

# Beaver Creek Wetlands Association

# The Spotted Turtle

Volume XX, No. 3

Summer 2007



## 2007 Calendar

### August

**Fairborn Sweet Corn Festival -**  
Volunteers needed.  
Call 320-9042.  
Sat, Aug. 18 - Sun, Aug. 19

### September

**Beaver Creek Popcorn Festival**  
Volunteers needed. Call 320-9042.  
Sat, Sep. 8 - Sun, Sep. 9

**Combined Federal Campaign  
Kickoff - Date TBA**

### October

**Combined Federal Campaign  
Kickoff - Date TBA**

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## Eagle Scout Project at the Fairborn Marsh



*Scouts installing the observation deck at Fairborn Marsh.  
It took 400 screws and 144 hours of labor to complete!*

Nate Spears of Troop 68 in the Tecumseh District has just completed his Eagle Scout Project at the Fairborn Marsh. The project consisted of constructing an observation platform overlooking the marsh. With this project, he learned about construction, reading design prints and organizational skills in order to construct the overlook.

Approximately 144 hours of scout volunteer labor was needed to complete the observation platform. We encourage you to see the complete product and to bring your binoculars and observe the large turtles, blue heron, and many other species of birds and flowers at this site.

To get to the observation platform, from Trebein Road, turn into the Fawn Ridge Development (Near New Germany Trebein and Trebein Road Intersection) and

continue straight until you reach a dead end. Turn right and go one block to another dead end. Turn left and continue straight onto the concrete pad entering the property and look for a mowed area for parking. Follow the car path South on foot until you see the observation platform or enter at one of the trail entrances at the woods edge and continue walking until you come to the platform.

We would like to personally thank all the Scouts that participated, especially Nate Spears, his brother Brandon, his father Frank, and two friends of the wetlands, Rob Evans and Andy Crump for hauling material to the site.

*Note-There are several more scout projects available, so stay tuned.*

*- Robert Louis*

## From the President... Affecting Life

*"We do not own the land. We belong to it. And by our sweat and breath shall she know us, and welcome us upon our return." -Pueblo saying*

Looking back on the past year I find the most outstanding thing about the BCWA is the people who give their sweat and breath to do the job at hand. We are nothing in this world of conservation except for those willing souls who say "I can help with that" and then they do just that!

A wonderful crowd of over 120 members attended our 19th Annual Meeting on May 15th and it was fine opportunity to recognize and thank this community of volunteers that make the BCWA "go". Our "Volunteer of the Year" award went to Debbie Karr. A constant presence at work parties in the Siebenthaler Fen, Creekside Reserve and the Fairborn Marsh, Debbie steps up quietly and gets the job done.

All Trustees were recognized, though time did not allow me to enumerate the tremendous amount of work that they each contribute. Keeping minutes, balancing our budget, organizing work parties, giving presentations, raising money, working for memberships, documenting our history and so much more, is work that really makes a difference between a successful organization and a fading dream.

We welcomed two new trustees to the fold. Ed Dressler and Mike Zimmerman will each bring expertise and enthusiasm to the organization. It will be a pleasure to have them on board. Sue Rytel and Judith Streiff renewed their commitment to BCWA by taking a second term.

Eagle Scout Nate Spears completed a beautiful viewing platform in the Fairborn Marsh with the help of other Scouts and adult advisors. His hours of planning and skill will benefit hikers and birdwatchers at the marsh. Thank you Nate!

In this newsletter you will read about the Shaw School students and their teachers who stepped up to not only learn about the wetlands but to donate funds from a special project. As the summer heat continues we can have renewed appreciation for these beautiful wetlands that are so vital to our community's water source. Our aquifer is worthy of the protection we seek to give it and the habitat it supports. Our volunteers are worthy of heartfelt thanks! We invite YOU to join in to learn and discover the wetlands through your own volunteer efforts. Just call...the wetlands will welcome you.

Susie Scott  
President, BCWA

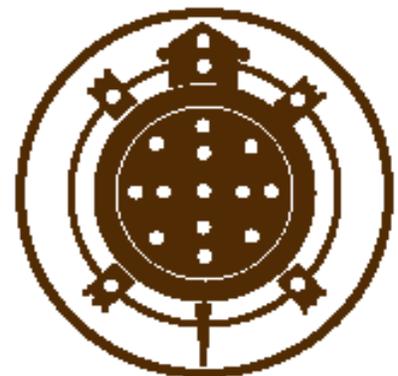
**Spotted Turtle Name and Logo:** The logo of the BCWA is a rendering of the Spotted Turtle by wildlife artist Charley Harper. Harper, who generously donated the drawing back in 1988. Charley passed away in 2007 and will be sorely missed. His work has been adopted by the National Park Service and is appreciated worldwide. Our newsletter title recognizes the Spotted Turtle as an icon for the many rare animals and plants that are protected in the Beaver Creek Wetlands.

**Submissions, Questions, or Comments:** The BCWA is a member-based organization. Just as we rely on you for annual support, we also rely on you to make this newsletter the product of several diverse voices. So, if you have an idea for an article or a picture to include, please send them to us at [admin@beavercreekwetlands.org](mailto:admin@beavercreekwetlands.org). Also, we welcome any comments or questions that you'd like to have addressed in this newsletter. For newsletter submissions, questions, or comments, please include "newsletter" in the subject line of your email. We reserve the right to edit submissions for content or clarity.

**Donations of Land/Easements:** If you are interested in donating land, placing an easement on property, or remembering the BCWA in your will, please don't hesitate to contact the Beaver Creek Wetlands Association at 937-320-9042.

**BCWA Annual Report:** Copies of the BCWA annual report are available by request. Email the office at [admin@beavercreekwetlands.org](mailto:admin@beavercreekwetlands.org) or call 937 320-9042 to request a copy.

Thanks to Sue Rytel for designing the layout of the *Spotted Turtle*.



**Founded in 1988, the Mission of the Beaver Creek Wetlands Association is to protect the wetland ecosystem in the Beaver Creek watershed through partnerships, community networks, and public education.**

# Science Corner

## All About Muskrats

While most of the vertebrates that inhabit our wetlands are fish, amphibians, reptiles, and birds, there are some species of mammals that also inhabit these wetlands. One of them is the Muskrat (*Ondatra zibethicus zibethicus L.*). The generic name, *Ondatra*, is an Iroquois name for “Muskrat”. Both the specific epithet and the subspecies name, *zibethicus*, is Latin for “musky glands”. Other common names for this animal are Bank Rat, Common Muskrat, House Rat, Marsh Bunny, Marsh Hare, Marsh Rabbit, Marsh Rat, Mud Beaver, Mudcat, Musrat, Musk Beaver, Musk Cat, Musquash, Mussacus, and Rat.

### Description

From nose to tail, Muskrats are typically 16-25 inches long, with tails as long as 7-12½ inches. Males are slightly larger than females. Muskrats weigh approximately 1¼ -5 lbs, and those Muskrats inhabiting still water are usually heavier than those inhabiting streams.

The Muskrat has two layers of fur. Its outer fur is glossy and is composed of long, coarse guard hairs. During the winter, these guard hairs may have yellow tips. Its under fur is dense, soft, silky, wooly, and waterproof. The color of the fur ranges from brown to black on its back, red to tan to yellow on its sides, and white to gray to cinnamon on its abdomen. Its chin, throat, and inner legs are white. Albino forms have been observed.

Tracks show that the hind feet are usually placed behind the front feet from the same side. The distance between each set of prints is about 3 inches. While walking, their tails may be lifted

or may leave drag marks.

In the wild, a Muskrat may live up to 6 years. In captivity, they may live up to 10 years. They inhabit ponds, marshes, swamps, or any standing water about 4-6 feet deep, as well as slow-moving streams. Muskrats can be found across most of the U.S., except for the extreme Southeast and Southwest, and Canada, as far north as the treeline. Since about 1900, Muskrats have been introduced to parts of Asia, Europe, and South America.

### Dwellings

The Muskrats have 2 main types of dwellings: burrows and lodges. While they both protect the Muskrats, they are both subject to drought, flooding, and freezing.

**Burrows:** Their burrows are hollowed dens in stream banks. The Muskrats dig these burrows with their forefeet. To make a burrow, the soil must have a lot of clay and little sand, gravel, and rocks. If there are a lot of roots, then sandy soil is workable. These burrows may extend up to 50-200 yards and may either travel parallel to the stream bank or away from it.

Their entrances are about 6 inches by 8 inches. Accompanying these tunnels are ventilation shafts and several nesting chambers. These nesting chambers are about 8-16 inches in diameter and are lined with plant materials. They are located above the water line. Their main entrance, along with most of their other entrances, is located below the water line. Some of their entrances may be located above the water line. These burrows are built to last a long time. Some of them may be used for up to 20-30 years. Because they are cooler inside than outside, they are preferred during the summer months.

**Lodges:** Their lodges are rounded, conical mounds of mud and

aquatic vegetation. The building materials are usually gathered from within a 10-foot radius of the lodge. They are usually located in open water up to 2 feet deep and are located near standing aquatic vegetation. These lodges are about 4-8 feet high and are about 5-10 feet in diameter. However, only about 2-3 feet of them are above the water line.

They are usually built upon supports, such as root piles, mud or gravel, or stumps. The larger lodges are usually built over a several year period and are usually built during the summer and the fall. Some of these larger lodges may hold up to 12 Muskrats. Many of these lodges only last about a year. Therefore, they must be rebuilt every year.

### Diet

The Muskrat is primarily a vegetarian. It eats succulent leaves, rhizomes, roots, shoots, and stems of both submergent and emergent vegetation. Flaps of skin located behind the Muskrat’s incisors enable the animal to cut or dig vegetation underwater while keeping their mouths closed and the water outside.

During the winter, when vegetation is scarce, Muskrats will eat small animals. Some of them include clams and mussels, snails, crustaceans, fish, frogs, turtles, birds, and carrion. Muskrats usually forage within 50 feet of their homes. They rarely forage over 500 feet from home. Muskrats usually eat at night or at dusk and dawn. They may also eat on cloudy days. A single Muskrat may consume up to 1/3 of its weight daily.

*continued on next page...*

### Reproduction

Breeding season for the Muskrat is March to October in the North and year-round in the South. However, most of the breeding is done in the spring. Located near their tail, the Muskrats have musk glands, which emit yellowish musk oil. This musk oil mixes with the Muskrat's own excretions to create distinct scents, which they use to mark their territories and to attract mates. These scented markings may last for several weeks. Males have far more active glands than females. These musk oils contain the chemicals cycloheptadecanol, cyclopentadecanol, and ketone.

Muskrats are usually solitary creatures. However, during breeding season, both sexes will stay together long enough to breed. Afterwards, the males will leave to seek out new females. Males rarely care for the young.

### Territories

During most of the year, Muskrats are not territorial. However, they may become territorial during breeding season. The females remain territorial when raising their young. Muskrats do not accept outsiders during spring and summer. However, they do accept outsiders during fall and winter. During winter, to share body heat, Muskrats form colonies and will share their lodges with outsiders. Before spring arrives, these colonies will disperse.

Muskrat densities within a wetland may contain up to 25 Muskrats per acre. On the average, their density is about 15 Muskrats per acre. The home range of a single Muskrat covers a small area. It is about 200 feet in diameter in a lake or a pond and about 300 feet along a stream.

### Swimming

Because the Muskrat is a semi-aquatic animal, it is a very agile swimmer. It can swim either forwards or backwards and can swim up to 2-3 mph. Under water, they can swim up to 300 feet. Its partially- webbed hind feet act as paddles and its tail acts as a rudder or a scull. They can twist their rear ankles sideways to enhance their paddling performance. While swimming, their forefeet are held against their chest or their chin.

Muskrats usually swim on the water's surface. If the weather is windy, the Muskrat may swim below the surface. Muskrats avoid water currents and rocky areas. Muskrats can remain submerged for as long as 20 minutes. They are able to do this because they

can slow down their heart rates and relax their muscles, both of which reduce their need for oxygen. They also have a very high tolerance of carbon dioxide and can obtain some of their oxygen from their own carbon dioxide. While submerged, their under fur traps air. These trapped air pockets provide buoyancy and insulation for the Muskrat. The Muskrat will usually dig its own underwater canal through the mud and aquatic vegetation. These canals are about 6-12 inches wide and radiate from their dwellings to their feeding areas. They dig the mud with their forefeet and remove the mud with their hind feet. During dry spells, these underwater canals provide more cover for them.

- Gordon Mitchell,  
Columbus MetroParks



*This newborn fawn was seen drying in the sun during the Grand Opening of the Cemex Reserve in Fairborn! Look how its ears are slightly bent at the tips. What a fine way to celebrate the opening of the newest addition to the Greene County Parks, and the successful restoration of a wetland/prairie habitat.*

*Photo courtesy of Kate Hagenbuch.*

## NATURE NOTES

### Wetlands Moving

Sedges have edges; rushes are round; grasses are hollow, jointed and two-ranked. Ugh! Did you feel the clunk in the last line? It stops the rhythm, the movement that we intrinsically expect. Although we have words that suggest non-movement – couch potato; stop; lifeless – we know that life is always in flux. For without movement, expressed as cycles, pattern, or rhythm, life would not be.

Hike any of the Beaver Creek Wetlands to experience the theatre of movement at a variety of levels. The cycles that change liquid water to gas back to liquid protect and nourish aquatic creatures. As it cools and heats up through the seasons, water expands and contracts. Different temperatures cause changing densities in water that make it rise and fall. As ice, water insulates a pool or pond to prevent the water below from freezing, which allows fish to survive. Dense water that falls to the bottom carries with it dissolved oxygen and nutrients vital for life.

Another cycle of water is capillary action, in which plants constantly move water from the soil to the leaves to the air where it evaporates. Think of the vascular plants with their complex systems for conducting water. Although many people think they just stand there, trees are actually performing incredible feats such as moving tons of water from the soil to the air. One large tree on a hot day can move as much as one ton of water daily. Try that in your exercise class!

And then there's the bubbling oily-looking water - evidence of gases such as ammonia; hydrogen sulfide (which smells like rotten eggs); and methane (a colorless, odorless, and very combustible

gas) that are the byproducts of bacteria and fungi breaking down organic matter into smaller elements that will nourish other aquatic life. Even in death, life does not stop its movement.

And then there is rhythm. To thrive human beings must move at all stages of life: children jump, skip, laugh and cry; adults run, dance, swim, lift weights, or just simply walk. Poetry is the essence of rhythm: "The light is like a spider. / It crawls over the water," writes Wallace Stevens in "Tattoo." In "The Butterfly," Jules Renard writes: "This love-letter folded in two / is looking for a flower's address." Of "The Snake," Kyoshi says, "A snake! / Though it passes, / eyes that had glared at me / stay in the grasses." The wetlands abound in rhythm. There are rhythms in swirling marl; in the singing of chickadees and yellow warblers; in the startled smack of beaver tails on water; in the darting and dashing and hovering of dragonflies; in the plops of frogs and toads into water; in the tallness of Great Angelicas; amidst the twining of dodders; and in the weaving of nests by red-wing blackbirds among the cattails.

If movement is the basis of our being, of our survival, of our very souls, then are not wetlands also? Sedges have edges; rushes are round; grasses are jointed down to the ground.

- Nancy Bain, President  
Native Plant Society of the  
Miami Valley



### A Big Thank-You to Spotted Turtle Society Endowment Donors

Sixteen generous donors have begun a permanent nest egg to help ensure the future of the Beaver Creek Wetlands Association. In just three months, our Endowment has grown to \$15,000 - an encouraging beginning!

An anonymous donor who wants to help ensure the future stewardship of the Wetlands is still matching donations to the Endowment Fund. The first \$25,000 in donations will be doubled until the fund reaches \$50,000. As our endowment grows, BCWA will be able to withdraw earnings from the account for projects like controlling invasive plants, maintaining trails, and public education. The principal will never be spent, so that the fund may become a permanent source of income for BCWA.

In partnership with The Dayton Foundation, BCWA is now able to accept other-than-cash gifts like stock transfers, charitable gift annuities, life estate and real estate, life insurance, retirement assets, trusts and wills. By partnering with The Dayton Foundation, donors will be able to receive expert assistance with planned giving, and BCWA will be confident of financial stability and long-term growth of our new fund.

Cash donations should be written to "The Dayton Foundation", marked for the "Beaver Creek Wetlands Association Endowment Fund", and mailed to The Dayton Foundation, 500 Kettering Tower, Dayton, Ohio, 45423. For assistance with non-cash gifts, please contact The Dayton Foundation, 937-222-0410. Our warm thanks to all who have donated to the Endowment – and Welcome to the Spotted Turtle Society!

- Kate Hagenbuch

## In Memoriam: Charley Harper

We are sorry to announce that on Sunday, June 10th, Charley Harper passed away. Charley was a very talented artist based in Cincinnati. He was best known for his highly stylized wildlife prints, posters and book illustrations. As well, he designed the Spotted Turtle logo used by the BCWA. Born in West Virginia in 1922, Harper's upbringing on his family farm informed his work to his last days. He left his farm home to study art at the Art Academy of Cincinnati, and there he met his wife, artist Edie Harper, with whom he had a son, Brett. He later went on to teach at the Art Academy.

## Birdathon: A Note of Thanks!

Thanks to everyone who participated in this year's Birdathon, either by participating on one of the many birding teams or making a generous pledge. And a special thanks to the Dayton Audubon Society for organizing this wonderful event each year! The Birdathon brought in \$1,209 in donations for the Beaver Creek Wetlands Association - \$200 over last year's total! If you're interested in birding in the Beaver Creek Wetlands, visit our website at <http://www.beavercreekwetlands.org/publish.php> for a listing of birds found in the wetlands in the 2004 Birdathon.

# BULLETIN BOARD



## BCWA WINS WITH SHAW 5TH GRADERS

What do birds, Shaw Elementary School 5th graders and the BCWA have in common? They are all winners! Shaw teacher and BCWA member Christina Simmons led her students through a multi-faceted learning experience this past spring that included studying the wetlands, building and decorating bird houses, and raising funds for the BCWA.

A grant from McDonalds provided the funds to purchase bird house kits. The students constructed the houses, surveyed the school for design ideas, selected and created design themes, and then sold the finished products. A trip to the Siebenthaler Fen and the Narrows allowed the students to see first hand the intricate habitat for wildlife. A scavenger hunt, using a page of photographs of various plants and animals, encouraged the students to look sharply for many inhabitants in the wetlands.

The BCWA was chosen as the recipient of the funds derived from the successful sale of the finished birdhouses. BCWA is very grateful for this donation of \$380. These students and teachers are true friends of the wetlands. On behalf of the many plants and animals who call the wetlands home, thank you, Christina and Shaw 5th graders!

- Susie Scott

## NEXT ISSUE:

In our fall issue, we will include the financial reports as submitted by treasurer Doug Hull at the Annual Membership Meeting. If you have any ideas for future articles or if you have taken any pictures in the wetlands that you'd like to contribute, please email BCWA Administrative Coordinator, Bob Limber, at [admin@beavercreekwetlands.org](mailto:admin@beavercreekwetlands.org).

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# *Making a Difference*

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## **Thank You!**

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Thanks to the following people for helping out with the Spring Spotted Turtle mailing and the Knollwood Garden Party food booth.

**Dorothy Bordewisch; Bruce Ford; Lou & Pat Falkner; Art & Kathy Bauer; Richard Robertson; Dane Mutter; Sally Meike; Ed & Bonnie Norvaisis; Pat Riley; Sue Rytel; Ann Byrd; Rick Perales; Jay & Maxine Tieber; Dave & Susie Scott; Ray Wylam; Judith Streiff; Rob Evans; Robert Louis; Pat Hefner; Paulene Steinbrueck; Evelyn Ferguson; and Tim Staiger.**



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## *Join the BCWA Today!*

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Membership dues go directly to fund land acquisition, our quality programming in education, habitat restoration and management of our preserve. In order to purchase future parcels of land and pay off the mortgage on our most recent purchase, we rely on your membership.

Membership categories include:

\$5-Student	\$10-Senior (60+)	\$15-Individual
\$25-Family	\$35-Contributing	\$50-Supporting
\$100-Patron	\$1,000-Life	

To join, please send a check payable to BCWA to: **BCWA, P.O. Box 42, Alpha, OH 45301.**

Please include your name, address, phone and email. Remember, the BCWA is a 501(c)(3) land trust organization and your donation is tax deductible.



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