



RAVINIA

An Advocate for Community Resources

Published by Friends of the Ravines (FOR)
Spring/Summer 2003

Clintonville Ravine Soils

Ravines in the Clintonville area were formed by small creeks draining westwards into the Olentangy River. As the creeks eroded lower through the rocks, they exposed progressively deeper layers of the glacial material and shale beneath the surface.

The north Columbus ravine soils are mostly classified in the Cardington-Alexandria-Bennington association. These are soils formed in limy glacial till: unsorted deposits containing rocks of all sizes that were dumped by melting glaciers. Much of the till dumped in central Ohio is carbonate rock, limy stones brought south by ice sheets as they gouged up the limestones of north central Ohio.

Beneath the glacial deposits are Devonian shales. These were alkaline carbonates laid down as limy mud in ancient seas more than 360 million years ago. Some of these easily eroded shales are exposed along cliffs, stream banks, and in creek beds in the ravines.

Knowing what to plant and where in ravines depends on soil tests for such indicators as acidity and alkalinity (pH), phosphorus, potassium and other factors affecting plant growth. Easy-to-use soil test kits may be purchased at many garden stores. Some kits come with lists of plants

suitable for different pH levels. Similar lists may be found on the internet.

In addition to chemical aspects of the soil, gardeners need to consider the overall tilth or condition; the depth to limy shale below, especially if planting trees with deep roots; sunlight and shade; the surface steepness and rapid runoff of rain; and the wetness of soil in ravine bottoms.

Many ravine soils are deep silt loam. Soils in the Cardington-Alexandria-Bennington association have a silt loam surface layer with moderately available water. Silt loam has an intermediate texture, ranging between clay and sand. The depth to the alkaline carbonates that restrict root growth beneath can be 23-26 inches and up to 35 inches in some places. These soils have slow permeability. That is, they hold moisture awhile after rains.

Some ravine soils are good for trees, shrubs, flowers, and vegetable gardens. Cardington soils found throughout Iuka, Glen Echo, and Walhalla ravines, and around Adena Brook Ravine are moderately well drained, with rapid runoff on steeper slopes. The water table is naturally high in winter (24-36 inches down), but most Cardington soils are artificially drained by sewers, gutters, and drains.

Bennington soils, found around Adena Brook Ravine, dry more slowly than Cardington or Alexandria soils in spring. They are poorly drained with a naturally high water table in winter and spring.

The Columbus Foundation Awards Restoration Grant

The Columbus Foundation has awarded Friends of the Ravines \$20,000 for restoration work on the southern slope of Glen Echo Ravine. The awards came from the Virginia Hall Beale Fund and the Clifford and Mary Ozias Conservation and Forestry Fund. Friends of the Ravines is grateful to the Columbus Foundation for its support of our mission to protect and restore ravine areas through conservation and community education.



If erosion is controlled, both Cardington and Bennington soils are good for grasses, trees, shrubs, and flower and vegetable gardens. However, their slopes, slow permeability, and wetness limit them for building structures.

Some ravine soils are severely restricted for building purposes. The steeper slopes of Alexandria soils, found in Overbrook, Whetstone Creek, Adena

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FROM THE CHAIR OF THE BOARD...

THANK YOU to all of our supporting members! Your contributions were more encouraging than you can imagine. Completing the restoration on the northern slope of Glen Echo had exhausted the funds from our last conservation grant. But your support boosted our dwindling account, and you are helping us pay expenses that are not covered by grant monies.

Your support was an important factor in FOR receiving a second Conservation Grant from the Columbus Foundation in February 2003. Your financial contributions demonstrated community support to the Columbus Foundation. To each of you we are grateful. Olentangy Street residents took the prize for the most households contributing. Cliffside Drive residents were a close second place, with a high percentage of support from households adjacent to Iuka, Glen Echo, Walhalla, and Overbrook Ravines.

Much time and energy was spent on the Columbus Foundation grant application, and I would like to thank each of you who contributed. With your talent and expertise, we submitted a very strong proposal. You wrote letters of support, prepared entries, helped develop a thorough budget, proofread the application, took photographs of the proposed restoration site, and met with Columbus Foundation staff.

I will not try to list the names of everyone who helped with the grant because I fear I would leave someone out. All who worked on the grant deserve a good pat on the back for success in obtaining funding at a time when foundations are struggling with slumping endowments. But our grant writing efforts must continue. The Columbus Foundation grant fell short of our projected annual budget by over \$5000.

In March 2003, we held a community forum featuring guest speaker Richard C. Pfeiffer, Columbus City Attorney, and John Husted, technician and spokesperson for the Glen Echo restoration. In April we held our annual Plant Walk at Camp Mary Orton on Flint Ravine with plant walk guide John Furlow, curator of the Herbarium in OSU's Museum of Bio-Diversity. In our last board meeting we voted to establish a task force to coordinate information flow between ravine groups monitoring Capital Improvement Projects (CIP) in ravines and to lobby elected officials for environmentally responsible CIPs.

We hope you visit the Friends of the Ravines informational booth at Columbus Recreation and Park's Bio-Blitz on June 7th in Whetstone Park and at ComFest in Goodale Park June 27 - 29.

Thank you for being Friends of the Ravines.
Martha Harter Buckalew
Chair
Board of Trustees



NEWS FROM THE RAVINES

Adena Brook Community will continue its Second Saturday removal of honeysuckle and garlic mustard and de-girdling trees. They are looking for three families to install rain barrels and are negotiating with infobarrell.com about donating rain barrels to participating families.

Friends of the Ravines on Glen Echo Ravine (FORGE) will be holding neighborhood meetings to address concerns about storm water runoff, sewage overflow, and the upcoming renovation of the existing sewer line running through Glen Echo Ravine. Area residents will receive a leaflet.

Columbus is Ravine Rich! Friends of the Ravines is proud to have attracted supporting memberships from ravine residents in Worthington who live west of the Olentangy River. Their condominiums are sandwiched between two ravines and, like all ravine residents, their major concern is erosion.

Ravine Passion bit a resident from The Plains, Ohio, when he got his hands on the last issue of *Ravinia*. The note that accompanied his supporting membership read: "I remember playing in Iuka Ravine in the early 1980s and being amazed at the forest, plants, and stream. I am so happy to see that someone is working to care for the ravines. Keep up the good work."

Iuka Ravine residents are closely monitoring the emergency repair recently begun by Columbus Sewers and Drains. A collapsed sewer line forced the CIP project to begin in early March. Area residents and members of FOR's Board of Trustees met with sewer officials and project engineers on site the day before the work began. Sadly, large trees were removed and a large area on the northeast slope of Iuka Park was trenched to allow access to the problem.



Iuka Ravine, 3/2003

Engineers meet with neighbors and FOR members to inspect sewer repairs.



Clintonville Ravine Soils, continued from page 1

Brook and Rush Run ravines are some examples. With more rapid runoff and lower strength, these soils are best suited to native hardwoods, shrubs, and woodland wildlife.

Some ravines contain patches of Ross

silt loam, a floodplain soil found in low spots, particularly near creek mouths. Prone to occasional flooding, this type of soil is good for some trees and other vegetation but is hazardous for housing.

A good source of information on

ravine soils, with maps, is *The Soil Survey of Franklin County, Ohio* published by the United States Department of Agriculture Soil Conservation Service.

To get a copy, call (614) 801-9450.



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

Name _____ Street Address _____

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Indicate any special instructions for inclusion in 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) _____

Shirt size: ___ M ___ L ___ XL First time members receive one free t-shirt. 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
___ Constructing a Website ___ Giving Computer Advice ___ Helping with Ravine Cleanups
___ Planning Community Forums ___ Removing Invasive Plants in Ravines

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

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

The Troubled Waters of Glen

Glen Echo Run is a tributary that flows east to west into the Olentangy River. Glen Echo Ravine East between the Big 4 Railroad and Indianola Avenue was deeded to the city in 1912 as a city park. When the land was transferred to the city, the donor, the Columbus Real Estate and Improvement Company, reserved the right to run water, sewer and gas lines to accommodate the development of the surrounding area.

By the early 1930s, Glen Echo Run was a threatened stream. The western portion of the watershed- the area from High Street to the railroad tracks - was urbanizing, with houses and businesses springing up. Changing the landscape around Glen Echo Run increased the volume of run-off flowing into the creek. Another threat to the future health of Glen Echo Run was burying a 30-inch sanitary sewer three to six feet deep in the bottom of Glen Echo Ravine. This sewer line serviced not the homes and businesses built west of the railroad tracks, but rather "thousands of acres of tributary sanitary area located east of the New York Central railroad tracks, and extending from south of Hudson to north of Route 161," according to a 1960 report to the Department of Public Services by the H.G. Dill Company.

Despite increased runoff and the installation of the sewer line, small fish and other aquatic life could often still be found in the stream, according to

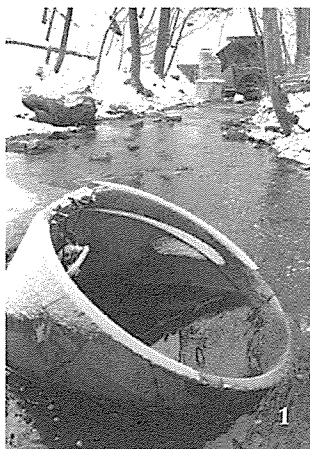
Clintonville resident Bob Anderson. As a youth, Anderson lived near Glen Echo Park, and he and his friends were often in the stream, building dams and catching bugs and crayfish.

During the 1940s and 1950s, the area east of Glen Echo Park and the railroad tracks, which is the larger portion of Glen Echo's original watershed area, was developed and later Interstate 71 was built. With this development the watershed was largely covered by impervious surfaces - rooftops, roads, driveways and parking

15 percent of a watershed has impervious cover, according to the article "The Importance of Imperviousness," published by the Center for Watershed Protection.

Impervious cover has two negative impacts, as pointed out by Jerry Wager in "Stormwater, Watershed Public Enemy #1," *Ravinia*, Spring 2001. The first is a reduction in the amount of water infiltrating into the ground and subsequently available to recharge the stream. Second the additional force generated by the greater volume and frequency of

stormwater runoff destabilizes the stream channel. The destabilized channel, as Wager notes, will deepen and become entrenched "to the point that the steeper banks become unstable and collapse." An



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lots. In addition, natural headwater tributary streams to Glen Echo Run were filled and replaced by storm sewers (See Figures 1 and 2).

It is estimated that impervious surfaces cover between 50 - 70 percent of the Glen Echo Run watershed. Estimates reported in an inventory by Friends of the Lower Olentangy Watershed (FLOW) showed a trend of increasing impervious cover in the Olentangy watershed as one moves from north to south. A portion of the Olentangy River watershed extending from Henderson Road south to Dodridge Street has 49.5 % impervious cover, while the watershed section from Dodridge to the confluence with the Scioto River is 78 percent. Research has shown that streams and their aquatic habitat may begin to degrade when as little as 10 to

unstable channel that is in the process of deepening and widening will also threaten structures such as bridge abutments and sewer lines.

Collapsing stream banks and threatened structures hastily armored using riprap and concrete are found along the entire length of Glen Echo run. Figure 3 shows a section of the run behind North High School, where the channel has widened and the instream habitat has degraded. Figures 4 and 5 show an eroding stream bank and rip rap and concrete installed in an effort to protect the sewer line and manhole. Figure 6 illustrates the destructive power of stormwater on a temporary culvert placed across the lower portion of the run.

Glen Echo Run also suffers from sanitary sewer overflows. Glen Echo Ravine

Glen Echo Run

has fourteen manholes that also serve as relief points or outlets when the volume of flow exceeds capacity. At least eight discharges of sewage to Glen Echo Run occurred during 2002, according to the Annual Report of Sanitary Sewer Overflows and Water in Basements for 2002, prepared by the Division of Sewerage and Drainage of the City of Columbus.

Overflows are often caused by an excessive inflow of surface water and infiltration of ground water into the sanitary sewer system. During storms or other wet weather, surface water enters sanitary sewers from downspouts, roof and footing drains connected to a house's sewer line, and through holes in manhole covers. Groundwater enters through cracked pipes, failing joints, root intrusions and other openings.

The old and leaky sewer under Glen Echo Run may also cause problems during dry weather by acting as a drain.

Water that would normally flow above ground is lost underground as water infiltrates into the sewer line.



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Given all that has occurred in Glen Echo Run and throughout its watershed, it was no surprise that last year it was reported to be in "horrible condition," in the Lower Olentangy River Watershed Inventory published by the FLOW. Sewage smells, litter and the erosion of stream banks resulting from the rapid rise in water levels after rains are a few of the problems noted in the Inventory.

Over the past century Glen Echo Run

has changed from a stream with good habitat and aquatic life to a stream that has a highly degraded channel with its flow dominated by stormwater runoff. While we may never see Glen Echo Run as Bob Anderson

saw in the 1930s, it need not remain in horrible condition. It is possible to end the neglect and degradation of Glen Echo Run and the streams in all our ravines and begin their restoration.



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Photos:

1: A short stretch of stream channel between Silver Drive and the railroad tracks is all that remains of the Run east of Glen Echo Park. To the immediate west are three storm sewers for stormwater from I-71, areas east of I-71 and Silver Drive. In the foreground is a section of sewer pipe embedded in the channel. In the background is a manhole rising from the streambed and the entrance to the culvert that runs under the railroad tracks and into Glen Echo Park.

2: Tributaries to Glen Echo Run are almost exclusively storm sewers such as the one shown above. This pipe empties just below Cliffside Drive on the south side of Glen Echo Park.

3: Stream channel modifications caused by excessive stormwater runoff are evident by the broad channel and eroded banks of this section of Glen Echo Run behind North High School.

4: Culverts placed near the mouth of Glen Echo Run rarely last for long and must be repeatedly rebuilt while construction or maintenance of the sanitary sewer is underway. The stone, gravel and plastic pipes are carried downstream to the Olentangy River.

5: Stormwater runoff is rapidly eroding the stream bank just west of High Street.

6: The destructive power of the stormwater in Glen Echo Run is evident from the amount of rip rap and poured concrete placed to protect the sewer line, the erosion occurring on the opposite bank, and the washed out culvert (visible in the top right of the photograph.) The view is looking west from the White Castle parking lot located at the intersection of High Street and Arcadia.

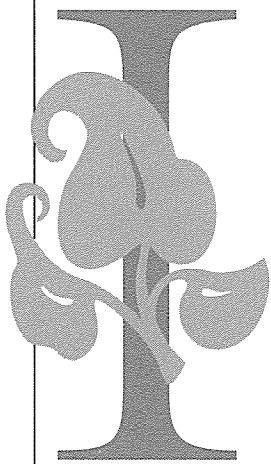
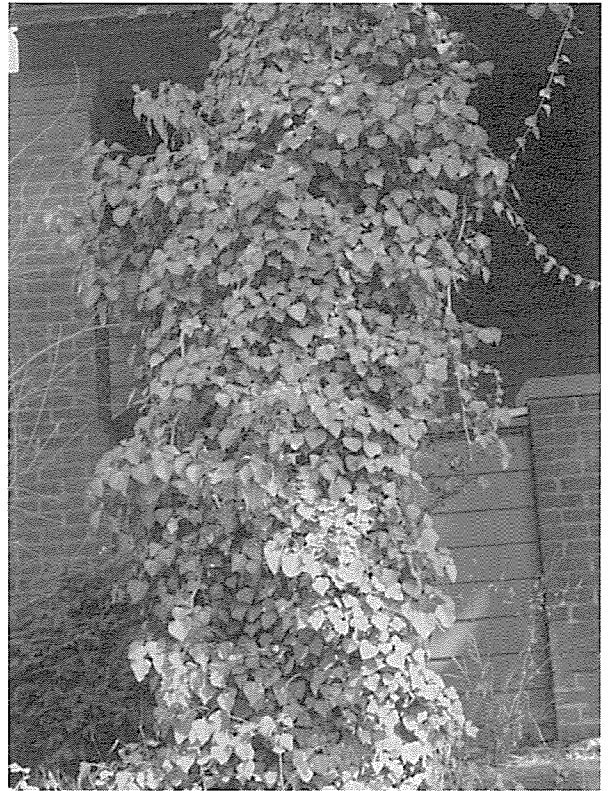
Students to Study Ravine Ecology

This spring, two Columbus public schools are participating in Friends of the Ravines' pilot project promoting the use of Glen Echo Park for field laboratory activities. The Graham School and North Education Center have received background packets from FOR's Education Outreach Coordinator Patricia Miranda. Both schools are eligible for financial assistance for water testing kits and other supplies from the Franklin County Greenways Program at the Mid-Ohio Regional Planning Commission.

Glen Echo Park provides an opportunity to study shale strata, stream erosion and deposition, glacial erratics, sulfur springs, vegetation, and slope restoration. Segments of the hillside are wooded with beech-maple, oak, and cherry trees with sycamores at the flood plain level. The four-acre park is an ecological study oasis in the heart of a crowded residential district. For more information about the Glen Echo Park Field Laboratory activities, call Patricia Miranda at 261-7249.



Pretty Ivy-covered Walls are a Headache



In the dead of winter, thoughts turn to the good things that spring will bring: lower gas bills, a reprieve from shoveling, an end to the cold blasts that reveal every uncaulked crack in my house.

Spring revives dormant plants, which is a good thing for most of us. For some homeowners, however, that can be a chilling thought.

A recent letter illustrates why. The writer was panicked because a plant had taken over part of her house, even destroying some of it.

The plant that ate a house? It happens. Blame it on ivy.

Perhaps the blame goes to the gardener, ages ago, who convinced his employer that he really didn't need to weed the ivy patch next to the house. Little ivy shoots here and there on the walls add character,

he must have argued, at the same time understanding that he would have fewer plants to tend.

Since that day hundreds of years ago, Americans have held romantic notions about the vines they allowed to consume buildings bit by bit.

Ivy is cunning. It sneaks up on a homeowner like a pit bull puppy. One day it's cute, and before you realize what has happened, it's a full-grown killer.

Ivy does the same thing to trees, causing premature death in some cases by creating pockets of humidity that allow rot to start or insects to enter. I'm not a plant expert, but I know a little about how ivy works.

It sends out roots along its vines. The roots are intended to burrow into something. If ivy stayed on the ground, all of those roots would sink into the soil. But ivy likes to climb, and being a tough plant, it doesn't much care what the walls are. It shoots roots into wood and brick seemingly with the force of an air gun driving nails into concrete, and the roots burrow into whatever cracks they find. And they find cracks most people could not imagine.

While ivy is growing into those cracks, it's doing very bad things. The vines and roots continue to grow, widening those cracks. They also serve as conduits for moisture, allowing rainwater to run along every fiber and into the house through the cracks.

The plant's leaves shield moisture from the sun, allowing water to sit and work its will – freezing and thawing to expand cracks or to breed rot and attract destructive insects. I have seen ivy perpetrate some amazing damage on wooden houses.

The letter writer didn't need me to tell her that ivy is a bad thing for her brick house. She had already cut the vines near the ground and killed those growing on the house. That's a good move – one I'd recommend for those who have a problem with ivy or any plant climbing on their homes.

Next, she pulled the vines from the house. As much as I'd be tempted to do the same, I would encourage resisting the urge to yank vines down. Instead, scrape them off with a putty knife or paint scraper. By doing that, you will cut the roots rather than pull them out.

The letter writer found that when she

Interested in Native Plants or Alternatives to Ivy?

For a newly revised and updated list of Native Plant Nurseries and related services and/or a list of ground covers to plant instead of ivy, send a self-addressed stamped envelope to Friends of the Ravines, PO Box 82021, Columbus, Ohio 43202. Indicate which list you want to receive.

pulled on the vines, some of the more tenacious roots clung to the mortar and pulled it from between the bricks, even loosening a brick. Now she must repoint the bricks on at least part of her house.

It's difficult to know whether that would have been necessary if the ivy hadn't been pulled off -- or if it had never grown there in the first place. My guess is that the tuck-pointing would have been years in the future if not for ivy's involvement. At some point in the spring, when plants perk up again, it would be wise to spray the ivy closest to the house with Roundup or similar herbicide to kill its roots.

Plants can be wonderful accents and decorations, but left unchecked they can be insidious house wreckers.

This article from the Home and Garden Section of The Columbus Dispatch (January 27, 2002) is reprinted with permission.



Expert Gardening Advice Is a Phone Call Away

Do you need gardening and landscaping advice but you can't afford hiring a landscaper? There is help at hand. Read on. The Ohio State University's Franklin County Extension Service has master gardener volunteers and extension staff who will help you with gardening questions and requests relating to in central Ohio.

Experts offer advice on planting and tending trees, shrubs, lawns, flowers, vegetables and fruits. You can learn about soil management, controlling insects and pests, treating diseased plants, and implementing integrated pest management. Extension fact sheets and other gardening resources are available.

Visit OSU Extension's web site for a list of fact sheets and bulletins by logging on to ohioline.osu.edu or the Department of Horticulture's web site at hsc.osu.edu. You may visit Franklin County Extension at 2105 S. Hamilton Road, Suite 100, Columbus, Ohio 43232. It is open from April to October from 9 a.m. to 12 noon. If it is more convenient for you to get help by phone, call 462-6750.



The Hex of Hedera Helix

English Ivy, the common name for *Hedera helix*, is generally considered a vine but is actually a high-climbing evergreen plant which clings by aerial rootlets. It can cover walls, rocks, tree trunks and trellises, carpet bare spots in shady places, and edge beds and borders. English Ivy was brought here from Europe. It is a shade tolerant plant that spreads by vines, roots, and seeds. Considered by many a choice landscaping specimen, English Ivy and its related varieties should be planted with caution or not planted at all.

Ivy can become a pernicious villain. It can crowd out native plants and damage trees by competing for nutrients and moisture from the soil. Ivy likes to climb. It can weaken a tree by making it more susceptible to toppling and interfering with a tree's ability to perform photosynthesis. Last September, Adena Brook Community saved seventeen trees by de-girdling them, or cutting off the vines. Most of the trees were stately sycamores on Overbrook Drive off Indianola.

To remove ivy from or de-girdle a tree, the No Ivy League website recommends using pruners, loppers, or a pruning saw to cut through ivy vines at shoulder height and ankle height, taking care not to damage the bark. Carefully strip the ivy away between the two cuts. Leave the ivy above the shoulder cut alone. It will wither or deteriorate. Be sure to get all vines or the tree will not be free. Check for any thin vines that might be snaked under bark. After freeing a tree, make a lifesaver around it by pulling ivy away from the base of the tree, extending the pulled area at least six feet from the tree's base all the way around.

If English Ivy is not a landscaping plant, what is it good for? According to the No Ivy League, English Ivy is good for topiaries.

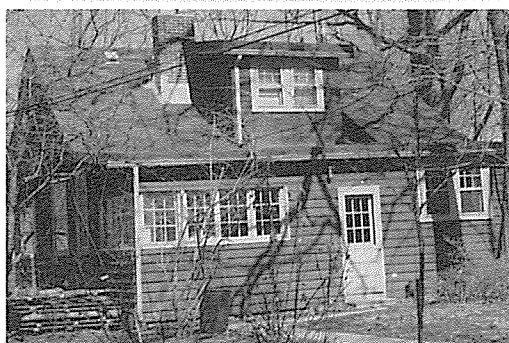
This article was adapted from information on the noivyleague.com website.



Photo: Terry Barrett

The Summer House on Walhalla

While delivering shirts to FOR supporting members, a board member bumped into an interesting story. One of FOR's supporters and her husband moved from Minneapolis to Columbus in 1958 and settled into a cozy white house with a green roof located on Walhalla Ravine. Her home, built in 1936, was located near one of the first houses on the ravine, which was built in 1904 as a summerhouse for its owners when Walhalla had sheep grazing on the slopes of the ravine, and the summerhouse provided a bucolic, rural setting for these folks seeking refuge from the bustle of the city. The lure of the isolated ravine location charmed the summerhouse owners and they abandoned their other home in Columbus to permanently settle into their Walhalla property. Over the years it was renovated, winterized and made comfortable for year-round living. The supporter who shared this story with us celebrated her ninety-third birthday on January 27, 2003. She still lives in the white frame house with the green roof, which sits on a ridge above Walhalla Ravine's urban woodland.



Friends of the Ravines Say Thank You!

Financial Contributions

Greta Adams
Twin Rivers Garden Club

Computer Assistance

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Sandy Jones

Operating Assistance

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Community Resource Center
The Columbus Foundation
Franklin County Greenways
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T-Shirt Sales

The Backyard Experience

Refreshments For Community Forum

Clintonville Community Co-op

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Submissions and suggestions are welcome.

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