

Public Is Invited

Marietta Natural History Society

Winter 1999 Newsletter

Stormy Weather

Thursday, January 14, 7:00 PM

Thomas Hall, Room 124

Marietta College

Presenter: Dan Barthoff



In June of last year the Mid-Ohio Valley joined many other areas of the country that had severe weather events. What's going on? Dan Barthoff, of the National Weather Service, will blow into town to share a meteorologist's perspective.



The Ecology of Hope: Pathways to Community Sustainability

Thursday, March 11, 7:00 PM

McDonough Auditorium

Marietta College

Presenter: Dr. Ted Bernard

Dr. Bernard, Ohio University, is co-author of "The Ecology of Hope", published in 1997. As Marietta seeks its future through the Community 20/20 initiative, sustainability will be an important goal. Dr. Bernard will talk about the importance of sustainability, and commonalities among communities that have achieved it.

A World Beneath Our Feet

Thursday, February 11, 7:00 PM

Thomas Hall, Room 124

Marietta College

Presenter: Nicole Cavender



Soil is Alive! It is home to animals, plants, fungi, and innumerable microbes.

Activities in the soil which we do not see play a large role in shaping the world that we see. Nicole Cavender of Ohio State University will relate some of the dramatic storylines going on underground. Afterwards, we'll never call soil 'dirt' again.





The Inside Scoop. The "How Things Work" site explains the inner workings of common household items. Learn how a CD player works or why a badminton birdie looks the way it does. The page was created by a physics professor and can be found at Landau1.phys.Virginia.EDU/education/Teaching/HowThingsWork.



Indiana Bats in Southern Ohio!

Indiana bats, a Federally Endangered species, have been found in the Wayne National Forest (WNF). A private environmental firm working under contract with the Forest Service carried out 120 net nights in both upland and riparian habitats. A single male was netted in the Ironton District of WNF but more significant and exciting were the one male and four lactating females found on the Athens District. This evidence of a reproducing population triggered consultation with the US Fish and Wildlife Service which will result in a biological opinion on the effects of proposed forest management activities. Under the Endangered Species Act, all projects on public lands with the potential to affect this rare species must undergo scrutiny to ensure Indiana bats will not be adversely affected. This is a good example of interagency cooperation to maintain our natural diversity. Under appropriate management, perhaps one day this species of bat will attain a healthy population sufficient for it to be removed from the Endangered Species list.



Q & A for a snowy day



Why do snowflakes have six sides?

The shape of a snowflake mirrors the organization water molecules assume as they solidify. When water freezes the molecules weakly bond together in a hexagonal (six-sided) crystalline structure. This fundamental structure is maintained as the crystal grows and underlies the six-sided symmetry shared by all snowflakes.

Why do snowflakes form such elaborate shapes?

The crystalline pattern is affected by the specific conditions of temperature and humidity that exist while the snowflake forms. These conditions fluctuate within the immediate environment of each snowflake and modify the pattern of water crystallization. The crystal begins to form under one set of conditions, but as the crystal enlarges the conditions change and prompt new shapes and patterns. The basic hexagonal symmetry is maintained, but contours change and elaborate branching patterns may develop.

How does the crystal maintain symmetry as it grows, or, to put it another way, why do all of the arms of the crystal assume the same shape?

The area influenced by the changing environmental conditions is much larger than the snowflake itself, so all of its arms are similarly affected. Since the physical conditions (humidity and temperature) are the same at any particular moment, identical shapes develop on all six arms of the snowflake.

Is the old cliché correct that "no two snowflakes are alike"?

This newsletter editor cannot attest to the accuracy of this adage, but he has not personally seen two identical snowflakes.

Barn Owls Ailing

Barn owls are the only owls designated as endangered by the state of Ohio. Their numbers in the state peaked in the mid-1930s and have declined significantly since then due to a lack of grassland, habitat where they hunt by night for their favorite prey, meadow voles. ODNR, Division of Wildlife management plans for barn owls include placing nesting boxes near suitable habitat and annually banding the adults and young that use the boxes. The number of known barn owl nests in Ohio each year since 1990 has ranged from 11-25. For more information on barn owls check out the video of the MNHS program *Barn Owls—Who-o-o Are They?* by Keith Morrow on 3/13/97, from the Washington County Public Library.



January 1999

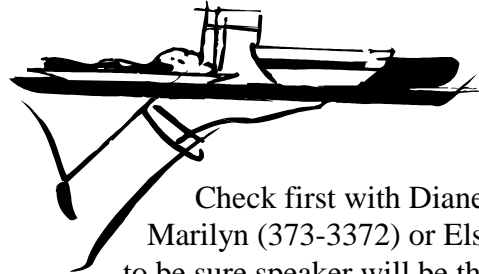
Sun	Mon	Tue	Wed	Thu	Fri	Sat
Bird Silhouette Indicates Bird Feeder Watch Days 					1 A New Year's Day	2 ☘
3 ☘	4	5	6	7	8	9 X
Great horned owls may be incubating eggs						
10	11	12	13	14 MNHS Meeting	15	16 ☘
Listen For Owl Mating Calls						
17 ☘ Δ	18 Martin Luther King, Jr.	19	20	21	22	23 Squirrels Begin Breeding
24 E	25	26	27	28	29	30 ☘
Early Woodcock Migrants Begin To Arrive			Skunk Cabbage In Flower			
31 ☘ A	"Blue Moon" (2 nd full moon of month) occurs on January 31. See note along side of March 31 below.					

Still time to participate in 1998-99 Bird Feeder Watch. If you want to participate contact our feeder watch coordinator, Ava Bradley (373-5790) or Bird Watchers Digest (373-5285).

March 1999

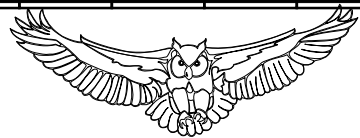
Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2 A	3	4	5	6 ☘
Venus is Brilliant in West at Dusk						
7 ☘	8	9	10 X	11 MNHS Meeting	12	13
14 Nat. Wildlife Refg Sys is 96 Years Old Today	15	16	17 Δ	18	19	20 ☘ Spring begins
Last Chance For Winter Walk						
21 ☘	22	23	24 E	25	26	27
Have you begun to plan your garden?			2.5 Hrs More Daylight Than Jan 24			
28	29	30	31 A	Second "Blue Moon" of year on 3/31. Two blue moons in one year does not occur again until 2018.		
Toads Calling						

You can have
Dinner with the speakers
5:00 at the Levee House



Check first with Diane (373-8031), Marilyn (373-3372) or Elsa (373-5285). to be sure speaker will be there. Members should make their own reservations.

February 1999

Sun	Mon	Tue	Wed	Thu	Fri	Sat
	1	2 Groundhog Day	3	4	5	6
Keep Bird Feeders Stocked						
7	8 X	9	10	11 MNHS Meeting	12 Lincoln's Birthday	13 ☘
Cardinals Begin "What Cheer" Call As Days Lengthen						
14 ☘ Valentine's Day	15 President's Day	16 Δ	17	18	19	20
Watch for Red Winged Blackbirds Clean Out Bluebird & Martin Boxes						
21	22 E	23	24	25	26	27 ☘
Spring Peepers & Wood Frogs Start To Call						
28 ☘						

Natural History Question?
Do you have a question about our local natural history? Submit it to the Newsletter Editor and we will print it with an answer from local experts.



Buckley Island — A “Wild” Ohio Future

By: Janet Butler, Outdoor Recreation Planner, U.S. FWS

When the U.S. Fish and Wildlife Service acquired Buckley Island for the Ohio River Islands National Wildlife Refuge this year, a distinct change in the course of the island's future became official. While it's been said that “you can never go home again,” that is just what is intended for the future of native wildlife on this 180-acre island in the Ohio River.

Buckley Island lies approximately 170 miles down river from Pittsburgh, PA immediately above the mouth of the Muskingum River near Marietta, Ohio. Although history doesn't record the names native Americans might have known for the island, since the 1700s it has been known variously as “Kerr,” “Duvall,” “Muskingum,” “Meigs,” “Marietta,” and “Buckley” Island. With those names came settlement and farming, an amusement park, and a chain of private owners concluding with the Buckley family.

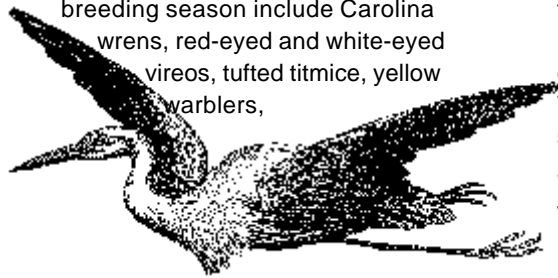
Buckley heirs sold the island and a 50-acre mainland parcel to the U.S. Fish and Wildlife Service for \$400,000. With that purchase, the island became public land with a wildlife priority.

The island's agricultural past still dominates much of the island. While the property hasn't been farmed for nearly twenty years, fields of sod-forming grasses have slowed the advance of woody plants. An early spring walk through these areas is relatively easy, interrupted now and then by multiflora rose, blackberry brambles and an occasional pawpaw. Later in the summer, wingstem and other herbaceous plants make walking these same fields a jungle-like experience unless one resorts to the numerous deer paths to ease the way.

In addition to abundant white-tailed deer, other mammals found in the old field areas of the island represent species typical of similar mainland habitats: woodchuck, cottontail rabbit, fox and white footed mice.

Undoubtedly other species occur, but intensive surveys have not been conducted.

Many of the birds breeding on the island are associated with the old field habitat: indigo buntings, song sparrows, willow flycatchers, rufous-sided towhees, goldfinches, yellow-breasted chats, robins, and cardinals. Other birds known to occur during breeding season include Carolina wrens, red-eyed and white-eyed vireos, tufted titmice, yellow warblers,



downy and pileated woodpeckers, cedar waxwings, kingfishers, rough-winged swallows, catbirds, cowbirds, and wood ducks. Many more species pass through during migration, using the island for feeding and resting stopovers. Ohio River islands in general have been identified as serving an important role for this purpose within the migration corridor.

Trees characteristic of the Ohio River floodplain encircle the island and cover much of the upstream end. Sycamore and silver maple, some of their massive, are common. Hackberry, slippery elm, black walnut, black willow, yellow buckeye, cottonwood, butternut, and pawpaw are also present.

Most of the forested areas are dominated by mature trees, providing nesting or roosting cavities for wildlife such as raccoons, fox squirrel, opossum, and wood ducks. Although not yet documented, it is likely that prothonotary warblers also find nesting cavities on Buckley Island as they have on nearby Muskingum Island.

A further question about inhabitants of the island's forested areas may be more difficult to answer than a bird

that can be confirmed in daylight hours. The federally endangered Indiana bat spends winter hibernating in caves, but it typically selects summer nursery and roosting sites under the bark of large old floodplain trees. Could they occur on Buckley Island? Another question yet to be answered. [ed's note: see pg 2]

The refuge's major habitat objective for the island is the restoration of the mature floodplain forest for the benefit of wildlife dependent on such habitat. While grass sod has slowed plant succession on much of the farmed area, a non-native plant called Japanese Knotweed (*Polygonum cuspidatum*) has invaded the island's head. This perennial weed grows to heights of over ten feet in the island's rich soil and crowds out virtually all other vegetation. It holds the distinction of being the refuge's major habitat restoration problem and thrives on all of its twenty islands. Pending availability of the biological control of the plant, the refuge plans to implement an herbicide treatment program to control Japanese knotweed, allowing planted tree seedlings to grow above the height of competition.

In addition to Buckley Island's above-water acreage, the refuge holds ownership to about 75 acres of surrounding underwater habitat. This represents the pre-dam acreage of the island, and consists mostly of sand and gravel deposits to the point of the river's historic mean low-water mark.

Beaver and muskrat are common at the interface of the island's land and water habitats. Refuge staff are currently in the process of inventorying one of the muskrat's dietary staples, freshwater mussels. So far, fifteen native mussels species have been documented around the island. Unfortunately, the non-native zebra mussel is rapidly colonizing the area. --con't on page 5

Ohio River in Top 10

To be precise, our local waterway was found to be the second most polluted river in the nation according to U.S. Public Interest Research Group (U.S. PIRG), which describes itself as a "nonprofit, nonpartisan organization dedicated to serving as a watchdog for the nation's citizens and environment."

In its report *Troubled Waters* released this summer, U.S.PIRG reported that the Ohio River received 34.9 million pounds of direct toxic discharge during 1992 through 1996 from IL, IN, KY, OH, PA and WV.

The Mississippi has the distinction of leading the nation with 509.8 million pounds of toxic discharge over the same time period, more than the sum of the discharges into all 49 other rivers on the list. The Muskingum River was number fifty on the list, having received 1.7 million pounds of discharge.

Unfortunately, the Ohio River was number one on the list of rivers receiving persistent toxic metal discharges. The 1.8 million pounds of toxic metal discharge was more than double that discharged into the Tennessee River (0.75 million pounds), which was ranked second. The data was compiled from EPA toxic release inventories.

U.S. PIRG also monitors campaign finance reform and has a consumer protection program. A copy of the *Troubled Waters* report can be found on the U.S. PIRG web page (www.pirg.org). The organization is located at 218 D Street, SE, Washington, DC, 20003-1900.



Buckley island, Con't.

Zebra mussels were first seen in the United States in 1988 near Lake Erie. They probably arrived in the ballast water of a trans-Atlantic ship. Since that time, they have spread throughout the eastern United States and now pose a critical threat to native mussels. Zebra mussels attach themselves in great numbers to the native mussels, interfering with feeding and reproduction. What fate is in store for the native mussels at Buckley Island remains to be seen, but observations this summer indicate that zebra mussels are flourishing.

By next year the refuge will have much more information about the wildlife at Buckley Island, both in and out of the water. Reforestation work is slated to begin this spring. Slowly, the island is on its way back to the past, reclaiming a little of what once was the "wild" Ohio.

The Aliens Are HERE! — by Marilyn Ortt

The premise of a number of movies and books is that aliens are on their way; general panic is a good way to begin a story. Thousands of alien plants and animals are already here and if panic is not the appropriate response, neither is ignoring the problem.

Species growing in an area in which they do not naturally occur are called 'exotics' or 'aliens'. Approximately one-third of the plant species now growing 'naturally' in Ohio were not growing here at the time of European settlement.

Zebra mussels, starlings, and chestnut blight which essentially removed chestnut trees from the countryside are other examples of this serious problem.

Many exotic species were brought purposely to this country, while others hitched a ride with other plants or materials. By whatever means, they are reproducing and growing in a variety of plant communities and habitats.

In our area, multiflora rose is a familiar example of a plant species now growing without those natural limiting factors of its homeland such as climate, predators, herbivores, and pathogens. From the beautiful, easily-maintained 'living fence' envisioned by its original proponents, multiflora rose has become a nightmare to control wherever it grows. Hundreds of thousands of dollars have been spent for chemical controls—themselves destructive to the environment.

Purple loosestrife is another exotic spreading across this and other areas, essentially turning wetland communities into monoculture as it replaces cattails and other native species. It is lovely to look at when in flower but devastating to the animals and other plant species that once made the wetland a rich, resilient community. We are all the poorer for it.

"But what can I possibly do about it" is a common response. We are all part of the problem if we do not inform

ourselves about what species are aggressive and avoid planting them. If informed, for instance, we would know not to buy purple loosestrife even when it is claimed to be a sterile variety so unable to spread—it does spread.

It is estimated that probably only 10% of non-native plant species are sufficiently invasive to be considered a threat. It is important for each of us to become knowledgeable about the possible outcome of our actions. Beautification may be short-lived if we are unleashing another Japanese honeysuckle on the landscape.

In future editions of this newsletter watch for more information about exotics creating havoc in southeastern Ohio.



