



RAVINIA

An Advocate for Community Resources

Published by Friends of the Ravines (FOR)

Fall 2006/Winter 2007

Birdlife of Greater Columbus Area Ravines

Ravines Are Wildlife Refuges

Drive, walk, or bike for any distance around Columbus and you're likely to encounter a ravine. You may not notice the chasm (especially if you're on a big road), but you almost certainly will notice the sudden cluster of large trees and shady canopy. Ravines are virtually all that we in Columbus have left of our native forest—almost all of our large parks and preserves have ravines as a centerpiece. If you examine early pictures of Columbus, the reason becomes apparent. Even though central Ohio was originally forest, most of the flat land was completely cleared for agriculture between 1850 and 1910. The hilly land was mined for minerals or rock and gravel. Only the ravines, with their sloped, unstable soil, were spared these fates, and their forest habitats usually persisted in some form or another. If you want to look for our remaining wildlife, they're a good place to start.

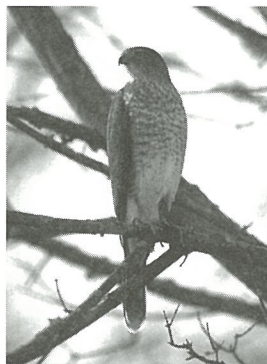
I'm particularly interested in how birds adapt to the mosaic of urban parkland. Being more mobile than most creatures, they're free to move around and choose sites that appeal to them. In a very real sense, they're the evaluators of our parks, preserves, and wildlands. Their presence indicates a "Yes" vote on the natural integrity of that habitat. If you are finding bird-friendly habitat within the suburban sprawl of Columbus, you are largely looking in ravines.

Birds of the Olentangy Ravines

The Olentangy Ravines are probably the best known of our urban ravine systems. From Iuka in the University District, up through Glen Echo, Walhalla, Adena, Bill Moose, and Rush Run, to the spectacular ravines of Camp Mary Orton and Highbanks MetroPark, these are the most human-visited and most modified of all our ravines. They are also the best known for their wildlife. Birds abound in these ravines, although the species diversity is not as great as you might find in truly wild forests. Carolina chickadees, tufted titmice, white-breasted nuthatches, Carolina wrens, and a variety of woodpeckers are permanent residents in these ravines and often forage in the surrounding neighborhoods. That bird at your feeder likely grew up in a nearby ravine.

Other birds migrate to the ravines as summer homes. This list includes flycatchers, such as the Acadian flycatcher, the eastern wood pewee, and the great crested flycatcher, and such vireos

as the warbling vireo and the red-eyed vireo. If the woodlands are large enough, as at Whetstone Park or Highbanks, they can attract deeper forest birds, such as wood thrushes and scarlet tanagers. If there are large stands of sycamores, riparian specialists, such as warbling vireos and yellow-throated warblers, can also be found. All of these residents and migrants are taking advantage of the rich insect life of the deciduous forests in these ravines. Cooper's hawks nest in most of these ravines and prey upon many of the residents and migrants, so most of these areas have a short, but functional, bird food web.



Cooper's hawks are ubiquitous in Columbus ravines, as they are in almost any sizeable forest patch in central Ohio. They are not unique to ravines, but probably exert a big influence on other birds that live there.

(photograph courtesy of Ohio Department of Natural Resources)

Most of these birds can be found in forested areas throughout central Ohio, so the ravines are not unique for them. Are there any species that can be preferentially found in the ravines? What do they tell us about the ravine habitat? From birding extensively in central Ohio for the past ten years, including a careful survey of ravine forests for the past five years, I can say that there are several species that can best be found in ravine habitats. These birds include some distinct and unusual species that I profile here.

Red-shouldered hawk: This forest hawk was largely extirpated from central Ohio during the great deforestations of the late 1890s to the early 1900s. They persisted only in a few of the larger forested tracts, such as Highbanks and Blendon Woods, but had largely disappeared from these fragments in the 1990s. However, they have survived in the ravines. A pair has nested in Walhalla Ravine for many years now, and another pair has recently started nesting in Rush Run Ravines. Other pairs have been noted in Blendon Ravines and Alum Bluff Ravines, and single birds have appeared in many other ravines. These birds are secretive and hunt a wide variety of prey, including birds,

FROM THE CHAIR OF THE BOARD

I've mentioned before how impressed I am with the dedication that Friends of the Ravines brings to its work. That is all the more impressive since each of these people has a full-time job, and their work on FOR comes on a volunteer basis. They publish *Ravinia*, which is a real treasure, and they analyze ravine problems; prepare grant requests; organize volunteers to do plantings, landscaping, clean-ups, and invasive removal; and accomplish any number of other tasks, including responding to a remarkable number of almost daily threats to ravines that come from development, transients, graffiti, and simple destructiveness.

They do this not for recognition, but out of love for the ravines. We all have many demands on our time, and others of you contribute to other needs with the same enthusiasm and dedication that FOR brings to ravines. However, if you're inclined to become more actively involved in caring for our ravines, I'd urge you to contact Martha Buckalew via 267-6293 or e-mail: mhbuckalew@sbcglobal.net. As with all worthy things, the needs exceed the number of hands, and FOR has a need for any talent or inclination you have. I hope you'll consider it.

Jack Cooley, Chair



NEWS FROM THE RAVINES

Adena Brook welcomed the assistance of volunteers from Cardinal Health in Dublin, who helped remove litter and invasive plants during a Second Saturday cleanup this summer.

Glen Echo Ravine has been home to a nesting pair of Cooper's hawks for the past four years. This year the fussy babies created a racket over the park when they fledged.

Iuka Ravine, host for Friends of the Ravines' Annual 2006 Plant Walk, added ferns and vernal pool plants to its landscape, thanks to an Oakland Park gift certificate provided by Friends of the Ravines.

Linden Run residents in the Bainbridge Condominium Association got busy this past spring and cleared out bush honeysuckle. They replanted the shady slopes with trillium, jack-in-the-pulpit and other spring ephemerals.

Rush Run will get a face lift, thanks to the National Fish and Wildlife Foundation, to renovate a degraded industrial area. Partners involved are Friends of the Lower Olentangy Watershed, Franklin Soil and Water Conservation District, Worthington High School, The Ohio State University, and the Boy Scouts.

Tucker Ravine residents in the Worthington Condominium Association defeated Worthington City Council's plan to dredge in Tucker Creek to install a sewer connector. Instead, after a number of speeches, council decided to install a lift station, saving Tucker Creek from an environmental hazard.



Spring ephemerals have been reintroduced to restore Iuka Ravine, site of Friends of the Ravines' Annual Plant Walk in 2006.



Simple Steps To Improve Stream Water Quality

Cities like Columbus will be directing billions to fix sewer systems and improve water quality. Smaller communities face increasingly stringent controls on stormwater (surface water runoff).

Municipalities are not the only players. Individual resident citizens also have a positive role, especially as the spotlight shifts from big industrial polluters to how users of the land affect water quality in streams and rivers.

Each one of us influences our home property, neighborhood, or community. There are simple steps toward better water and healthier streams:

Report problems.

In Columbus, the new Call Center centralizes information on nonemergency services. Call this number in Columbus to report sewer flooding, backups, or overflows: (614) 645-3111. In other cities, call the public service or utility department. (If you suspect hazardous materials, contact the Ohio EPA at (800) 282-9378.) If there is illegal dumping involved, get full information with a photo and contact the Nail-a-Dumper Hotline (614) 871-5322, www.nailadumper.com.

Ensure that gutters and downspouts do not go into sanitary sewers.

Gutters and downspouts take "clean" water away from buildings and should not empty into sanitary sewers. It is against city codes to put rainwater into sanitary sewers because of the danger of overflows and backups. Info: call Columbus Division of Sewerage and Drainage at (614) 645-2123 or your utility service dept.

Spicebush Worth Salvaging for Sake of Local Species

Native spicebush flourished in local forests before honeysuckle was introduced from Asia and took over. Typical of any species adapted as part of an established ecological community, spicebush exists in a web of species.

The aptly named spicebush butterfly searches for the bushes to lay its eggs. Their caterpillars eat spicebush leaves, which are protected from most other plant-eating animals by compounds that give spicebush its distinctive smell. But spicebush is no match for the invasive honeysuckle, which grows in bulldozer fashion like the machines that often open habitat for them.

I've been salvaging native spicebushes from a local road-construction site. They are surprisingly easy to transplant. Only summer temperatures and lack of clear salvage policies have caused delays. Persistence was the solution in both cases.

Most towns don't have salvage-permit programs, but a growing appreciation for native environments is changing that. The lack of a permit system is more a function of past demand than lack of care by current city officials. In fact, they usually like the idea of preserving anything local.

Dispose of hazardous materials properly.

Chemicals, oil and gas, pesticides, paint, cleaners are hazardous materials and should not be poured into sewers, drains, rivers, streams, or on the ground. Info on hazardous waste disposal: www.swaco.org.

Compost yard wastes.

You can easily create your own organic recycling system. Your community can also pick up yard waste and compost it for you. There are drop-off facilities around the region. Do not dump yard waste into streams or ravines, clogging waterways and choking oxygen supplies.

Info on composting:

www.compostguide.com

Yard waste dropoff sites:

www.swaco.org

Dispose of pet waste properly.

Many people bag pet waste and put it in the trash. It can also safely be flushed down the toilet. Do not leave it on the ground, where it can contribute to high bacteria levels in streams and ravines.

Practice natural landscaping.

Cutting use of quick-release pesticides and fertilizers, installing rain gardens, planting native trees and shrubs

Spicebush probably contains 20,000 to 50,000 genes. Some of these occur in multiple forms, with local climate and organisms determining frequencies of those variable genes. Increasingly, conservation biologists realize that we don't save individual species of plants, but whole gene pools. Or better yet, whole complexes of interacting species. Stated another way, a Michigan spicebush is not the same as an Ohio spicebush, much less a central Ohio one.

Some people worry that granting permits to salvage local, native plants might encourage poaching. But that problem doesn't seem to plague fishing or hunting. Quite the contrary, those activities provide funding to develop and maintain natural areas for them.

So if it works for legal hunting of deer, which ruin many of our suburban natural areas through overpopulation, why not give salvage permits a shot for the lowly spicebush and associated butterflies that could help restore those same areas?

The above article was written by Steve Rissing, biology professor at Ohio State University, and appeared in the Columbus Dispatch on June 13, 2006. It has been reprinted with permission from the author.



small mammals, reptiles, and amphibians, by surprising them with a quick drop from the leafy canopy. The dense tangles of vegetation along ravine streams, coupled with the thick forest cover, seem to be ideal habitats for them. This is true not only here in Columbus, as biologist Jeff Hayes has documented many nesting pairs in hillside ravines down in Cincinnati.

Yellow-billed cuckoo: This secretive bird of riparian forests is not uncommon in floodplain woods south of Columbus. Once you reach Columbus, however, they become more common in the ravine forests than in the thin riparian corridors of our urban areas. Their retiring nature and secretive habits make them difficult to observe, but fortunately their unusual song and calls give them away. In some years they are more common than in others, possibly due to outbreaks of caterpillars or cicadas, two of their favorite foods.

Pileated woodpecker: This large woodpecker needs big trees infested with carpenter ants, its favorite food. Most of the large trees in north-central Columbus are now restricted to the Olentangy ravines, and pairs of these birds haunt Adena, Camp Mary Orton, and Highbanks ravines. Oftentimes, they are given away only by the loud “thwack thwack” as they hammer into dead wood searching for ants and grubs. They are amazingly adept at not revealing their nests, and finding a pileated nest hole is like peering into the primeval forest.

Yellow-bellied sapsucker: This interesting woodpecker needs flowing sap, both to drink and to attract the insects upon which it feeds. They don’t nest in central Ohio, but many migrate through and a few spend the winter. Almost all the wintering birds use ravines as their territories, possibly to take advantage of the trees on sunny south-facing slopes for sap wells. Over the past five years, I’ve documented wintering birds in Adena, Rush Run, and Highbanks ravines, as well as in several ravines along other Franklin County streams.

Screech owl: These elusive little owls are very difficult to find during the day. But enough evening walkers have heard their weird whinnying call to suggest that they are surprisingly common in several area ravines. What can they eat here? Almost anything, from small rodents to big insects. Their biggest need appears to be suitable nest cavities, and they’ll use both natural cavities in old ravine sycamores and oaks and artificial nest boxes of appropriate size.

Acadian flycatcher: These tiny little flycatchers are a feature of beech-maple forests throughout Ohio, but they are particularly common in the shady forests of central Ohio ravines. I’ve seen record numbers of them in the Highbanks ravines, but they can also be found in just about every ravine in the Olentangy watershed, where their cheery “peet-soo” call seems to ring out from every maple glen.

Crested flycatcher: This gorgeous, large flycatcher loves ravines and can often be heard throughout the Olentangy ravine system. Their loud “wheeeep” calls ring through the riparian forests in May, and pairs nest in several of the ravines. They favor cavities in large sycamores, and I’ve found nests in Adena, Rush Run, and Highbanks.

Eastern towhee: What is a ground-loving, oversized sparrow doing on this list? They love to forage and nest in tangles, and these ravines often have such tangles either along their streams or along their margins. Towhees are quite common in rural areas, but are surprisingly rare in urban Columbus, where they are restricted to ravine areas. Listen for their scratching in leaves and their querulous “chuweee” call in ravine thickets.

Comparing Highbanks and Camp Lazarus to Urban Ravines

What could be the original avifauna of these ravines? We’ll never know for certain, but we can glean an idea by comparing these areas with more natural ravines. Within the Olentangy ravines, there is a natural progression from the very urbanized ravines in central Columbus/Clintonville to the nearly wild ones of Camp Mary Orton, Highbanks MetroPark, and Camp Lazarus. What birds are added in these wilder ravines? All of the above species are more common in these wilder ravines, although they can actually be harder to find there due to these areas’ better cover and difficult access. Other more specialized birds of forest and forest edge are more common in wilder ravines than in more urban ravines. Some of the birds, such as wood thrushes, scarlet tanagers, and red-eyed vireos, appear to be attracted by the large forest area, because they can be found in other large forest blocks in central Ohio. A few birds, however, seem to require ravines specifically.

Barred owl: This large secretive forest owl can be found in many places in Columbus, but is quite rare in the most urban areas, even in leafy Olentangy ravines. A few are reported in most of the Olentangy ravines every year, but no evidence of a persistent population has materialized. However, they breed in Highbanks and Camp Lazarus, and a few even seem to spend the winter there. They are also present in other ravines around Columbus (see below), so they were probably once widespread in the Olentangy ravines.

Yellow-throated vireo: This pretty vireo owes its persistence in Columbus ravines to an odd circumstance. The bird favors oak forest, but oak forest meant high, dry land to early settlers and farmers, so most of our oak forests and savannahs were quickly modified or destroyed for housing and agriculture. Quick—name an oak forest in Columbus. It’s not easy, once you get past Highbanks and Blendon Woods. Both of these areas have oak forest largely because the high ridges between their ravines allowed some oak forest to survive untouched. Resident vireos in Highbanks and Camp Lazarus take advantage of these remnants of the oak groves along the ravine crests.

Summer tanager: This attractive tanager is in almost the same situation as the above vireo. It favors oak edge/savannah, which is just as scarce a habitat in central Ohio now. The dry shale bluffs of Highbanks hold enough oak edge to have one to two pairs of breeders of this unusual bird. Similar oak edges along the margins of ravines in Blendon and Sharon Woods appear to hold more of them.

Hooded warbler: This beautiful warbler favors forest blowdowns, where trees have fallen and allowed a tangle of vines and shrubs to spring up in a small patch. In Columbus, fires are suppressed and park management prevents many of these conditions. But ravines, with their slanted unstable soil, often have such treefalls, and hoodeds have nested at both Highbanks and Camp Lazarus.

Kentucky warbler: This striking warbler also favors blowdown tangles or underbrush thickets, but appears to be more finicky than the hooded. It appears to need mature forest floor environments to forage. It breeds occasionally at Camp Lazarus and has been found on territory at Highbanks.

Louisiana waterthrush: This odd warbler is probably the most ravine-specific bird on this list. It forages along small rushing streams and will even build its nest along steep banks or between rocks at the sides of such streams. Their loud song rings through the ravines of Highbanks and Camp Lazarus in early April, but they become much less vocal as spring wears into summer. I used to think that most were just migrating through, but I've found nests and adults feeding young with enough frequency in these two ravine systems to suggest a small nesting population.



Louisiana waterthrushes are neither thrushes nor restricted to the South. They are perhaps the ultimate ravine bird, nesting and feeding along the rippling streams that run through many of our wildest ravines.

(photograph by David Cagnolatti)

Notice the pattern yet? The birds that are added in the wilder ravines are there either because of the bigger forests in the surrounding areas or because they favor some micro-environment that is better preserved in these larger parklands. This is a rather sobering assessment, since these conditions would be difficult to restore in the fragmented ravines of the lower Olentangy. We may have to enjoy these birds vicariously during their migration through these areas and work to preserve bigger habitat patches in other nearby ravine areas.

Alum and Big Walnut Ravines

In central Ohio we tend to overlook the fact that ravines are a widespread, unique feature of our landscape.

If you look carefully at a map of central Ohio, you'll see that most of the big streams have a strikingly similar course, running north to south in almost parallel arrays. In fact, some of these streams share more than just direction. The Olentangy, Alum Creek, and Big Walnut Creek share similar topography as well. All three cut down from uplands of eastern Delaware and northern Franklin counties into the till plains of southern Franklin County. All three have narrow floodplains lower than much of the surrounding upland, with side creeks that emerge out of small ravines. In fact, much of the Columbus MetroArea is lined with ravines. We just happen to know the Olentangy ravines best because they are the most accessible to urban dwellers and closest to the Ohio State University campus.

The ravines along Alum and Big Walnut offer us a chance to see how these habitats have developed under less urban conditions than along the Olentangy. Except for some stretches of Alum Creek through east Columbus and Bexley, these streams have not seen the kind of development intensity found along the Olentangy. Only within the last decade, with the recent growth of Easton Town Center, Westerville, and southern Delaware County, has the environment around these two creeks seen significant changes.

Along Alum Creek, a series of ravines starts at Mock Park and runs north all the way through the north end of Alum Lake State Park, a distance of nearly 20 miles. The southern ravines—Mock Park, Mecca Park, Innis Park/Champions Golf Course, Minerva Park, Spring Run East, Spring Run West, and Maple Canyon—have become isolated but have remained intact except for a few instances. Most of Minerva Park Ravine was flooded for a lake early in the last century, while Spring Run West and Maple Canyon have been fragmented because portions of them were used as the paths of State 161 and I-270, respectively. The middle ravines, with the exception of Spring Creek (in Sharon Woods MetroPark) and Hannah Mayne (a Westerville park), are mostly preserved within private developments. The Westerville Reservoir filled one of the more spectacular ravine complexes here. The northern ravines are mostly within Alum Lake State Park, and many are preserved to a degree comparable to that at Highbanks and Camp Lazarus. You can glance at one of the better sections here, Alum Bluffs, as you drive across the narrow Alum Lake on Route 37 between I-71 and U.S. 23.

Along Big Walnut Creek, the first significant ravine is the spectacular Rocky Fork canyon at the eastern edge of Gahanna, followed by a series of ravines along the east side of the creek north to the town of Sunbury, about 20 miles away. These ravines can be unusually deep, since they cut down through the resistant Berea sandstone at the edge of the glaciated plateau region of east-central Ohio. The major southern ravines—Rocky Fork, Columbus Academy, Blendon Woods (which has three ravines), and Little Turtle—are mostly preserved to a degree not seen along the Olentangy or Alum Creek. The middle ravines are largely preserved by Hoover reservoir and the adjoining nature preserve, although the lower reaches of several have been flooded from the waters of the reservoir.

The bird lists of these ravine areas reflect their development histories. The southern ravines of Alum Creek are the most isolated and modified of the forest habitats and have lists very similar to the southern Olentangy Ravines. Raptors here show a peculiar difference, with red-shouldered hawks missing (although they may be colonizing Maple Canyon in 2006), but barred owls present in most of these ravines. Red-shouldered hawks do reappear in the middle and northern Alum ravines, and the northern Alum ravines have the complete set of ravine special birds mentioned above. They even have cerulean warblers, a species that is missing from all the other ravine areas, missing largely because they need extensive slope forest along valley edges. The variety of breeding birds in these ravines is almost unmatched in central Ohio. To hike around in some of the ravine areas of Alum Bluffs or Hogback Preserve (both at the northern reaches of the state park) in spring is to hear the birdsong symphony that must have greeted the first settlers to the Olentangy Ravines.

The ravines along Big Walnut, especially the southern and middle sections, were recognized early for their uniqueness and beauty, so they have been preserved largely intact either in private hands or as parts of a park. As a result, they contain large portions of forest and almost all of the ravine special birds. Again, only red-shouldered hawks seem irregular in occurrence, being largely replaced by barred owls, which are very common here. Blendon and Hoover are large enough to attract unusual forest birds such as Kentucky warblers and summer tanagers, but for some unknown reason they are lacking cerulean warblers. Louisiana waterthrushes, the signature bird of ravines, breed in Rocky Fork, Blendon, and Hoover ravines. If you want easy access to a pristine ravine, walk the Streamside-Overlook trail loop in Blendon Woods in spring and listen for these birds and many others.

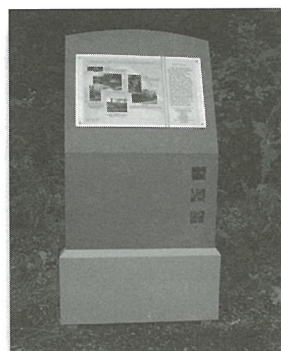
Lessons from Ravine Birdlife

What do these birds tell us about our ravines, and what does that augur for their future? Ravine habitats clearly act as a sanctuary for many birds that would otherwise be very scarce in central Ohio. They're our defining natural feature, and their preservation, either through luck or design, has resulted in a trellis of forest habitat strung across Columbus and its suburbs. Most of us can walk or bike to a nearby ravine that hosts forest birds that would be the envy of Chicago or Detroit. Right now, we still view these ravines as separate pieces, but the birds clearly don't think of them as separate, since it's unlikely that their populations could persist without some dispersal and foraging between ravines. As the Columbus Greenways bikepaths are developed and start to link our parks, our perception of this linkage should grow.

What of these birds' future in our ravines? That's less clear. Some birds can survive even in the face of very fragmented and urbanized ravines. But are these birds actually doing well there? Much of recent bird conservation research has focused on "sources" and "sinks." These are jargon words, shorthand for "sites that produce fledglings" and "sites that waste breeding

effort." A source has enough good habitat to ensure much successful nesting, so that its juveniles survive to colonize nearby areas. A sink has enough habitat to attract nesters, but enough dangers (nest exposure, predators, paucity of food) to make most of these nests fail. Which are our ravines? We don't know yet, but the answer could determine how our ravine birds fare in the future. If they are sources, the birds should persist as long as the habitat does. But if they are sinks, bird species will slowly disappear as the outward spread of urban Columbus modifies and further isolates these habitats. This may be why certain species have disappeared from the most urban ravines along the Olentangy River and Alum Creek. We can enjoy what's left, but preserving nearby forest and ravine areas may be critically important to the continued good health of our ravine birdlife.

The author, Rob Thorn, is an avid bird-watcher and a frequent contributor to Audubon Magazine.



Two views of three interpretive signs that were installed in Glen Echo Park by Columbus Recreation and Parks Department. The signs were paid for by a grant from NiSource Environmental Challenge to Friends of the Ravines.

Interpretive Signage Installed in Glen Echo Park

Three interpretive signs have been installed in Glen Echo Park along Parkview Drive. The easternmost sign outlines the geological history of ravines in Central Ohio. Another sign, *Anatomy of the Restoration*, gives an overview of the restoration of the northern slope. The third sign is devoted to ravine-related facts and pictures line drawings of leaves of trees found in Glen Echo Park, promoting interactive nature activity. The signs were funded by a grant to Friends of the Ravines from NiSource Environmental Challenge Fund. They were designed by T. J. Simmons, a student from the Columbus College of Art and Design who worked under the supervision of Associate Professor Tom Kier, Chair of Industrial Design. Friends of the Ravines coordinated all phases of the project from design to fabrication. Columbus Recreation and Parks Department installed the signs in early September.



Ravines and the Clean Ohio Fund

Franklin County has received a total of 22 grants for land conservation from the Clean Ohio Fund in the last three years, totaling almost \$9 million. Conservation grants are often tied to river and stream corridor protection: Alum Creek, 7 grants; Darby, 3 grants; Hellbranch, 2 grants; Blacklick, 2 grants; Scioto, 2 grants; Big Walnut, 1 grant. There were five other grants for parks and one specifically for ravine restoration and protection in a city park—Glen Echo ravine and Glen Echo stream in Columbus. Conservation grant applicants are county park districts/Metroparks, cities and villages, non-profits, and townships. There were other conservation projects funded in surrounding counties. When rivers, streams, tributaries, and parks are protected, ravines can be protected as part of a larger greenway.

What is the Clean Ohio Fund?

The Clean Ohio Fund is really four separate pots of money raised through the sale of state bonds. All four funds total \$400 million, dispersed in four funding cycles from 2002 to 2006. The funding structure was approved by state voters in 2000 (Issue 1) and by the legislature in 2001 (H.B. No. 3).

What does the Clean Ohio fund support?

Of the total \$400 million, half goes to cleaning up polluted "brownfields"; i.e. the Revitalization Fund pays for cleanup of polluted industrial sites, often in public ownership after the polluter is bankrupt or gone. The other half goes to preserving land in three ways: greenspace conservation, trails acquisition, and agricultural easement purchase of farms. The Greenspace Conservation Program alone totals \$150 million, the conservation fund with the most projects, money, and acres preserved.

Will Clean Ohio continue?

The Clean Ohio Fund mandate expires in 2006, as the last cycle of funded projects is announced in the fall and winter. If the next Ohio governor supports the program, the legislature will consider whether to reauthorize it.

Has the Clean Ohio Fund been successful?

Clean Ohio funds dwarf any other public source for land conservation and protection in the state. The state money has also leveraged other investment. Some conservation applicants have provided 80-90% of project costs, even though the minimum contribution is 25%. The statewide average for conservation applicants is 43%. Local and private investment in brownfield redevelopment is usually much greater than Clean Ohio state dollars.

Where can I learn more?

The Ohio Nature Conservancy has a summary of all Clean Ohio projects:

www.nature.org/wherework/northamerica/states/ohio/preserves/art12993.html

The state Clean Ohio Fund Website is www.clean.ohio.gov

How Can An Organization Apply for a Clean Ohio Conservation Grant?

By law, conservation applicants must either be a political subdivision or a non-profit with a mission objective of greenspace protection. Grants are administered through Natural Resource Assistance Council districts. To find out about applying for a grant, contact the Chair or Liaison for your district listed on the Clean Ohio Fund Website (see above).



YES! I WANT TO BE A SUPPORTING MEMBER OF FRIENDS OF THE RAVINES.

Name _____ E-Mail _____ Phone (____) _____

Address _____ City/State/Zip _____

Indicate any special instructions for listing of your name in the Roster of Supporting Members. _____

Membership Category (Make check payable to Friends of the Ravines.)

___ Friend: \$15 ___ Sponsor: \$35 ___ Sustainer: \$50
___ Contributor: \$25 ___ Household: \$40 ___ Patron: \$100 ___ Corporate (Over \$100) _____

Indicate Shirt size: ___ M ___ L ___ XL *Anyone contributing \$100 or more will receive TWO T-Shirts!!*

I want to volunteer to help Friends of the Ravines carry out its mission to protect ravine areas and educate the public. I can help by:

___ Distributing *Ravinia* ___ Writing Articles for *Ravinia* ___ Preparing Mailings
___ Maintaining the Website ___ Giving Computer Advice ___ Helping with Ravine Clean-ups
___ Planning Community Forums ___ Removing Invasive Plants in Ravines ___ Becoming an On-Call Volunteer

My special area of expertise is _____ My favorite ravine is _____

Friends of the Ravines, PO Box 82021, Columbus, Ohio 43202

Brian Gara Joins Board of Trustees

Friends of the Ravines is pleased to announce that Brian D. Gara is now serving on the board of trustees. Brian is an avid amateur botanist, with a strong interest in studying native Ohio fern species. He graduated with a B.A. in Art and Biology from Bluffton College (1985), an M.S. in Botany from Ohio University (1987), and a Ph.D. from The Ohio State University in Environmental Science (1995). Brian has worked as a researcher with the OSU Biomedical Engineering Center (1988–1995), a Wetland Specialist with the Missouri Department of Transportation (1995–1999), and a GIS Professional with the State of Ohio (1999–2006). His hobbies include hiking central Ohio parks, playing basketball, and throwing the Frisbee with his daughter, Sarita. Brian's two-part article, "Ferns in the Ravines of Central Ohio," appeared in the Fall 2004/Winter 2005 and Spring/Summer 2005 issues of *Ravinia*. His fern photography was the centerpiece of Friends of the Ravines' display at Riverfest in 2005.



Ravinia is the official publication of Friends of the Ravines.

CONTRIBUTORS

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Jack Cooley	Cyane Gresham
Steve Rissing	Rob Thorpe

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Submissions and suggestions are welcome.

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Thank You:

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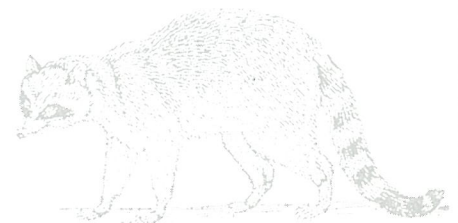
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