HABITAT is where it’s at!
In this issue:

We’ll explore some of the wildlife habitats we have in New York and how we can help ensure they continue to be home to many kinds of wildlife.

Find us at
www.dec.ny.gov/education/40248.html

Contact us at
Conservationist for Kids
625 Broadway
Albany, NY 12233-4500
or e-mail us at
cforkids@gw.dec.state.ny.us

New Yorkers who enjoy the outdoors can support the improvement of wildlife habitat and access for outdoor recreation by purchasing a $5 Habitat & Access Stamp. Learn more at www.dec.ny.gov or ask about it where hunting and fishing licenses are issued.

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Cover photo: Michael Hayden - Native white-tailed deer and a great blue heron wade through non-native pink water lilies.
Unless otherwise attributed, all photos by DEC staff.
Habitat is the area in which an animal normally lives—where it finds what it needs to survive. The amount and quality of each part of the habitat have to be just right, and they have to be arranged so that the animal can use them. If one component is out of balance, the entire puzzle may not work as it should for that species of animal.

Habitats are often named for the main plants or features. FORESTS have TREES, GRASSLANDS have GRASSES, WETLANDS have WATER-TOLERANT PLANTS.

New York State has many different kinds of habitats, including rivers and lakes, marine waters, wetlands, grasslands, shrublands, alpine areas, and different kinds of forests. Even cities offer wildlife habitat. Each habitat features different kinds of plants and supports different kinds of animals.
Forests are known for their trees: coniferous, deciduous, or a combination of both. Other plants include shrubs, small trees, and herbaceous (non-woody) plants. Each layer of the forest, from the tree tops (canopy), to the shrubs and other plants along the forest floor, and the area in between (understory), provides for the needs of different kinds of animals.

When Europeans arrived in what is now New York State, the land was mostly forested. As the land was settled, much of the forest was cleared for farms. Forest habitat was lost, along with the animals that lived there. Over time, some of the farms were abandoned and forests grew back, with the animals that rely upon this habitat returning as well. Today, most of New York is forested again.

Young forests are important habitat for many woodland animals.

Wildlife to watch for:
- gray and red squirrels
- chipmunk
- scarlet tanager
- woodpeckers
- salamanders
- toads
- wood frog
- ruffed grouse
- deer

Grasslands are wide open areas where herbaceous plants, such as flowers and grasses, are found. If left alone, shrubs and trees will begin to grow, and this habitat will slowly change to forest. Grasslands were once more common, maintained by farming practices (haying). They are becoming scarce as farms disappear and these grassy areas grow back up into trees. Many grassland birds require large open spaces. As big areas of grasslands are lost due to natural changes and human development, so are the homes of these species.

Wildlife to watch for:
- woodchuck
- eastern bluebird
- white-footed mouse
- meadow vole
- bobolink

Ground-nesting birds and burrowing animals find safety and cover among the dense grasses.
Freshwater habitats have one thing in common: water. Swiftly moving waters (rivers and streams) and calm waters (lakes, ponds, and wetlands) support different kinds of aquatic wildlife, plus animals visiting to drink and to forage. Plants include cattails, bulrushes, algae, water lilies, duckweed and other water-dependent species.

Over hundreds of years, small ponds may naturally fill in, becoming wet meadows and finally forests. People change these habitats, too. Some wetlands have been filled in or drained to make them more suitable for farming or building. New York’s wetlands laws protect freshwater and tidal wetlands, preserving these important habitats.

Wildlife to watch for:
- fish
- beaver
- dragonflies
- caddisflies
- turtles
- ducks
- herons
- muskrat
- river otter
- raccoon
- mink
- osprey

Urban areas provide habitat for many kinds of wildlife. Tall buildings serve as cliff-type habitat for pigeons and falcons. Crows are common. Trees along city streets offer limited food and shelter for most urban wildlife. For more cover and food, wildlife may turn to the parks, cemeteries and other green spaces, large and small, scattered around our cities. Truly wild natural spaces, undisturbed by people, are few and far between.

Wildlife to watch for:
- raccoon
- gray squirrel
- peregrine falcon
- red-tailed hawk
- cottontail rabbit
- mice
- fox
- songbirds (robins, sparrows)

Many people living in cities help wildlife. We put out bird feeders and plant wildlife gardens that attract butterflies and birds. Sometimes, if garbage isn’t properly stored, we provide food for wildlife when we did not intend to.
**CHANGE HAPPENS**

Habitats can change over time, sometimes over many years, and sometimes very quickly. When the changes take place gradually and go through a number of different stages, we call it “ecological succession.” Sometimes, natural events interrupt these changes and the habitat returns to an earlier stage, perhaps even a different type.

**When a habitat changes** to another type, the animals that needed the earlier habitat will no longer be able to call it home. Other animals—those that need that new type of habitat—will move in because the area now meets their needs.

**What’s bad for some is good for others.**

**People can cause habitats to change:**

Students plant a garden with flowers that butterflies feed upon.

If habitat is restored, wildlife may be brought back into an area where they used to live (reintroduced), as happened with wild turkeys. New York’s turkey population is now abundant.

**Change can take place naturally:**

A beaver dams a swift stream, flooding the surrounding forest and creating a quiet pond. Over time, the beaver leaves and the dam breaks, turning the quiet pond into a wet meadow, and then eventually back into a forest.

An open field or grassland provides good habitat for short-eared owls. As shrubs and trees grow in the field, it becomes a forest. A forest habitat is ideal for woodpeckers.
If left alone, habitats will change over time. Some species may disappear if their habitat changes a lot—or vanishes altogether—and they have nowhere else to go. People can help wildlife by taking good care of all the different kinds of habitat.

Biologists and foresters work together to manage habitat to make it more suitable for particular wildlife species. They observe what happens to wildlife in good quality habitats and try to create the same conditions elsewhere, mimicking nature. They also help landowners make wise choices about how to care for their land for the benefit of wildlife.

**Unwelcome wildlife or plants,** especially invasive species, may be removed to preserve habitat. Garlic mustard and purple loosestrife crowd out native plants and are not good food sources for native wildlife.

**Prescribed burns** are sometimes used to maintain habitat. These fires are set on purpose and supervised from start to finish by professionals. Fires are one technique used to maintain the habitat of the endangered Karner blue butterfly.

**Responsible timber management** can return succession to an earlier stage and ensure a healthy forest habitat for a wide range of species. Healthy forests feature trees of varying ages and are able to fend off pests and diseases.

**How will you help wildlife and the spaces that are home to them?**

**Biologists, foresters and others,** including farmers and other private land owners, work together to maintain grasslands, wetlands, forests and other habitats across New York State.
Outdoor Explorer
Take a walk outdoors to look for signs that habitat has changed over time. Follow a trail through a field and into a forest. Is the change from field to forest quick, or is it gradual? Why? (HINT: Is the forest beside a mowed area or a wild area?) As you walk through the woods, do you see signs that it was once a field? (HINT: Watch for old fences or stone walls and the stone foundations of buildings.)

Watchable Wildlife
Watchable Wildlife sites are great places to look for animals. Go to www.dec.ny.gov/outdoor/55423.html to find a designated Watchable Wildlife site near your home or school. Is there watchable wildlife in your yard or neighborhood? Keep a journal with a record of what you see. Include drawings or photos as well as your written observations. Does the time of day or the time of year seem to affect what kinds of animals you see?

Create Wildlife Habitat
You can create habitat for wildlife at home or at school just by leaving a corner of the yard to go wild, or by planting a wildlife garden. There are flower gardens that attract butterflies, and seed gardens that attract birds, even gardens for toads. As you plan your garden, think about how it will provide all of the components of good habitat: food, water, shelter and space. There are lots of ideas from the National Wildlife Federation at www.nwf.org/Get-Outside/Outdoor-Activities/Garden-for-Wildlife.aspx.

For More Information
The Magic School Bus Hops Home by Patricia Reif (Scholastic, Inc., New York, 1995)
DEC’s Biodiversity & Species Conservation
DEC’s Return a Gift to Wildlife
DEC’s New York Nature Explorer
DEC’s Watchable Wildlife
DEC’s Kids GO (Get Outside) Nature Activities

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Andrew M. Cuomo, Governor of New York State

DEPARTMENT OF ENVIRONMENTAL CONSERVATION
Joe Martens, Commissioner
Michael Bopp, Director, Office of Public Affairs
Laurel K. Remus, Director, Division of Public Affairs and Education

DIVISION OF PUBLIC AFFAIRS AND EDUCATION
Ann Harrison, Bureau Chief, Environmental Education
Gina Jack, Environmental Educator
Frank Herec, Art Director

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Habitats
Within an animal’s habitat, it finds what it needs to survive: food, water, shelter and space. While there is some overlap, generally different animals are found in each habitat. Fitting together needs with available resources is like a puzzle (as depicted on page 3 of this issue of Conservationist for Kids). If the pieces don’t fit together, the puzzle doesn’t function properly. Habitats change over time. Ecological succession—the orderly and progressive replacement of one natural community by another until a relatively stable community is reached—may occur, or natural events (e.g., forest fire, beaver flooding) or human actions may affect an area. If a habitat changes, it is likely that the animals found there will change as well.

New York State features numerous and varied habitats, from marine to alpine, forest to wetland, rural to urban, and many more. Some wildlife habitats are disappearing from our landscapes, whether by natural forces or because of people. Of special concern are grasslands and young forests. Both support diverse wildlife, and both represent early stages in the process of ecological succession. If left alone, and barring natural disturbances, both will eventually progress to become mature forests and will support the wildlife found within this common habitat. Biologists and foresters work with private landowners and on public lands to manipulate habitat, often mimicking nature, to ensure that all possible habitat types are represented within New York State and support the widest possible range of animal and plant species.

This Issue’s “Outside Page”
Activities on the Outside Page (page 8) of this issue of Conservationist for Kids show ways in which students can contribute to creating and observing wildlife habitats. Many of the activities are best completed outside the classroom with peers or community groups.

Teacher Workshops
For teachers who have participated in a Project WILD or Project Learning Tree workshop, the activities listed below complement the spring 2012 issue of Conservationist for Kids. Visit www.dec.ny.gov/education/1913.html for information about workshops and about how to obtain curriculum and activity guides.

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Do you have an interactive white board in your classroom?
If you use a SMART Board or similar interactive white board or projection system in your classroom, consider downloading a PDF of C4K and using it in your classroom, along with the printed copies enclosed in this mailing. This issue and all of our back issues are available at www.dec.ny.gov/education/40248.html.
Supplemental Activities for the Classroom

Build a Bluebird House
Is your schoolyard good habitat for our state bird, the eastern bluebird? They are found in meadows and open areas if appropriate nesting sites are nearby. Go to www.dec.ny.gov/docs/administration_pdf/c4kBluebirdplan.pdf for building plans, and follow the step-by-step instructions on DEC-TV at www.dec.ny.gov/dectv/dectv79.html to build a bluebird house. Place the completed house in habitat that bluebirds favor, and watch them raise their young year after year.

Habitat Hike
Take your students outdoors to compare and contrast at least two different habitats. Have students record their observations while at each site, then discuss their findings in the classroom. Consider what kinds of plants are present, what kinds of food sources animals may find and where animals will find water and shelter. What kinds of animals do students expect to see? What kinds of animals do they actually see or find evidence of (e.g., scat, feeding sites, nesting/sheltering sites). If no animals are seen, do students have any ideas why? (e.g., too noisy, not enough space) What, if anything, would they do to improve the habitat for wildlife? If one of your locations is a part of the schoolyard, consider working as a class to improve the site for wildlife by planting a wildlife garden or removing invasive plants.

Habitat Dioramas and Fair
Have each student select a habitat found in New York State and construct a diorama in a shoebox depicting that habitat. The diorama should include some of the plants and animals one would find in the habitat, plus sources of food, water and shelter for the animals. Host a “Habitat Fair” during which students show their dioramas to other classes in the school, explaining what a habitat is and why they chose their particular habitat.

Online Resources

Lesson Plans about Habitats:
www.dec.ny.gov/education/36572.html DEC’s Hudson River Lesson Plans (science lessons)
http://education.nationalgeographic.com/education/teaching-resources/
National Geographic’s education portal; search for “habitat” for appropriate lesson plans

Schoolyard Habitats:
www.fws.gov/cno/conservation/schoolyard.cfm U.S. Fish and Wildlife Service’s Schoolyard Habitat Program, including downloadable project guide
www.nwf.org/Get-Outside/Outdoor-Activities/Garden-for-Wildlife/Schoolyard-Habitats.aspx National Wildlife Federation’s Schoolyard Habitat Program, including project guide and lesson plans
www.plt.org/greenworks Project Learning Tree’s “Greenworks” grants can be used for habitat projects

General Information about Habitats:
www.dec.ny.gov/lands/4957.html DEC’s Urban and Community Forestry information
www.dec.ny.gov/dectv/dectv57.html DEC-TV: “The Urban Forest of New York City”
www.dec.ny.gov/animals/32722.html DEC’s Landowner Incentive Program
www.dec.ny.gov/pubs/32891.html DEC’s Grasslands Landowner Incentive Program
http://longislandsoundstudy.net/issues-actions/habitat-quality/the-12-types-of-habitats Long Island Sound Study: Habitat Types of Long Island Sound

Conservationist for Kids (C4K) and an accompanying teacher supplement are distributed to public school fourth-grade classes three times each school year (fall, winter and spring). If you would like to be added to or removed from the distribution list, if your contact information needs to be changed, or if you have questions or comments, please e-mail the editor at cforkids@gw.dec.state.ny.us

Printable activity sheets and links to other resources are on DEC’s website. You will also find back issues of C4K and the activity sheets and teacher supplements associated with each of them. Visit www.dec.ny.gov/education/40248.html.

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