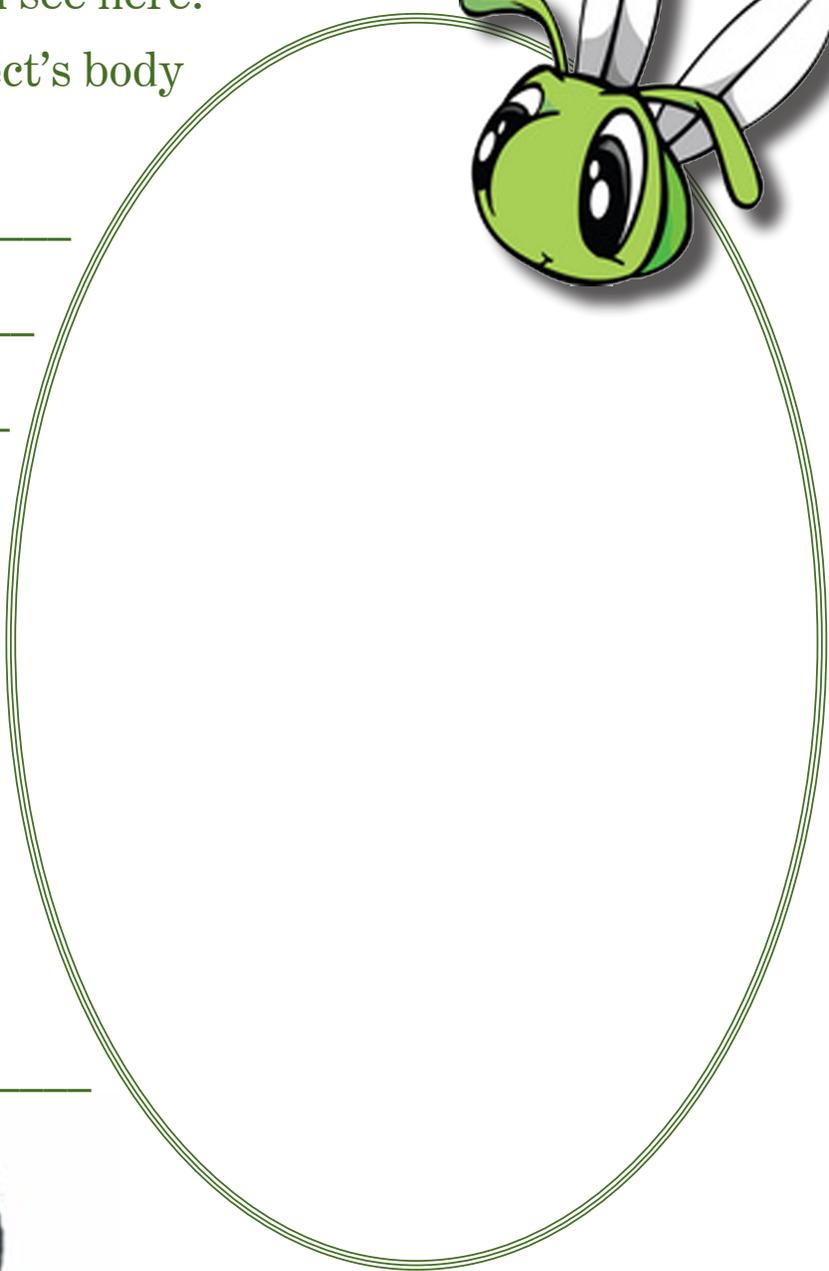
Do you see legs? _____

How many? _____

Are any parts moving?

Which parts?

Can you identify (name) your bug? _____



• Release...Gently put the bug back where you found it. Remember to put rocks and logs in the same spots you found them!

“Be kind to everything that lives.”~Omaha Proverb

Pishing



Tools: pencil, bird ID book, binoculars, your mouth!

Spot: Aker's Trail, Jen's Trail, Songbird Trail, Barnegat Observation Platform, Eno's Pond, deCamp Wildlife Trail

There is a bird call you can do with no special tools, you only need your MOUTH!

When you want to attract birds to you, make a “pishing” noise. This sound makes an “alarm call” that many kinds of birds know. After hearing it, they may fly near you to see what’s happening.

Here are some simple sounds you can start with:

The LOUD pish: PSH...PSH...PSH

The REGULAR pish: SSH...SSH...SSH...SSH

The HIGH pish: SSS...SS...SS...SS



For best results, try this:

1. When you hear birds near you, stand still by bushes or trees to hide yourself.
2. Start pishing—stopping after three or four tries of making the same sound to listen for birds. When birds come close, stay quiet so you can get a good look at them.
3. Different calls work with different birds. Try other beats to find the calls that attract the birds where you are.

Can you name the birds you found? _____

If not, that's OK, what do they look like? _____

“Keep a green tree in your heart and perhaps a singing bird will come.”

~Chinese Proverb

Shadow Catching

Tools: pencil

Spot: Aker's Trail, Jen's Trail, Songbird Trail, Eno's Pond, deCamp Wildlife Trail

Look for things that have “cool” shadows.

- Stop at a sunny spot.
- Look for shadows made by small (flowers, grass, leaves) or large (tree, branch) objects.
- Place your paper so that a shadow falls on it, and trace it in the box below (if the whole shadow does not fit in the box, just trace part of it).



Describe the object that made this shadow. Do you know its name? _____

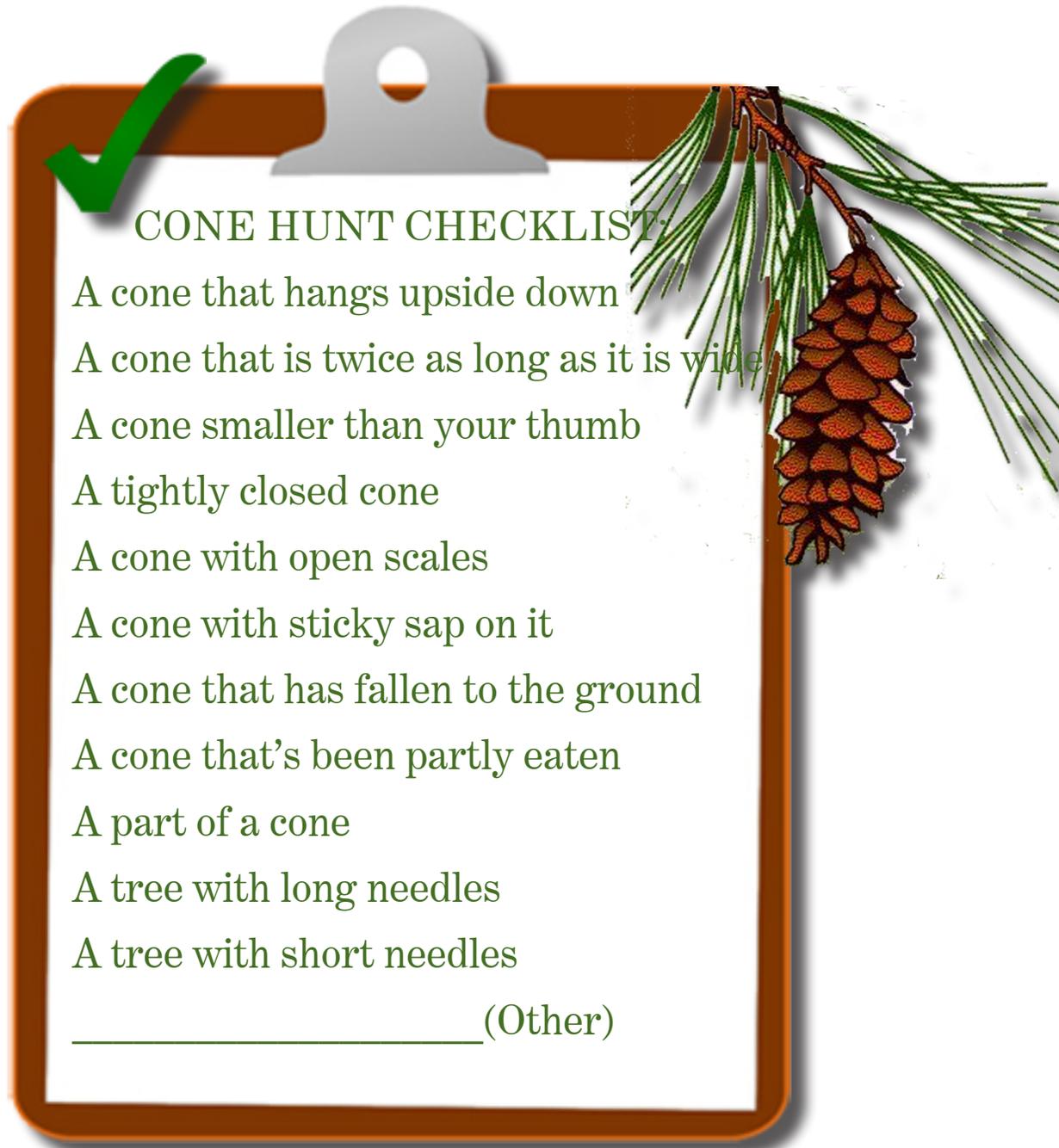
Got Cones?

Keep an eye out for CONES!

Tools: pencil, tree ID book

Spot: Aker's Trail, Jen's Trail, Songbird Trail, Eno's Pond, deCamp Wildlife Trail

As you explore the refuge, try to complete this checklist.



CONE HUNT CHECKLIST:

- A cone that hangs upside down
- A cone that is twice as long as it is wide
- A cone smaller than your thumb
- A tightly closed cone
- A cone with open scales
- A cone with sticky sap on it
- A cone that has fallen to the ground
- A cone that's been partly eaten
- A part of a cone
- A tree with long needles
- A tree with short needles
- _____ (Other)

“Study nature, love nature, stay close to nature. It will never fail you.”

~Frank Lloyd Wright

Close Encounters



Tools: pencil, magnifying lense

Spot: Aker's Trail, Jen's Trail, Songbird Trail, Barnegat Observation Platform, Holgate Unit, Eno's Pond, deCamp Wildlife Trail

This challenge will use your senses.

- Hawk eyes: Be hawk-like and see all things big and small.

Look as closely as you can at any 3 things you see.
(Use a magnifying lense to get an even closer look!)



Draw those 3 things here:



- Wolf ears: Listen to the sounds around you.

Cup your ears and turn your head to face the sounds you hear. Listen for two minutes.

Can you name the sounds you just heard? _____

How far away do you think they are? _____



- Cat paws: Use your sense of touch to discover new things (without hurting yourself or anything in nature).

Find one secret thing for your partners to touch with their eyes closed.

Can they guess what it is? _____

What is it? _____

If you were to sleep here like a wild animal, what would you make your bed out of? _____

If you were to make your clothes here, what would you use? _____



- Foxy nose: The nose knows!

Find 3 things in the area to smell.



Draw or write what you smelled here:

--	--	--



Have your partners smell one thing with their eyes closed.

Can they identify it? _____

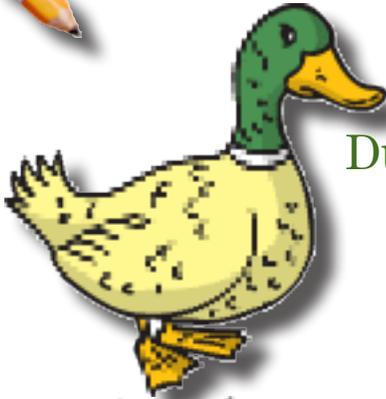
What is it? _____

Animals & Their Habitats

Tools: pencil

An animal's habitat is where it lives, eats, and plays.

- Draw a line from each animal to its habitat:



Duck

Forest



Butterfly

Pond



Deer

Grasslands



What animals and habitats did you see today?

What can we do to make sure animals don't lose their habitats?
(Not sure? Ask a refuge staff member or volunteer.)

“Take time to go and find your magic place. It could be a special rock or tree, somewhere you feel at peace.” ~Zach Ladin

Bird Olympics



Tools: pencil, yard stick, watch/timer, partner

Challenge #1: Winging It!

See how your “flapping rate” compares with birds. Count the number of times you can flap your arms in 10 seconds.

BIRD	WING BEATS/10 SECONDS
Crow.....	20
Peregrine Falcon.....	43
Chickadee.....	270
Hummingbird.....	700



I have a wing beat of..... _____

Challenge #2: What’s Your Wingspan?

See how your wingspan compares with birds. Have a partner measure your arm span.

BIRD	WINGSPAN
Tufted Titmouse.....	10 inches
Green-winged Teal.....	2 feet
Short-eared Owl.....	3 feet 2 inches
Red-tailed Hawk.....	4 feet
Bald Eagle.....	6 feet 6 inches



I have a arm span of..... _____ feet _____ inches

Challenge #3: Breath Control

Fish-eating birds dive underwater to chase and catch fish.

A cormorant can hold its breath for 15 minutes (900 seconds).

I can hold my breath for _____ seconds.

Challenge #4: Staring Contest

See how your stare stacks up!

An owl can stare for hours while hunting for prey.

I can stare for _____ minutes _____ seconds without blinking.



Adapted from: Flying Wild

Bird Safari

In this activity, you will watch birds in the wild.

Using the list below...

Check the boxes next to the bird behaviors you see. (It's OK if you do not see them all today!)

Then, write where you saw the bird.

If you can, identify the species.

Tools: pencil, bird ID book, binoculars
Spot: Wildlife Drive, Barnegat Observation Platform, Eno's Pond



BIRD BEHAVIOR	LOCATION	ID
Singing or calling		
Preening(cleaning feathers)		
Bathing in water		
Soaring (flying, wings not moving)		
Flying (wings beating)		
Perched (sitting) on a limb		
Swimming		
Diving		
Standing on the ground		
Wading in the water		
Feeding		
Flying with food in its mouth		
Climbing a trunk/branch		
Perched on a wire or fence		
A group of birds flocking together		

Color Walk



Tools: pencil

Spot: Aker's Trail, Jen's Trail, Songbird Trail, Eno's Pond, deCamp Wildlife Trail

How many colors can you find in nature?



In each oval:

Name the color, and then write or draw what you found.

color:

color:

color:

color:

color:

Scavenger Hunt

Nature is made up of both living and nonliving things.

Tools: pencil

Spot: Aker's Trail, Jen's Trail, Songbird Trail, Eno's Pond, deCamp Wildlife Trail

Nonliving things don't eat, breath, or move like you do, but they play are important for plants and animals.

See if you can find any of these:

(**You can touch, but be careful not to harm anything.)



- Nonliving things:

- | | |
|--------------------------------------|---|
| <input type="checkbox"/> Smooth rock | <input type="checkbox"/> Sand |
| <input type="checkbox"/> Shiny rock | <input type="checkbox"/> Broken Rock |
| <input type="checkbox"/> Water | <input type="checkbox"/> Clouds |
| <input type="checkbox"/> Dew drops | <input type="checkbox"/> Sunlight shining through the trees |

- Living things:

- | | |
|--|---|
| <input type="checkbox"/> Pine needles | <input type="checkbox"/> Leaf with pointy edges |
| <input type="checkbox"/> Leaf with bug holes | <input type="checkbox"/> Bugs |
| <input type="checkbox"/> Vine | <input type="checkbox"/> Flower |
| <input type="checkbox"/> Mushroom | <input type="checkbox"/> Moss |
| <input type="checkbox"/> Squirrel | <input type="checkbox"/> Tall grass |
| <input type="checkbox"/> _____ | (Other animal) |



- Signs of living things:

- | | |
|-------------------------------------|---|
| <input type="checkbox"/> Ant hill | <input type="checkbox"/> Bird nest |
| <input type="checkbox"/> Spider web | <input type="checkbox"/> Broken branches |
| <input type="checkbox"/> Feathers | <input type="checkbox"/> Animal footprint |

When one tugs at a single thing in nature, he finds it attached to

Adapted from: *Try-Its* for Brownie Girl Scouts, 2000

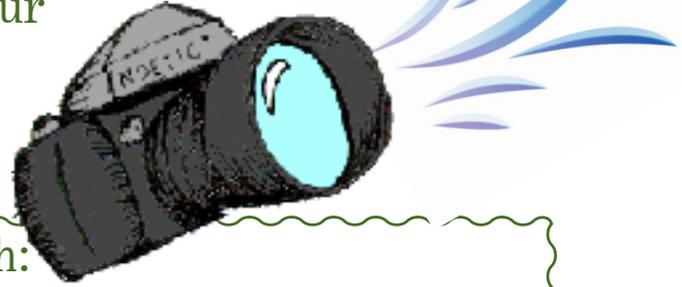
the rest of the world.”~John Muir

Snap Adventure

Tools: pencil, camera, tape

Spot: Any part of the refuge!

Capture your trip to the refuge in photos!
Finish this checklist by taping in your
finished photos...



Birds flying over the salt marsh:

A large rectangular area with a wavy green border, intended for taping a photograph of birds flying over the salt marsh.

View from high above (one of wildlife drive's towers or an observation platform):

A large rectangular area with a wavy green border, intended for taping a photograph taken from high above, such as from a wildlife drive tower or observation platform.

Favorite thing you saw today:

Everyone in your group:

Win a prize too!

- One photo for each age group will be chosen every month.
- Please only submit one photo per month, per child.
- Drop your entries off at refuge headquarters Mon.-Fri. 10 a.m.-3 p.m. Please include:
 - Child's name, age, date visited, and phone number where we can reach you.
- Winners will be announced the 1st of every month.
- Have fun! Be creative! **GOOD LUCK!!**



Know Your National Wildlife Refuge

The Edwin B. Forsythe National Wildlife Refuge (N.W.R) protects 47,000 acres of southern New Jersey coastal habitats. The refuge has been set aside to protect plants, animals, and the wild places where they live. Many people come to this refuge to observe wildlife, take photographs, or to go hiking.

- Where is your hometown? _____
- How many times have you visited Forsythe N.W.R.? _____
- Draw an animal that you saw at the refuge today:



What animal is it?

Where did you see it?

• What interesting things did you see or do here at Forsythe N.W.R.? _____

• What do you think makes Forsythe N.W.R. a fun and special place? _____

Junior Refuge Manager Pledge

- I promise to leave only footprints and take only pictures while visiting the Edwin B. Forsythe National Wildlife Refuge.
- I promise to respect the plants and animals by not disturbing them or their homes.
- I will continue to learn about the Forsythe Refuge and other Refuges and share my knowledge with my friends and family.

Jr. Refuge Manager's Name

Date

Refuge Official's Signature

U.S. Department of the Interior
U.S. Fish & Wildlife Service
Edwin B. Forsythe National Wildlife Refuge



CONGRATULATIONS on becoming
a Jr. Refuge Manager!

Edwin B. Forsythe
National Wildlife Refuge
P.O. Box 72
Oceanville, NJ 08321
609/652 1665
609/652 1474 FAX
Email: forsythe.fws.gov
<http://forsythe.fws.gov>

U.S. Fish & Wildlife Service
1 800/344 WILD
<http://www.fws.gov>

August 2008

