



Celebrating 30 Years

By Mark Boardman

The story of Three Valley Conservation Trust (3VCT) is a fascinating one of innovation, growth, challenges, and evolution. The story is a testament to the power of a vision supported by people dedicated to the idea that all conservation requires stewardship of land.

I'm the longest-serving member of the current Board of Trustees (2010-present), and I was asked to write an essay sharing my views on the growth of the Trust. My earliest direct contact with the Trust was in 2004, so the review of the earliest years is derived from newsletters, legal documents, and discussions with many of the founding members. Importantly, this essay mainly reflects my selective memory.

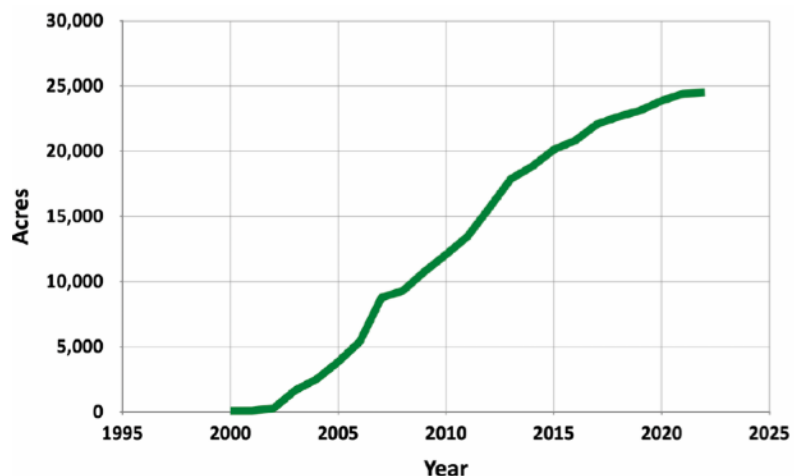
Innovation: The Early Years

In the early 1990s, a group of conservationists led by Wally Edwards recognized the urgent need to protect and conserve natural habitats, biodiversity, and water quality. In 1994, After careful consideration of an Institute of Environmental Science (IES) project to determine how best to do so, they established a land trust called the Four Mile Valley Conservation Trust to achieve these goals. The Trust's passionate and dedicated team of supporters gained legal recognition as a land trust and approval as a tax-exempt non-profit organization in 1996, and shortly after that, they accepted their first property and conservation easements. In 2001, the Board changed the Trust's name to Three Valley Conservation Trust (related to Four Mile, Seven Mile, and Indian Creeks). Soon after, the service area was enlarged to include all areas of Butler and Preble counties as well as fringe regions adjacent to these counties. Until 2001, all activities were by volunteers operating from private homes. In 2001, the Board hired Larry Frimerman as the full-time director and Mike Beck donated his family farm for the office.

Explosive Growth

Between 2002 and 2014, Three Valley Conservation Trust witnessed a remarkable surge in the number and size of easements. Much of this explosive growth is attributed to the Trust's new director, Larry Frimerman, whose boundless energy, persuasive communication, and vast knowledge about easements and funding opportunities created numerous conservation opportunities with government partnerships (state and federal agencies like ODA, OEPA, and NRCS) to purchase easements. A significant local partnership was with MetroParks of Butler County, in which the county park system became the landowner and Three Valley held the conservation easements (e.g., Mill Race Preserve). Another partnership of particular importance is the Paddys Run Conservation Project (PRCP), the Fernald cleanup - a federal Dept. of Energy superfund project. This project generated funding to;

1) hire two easement acquisition specialists (Eric and Steve), whose efforts added over 5,000 acres of conservation easements in the Fernald area, and 2) contribute over 1 million dollars to the Trust's endowment to ensure perpetual monitoring and legal defense. During this time, the Trust completed about 13 easements each year, and over 15,000 acres of land were protected from development.



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At first, volunteers handled the Trust's day-to-day operations, but eventually, a paid, part-time secretary was employed. Together they managed finances, membership, record-keeping, easement preparation, and monitoring. Student volunteers from Miami University provided GIS capacity (maps). Financial support was provided by a few very generous donors and by fundraising events such as elegant dinners and the annual "Auction for Acres". Many volunteers generously contributed their time, talents, and money to enable the Trust's explosive growth. I only know some of them, but the ones I did know are too important not to mention. Thank you to Lois, Frank, Ann, Betty, Sam, Kathleen, Sandi, Tom, Ernst, Holly, Pat, Marlene, Janet, Doug, Anne, Jan, Catherine, Mary, Eric, Steve, and many more.

Also during this time, the first ever fund-raiser for land acquisition raised funds to leverage the multi-party contracts resulting in conservation easements that protected the northern approach to the Black Covered Bridge in Oxford. The result was the creation of the Mill Race Preserve by Butler County MetroParks, the OATS trail by the City of Oxford, and a broad expanse of conserved farm land. Many volunteers were involved, but Cal and Roger were especially influential.

Around 2010, Three Valley Trust volunteers completed the grueling task of assembling the data to meet the exacting standards of operation required for accreditation by the Land Trust Alliance, the national leader in land trust policy, standards, education, and training. Three Valley was granted accreditation in 2011.

Challenges of Growth

Three Valley Conservation Trust quickly became a regional land conservation leader. The partnership with PRCP generated funded easements and helped create local parks protected by conservation easements held by Three Valley (e.g., Salamander Run Nature Preserve). However, the Trust's success was so phenomenal that it had outgrown the resources of its small full-time staff and volunteers. The involvement of government agencies added legal and financial complexity to every easement, and the Beck Farm office space needed to be bigger. Thus, the Trust faced significant challenges in sustaining legal record-keeping, financial accounting, monitoring, database management, membership, etc.

The Board of Trustees hired Liz Woedl as the new Director in 2012 to tackle these issues. Liz was previously Chair of the Board of Trustees and knew the Trust's operations well. She hired Bonnie Kretschmer as the part-time secretary and added a new staff position (Land Protection Specialist) to resolve the many steps needed to secure the increasingly complex easements. Later, Liz added another new position, Land Stewardship Manager, to oversee the growing number of easements. Randy Evans became Three Valley's first full-time stewardship manager. In 2014, 3VCT moved to a more modern and larger office space on Ringwood Road.

By the time Liz left, 3VCT had a professional staff (Liz, Bonnie, Meghan, and Randy) and a fully functioning contract with OEPA (PRCP - Fernald cleanup; Eric and Steve). The staff was acquiring new conservation easements and monitoring the nearly 150+ properties already with easements.

After Liz retired, Mark Boardman (then Chair of the Board of Trustees) became the de facto Director. He addressed financial, legal, and procedural challenges, such as disentangling escrow and operational banking accounts. He clarified endowment accounts and revolving land acquisition funds and ensured that their management was simplified (many thanks to Roger Ames, Ed, Neil, and Cal). In its first-ever legal proceeding, the initial court decision essentially vacated the easement language. However, an appeal to the 12th Circuit Court of Appeals reversed the lower court judgment, preserving the easement. We can expect more challenges to conservation elements - second-generation landowners don't always share the original conservation zeal.

LTA denied the Trust's application for renewed accreditation. This rejection sharpened the Trust's attention to operational details concerning the completeness of easement files, tracking violations, file security, and record-keeping. In 2017, the 3VCT office was relocated again, and the new location provided better internet, intranet, and digital storage capacity—and forced a review, cleansing, and update of easement files.

In September, 2017, the Board hired Chad Smith as the new Director. Chad had years of experience with state park management but had to learn the details of land trusts and easements. After two years, he accepted a position with MetroParks of Butler County.

Evolution: Embracing the mission

Today, Three Valley Conservation Trust is the conservation manager of nearly 25,000 acres of land in southwest Ohio. The original prescient vision is still applicable and guiding the Trust's actions, and we (Continued)

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have had the best organizational stability and professional staff since I came on the board (2010). The past decades of inspiration, growth, and meeting the challenges of growth provided a foundation for embracing aspects of the mission beyond easement acquisition, such as:

- strengthening engagements with landowners,
- improving easement stewardship,
- supporting biodiversity and community education initiatives and
- coordinating regional watershed projects.

I like to think that "we didn't come this far just to get this far."

In 2019, Randy Evans became Director. With six prior years of experience at Three Valley managing stewardship and monitoring, Randy was intimately familiar with easement acquisition and monitoring. He knows what the Trust does well and how it could improve. His background includes extensive organization leadership experience (decades in the Coast Guard), significant farming experience, GIS certification, and a recent master's degree in Biology.

Under Randy's direction, Three Valley continues to preserve strategically important land via conservation easements. Office procedures ensure rigorous oversight of new easements, excellent field and database management of easement monitoring, and excellent accounting and record-keeping - guided by LTA guidelines.

In addition to the above, Three Valley is extending the practice of land conservation via preservation to land conservation via comprehensive stewardship. With collaborative partnerships and multi-year projects funded through various sources, Three Valley now coordinates stewardship initiatives that promote soil health, reconstruct wetlands, restore streams, assess water quality in watersheds, and engage community biodiversity activities. In the past three years, nearly \$1,500,000 in grants from private and government sources were secured to support these stewardship activities on land conserved by Three Valley and in the Three Valley service area.

Of particular (and personal) note is the externally funded stewardship of the 14-acre riparian forest known as Ruder Preserve, the first conservation responsibility of the Trust. Led by Donna McCollum (and helped by many others), honeysuckle and other invasive plants are being removed, and native plants are being planted. Between 2019 and 2023, volunteers (led by Mark Boardman, Tom Farmer, Donna McCollum, Steve Nimbus, and Ed Teets) built ADA-compliant boardwalks on both sides of Four Mile Creek - accessible via a parking area on one side of the creek and the City of Oxford's "OATS" trail on the other side. Ruder Preserve is now a showpiece of stewardship by Three Valley and an official "point of interest".



The Hoffmann wetland project, funded by H2OHio, fortified 1200' of stream bank as well as established six vertical pools in the riparian woodland along Indian Creek.



The "Wise Women of the Woods" regularly enjoy the ADA-compliant boardwalks at Ruder Preserve.

Summary

Nature requires natural areas, clean streams and groundwater require clean, natural surface conditions, biodiversity requires suitable habitat, and climate stability and control require all the components of Earth. The preservation of land is fundamental to all of the above—to all conservation.

The founders of Three Valley Conservation Trust recognized the fundamental importance of land preservation. Today, the trust's preservation and stewardship actions continue to fulfill their dream, my dream, and our shared dream.



By Tom Vogel
Board Chair

Conserving History

Our core mission at Three Valley Conservation Trust focuses on land conservation, with a particular emphasis on prime farmland, forested areas, wetlands, and prairies. We certainly have achieved a high level of success in establishing and monitoring our 221 easements and nearly 25,000 acres. I would like to highlight a less visible success your Trust has achieved – the preserving of a farm culture and a family history that go back over two centuries in our region. Our easements provide collateral benefits to our core mission that we all must recognize.

Some of our easements have nearly 200 years of history with the same family. They all tell a story of great sacrifice, hard work, and tragic loss of early settlers. While hiking one of our farms this past week, I found a 200-year-old cemetery for which I have been searching the last four months, and I could not help but be overcome with a sense of sadness and admiration for those buried there. Two graves I could decipher stood out to me. One was a grave of an infant and the other was the grave of a young 37-year-old woman named Catherine, who died in 1828. I could only feel thankful for that woman for what she and her family did to establish and nurture that farm. Women like Catherine built the country and the region. I only wish I could turn back the pages of time to talk to Catherine, as I want to know more about her life and her challenges on the farm.

Fellow Three Valley members, the next time you see one of our signs, I ask you to think about what your Trust has done to conserve land in southwestern Ohio, but also to ponder the history of that land and the role you are playing in preserving said history.

FOUNDERS

The Four Mile Valley Conservation Trust, Founded 1994
Renamed Three Valley Conservation Trust, 2001

By Stephen Gordon

As we celebrate 3VCT's 30th year of existence, it seems only fitting to remember the folks whose vision and tenacity enabled the splendid growth of our Trust.

Wallace I. Edwards (1925-2003)

A native of Cleveland, Wallace Edwards grew up in Springfield, Ohio. After serving in the US Army in Europe during WWII, Edwards received his bachelor's degree in business from Miami and master's and doctoral degrees from the University of Wisconsin. In 1950, Edwards married Marilyn Jacoby, and they moved to Oxford in 1953 where he taught economics at Miami

until his retirement in 1984. At Miami, Edwards also served as first University Secretary and the second Director of the Honors Program. He volunteered in various capacities with local organizations and was named an Oxford Citizen of the Year in 1999, reflecting the community's appreciation for his work to establish the Three Valley Conservation Trust. He and Marilyn had four children and two grandsons, all of whom enjoyed many family hikes along the Four Mile Creek and its tributaries.



Jim Reid (1936-

Jim Reid has devoted much of his life as an advocate and supporter of conservation. In addition to being a founding member of the Trust, he has served as Board Chair and holds the distinction of donating the the Trust's first easement.

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FOUNDERS (continued from pg. 4)

Significantly, Jim collaborated on transitioning the Trust from an all-volunteer organization to one employing an Executive Director. Jim attended public schools in Hamilton and graduated from Miami University majoring in Economics. After serving as a Captain in the US Air Force, Reid was employed at Beckett Paper Co. (International Paper) for 35 years where he served as Vice-President, Marketing. From 2000-2020 Reid worked as the Field Manager of Miami University's Natural Areas. Jim has served on numerous boards that include Institute for Learning in Retirement, Audubon Miami Valley, American Cancer Society, Ohio Audubon Society, and volunteer work on the Milford Township Land Use Planning Committee. Jim's passion for nature and recreation has taken him to hikes on the Appalachian Trail, photography, woodworking, birding, fishing and most-recently, pickleball. With his late wife Barbara, Jim raised three children and nurtured four grandchildren. In 2023, Jim married Beth Polanka. They reside on a wooded property in Milford Township.

Orie Loucks (1931-2016)

An internationally noted ecologist and environmentalist, Orie Loucks had a distinguished academic career spanning six decades. He was born on a farm in Ontario. He received his B.Sc.F. and M.Sc.F. in Forestry from the University of Toronto and his Ph.D. in Botany and Soils from the University of Wisconsin. While at Toronto, Loucks became Managing Editor of the university paper, where he met Elinor Bernstein, his beloved partner for the next 60 years. In 1969, his efforts led to the banning of DDT in Wisconsin. In 1989, Loucks joined Miami's Department of Zoology, as the university's first Ohio Eminent Scholar. In conjunction with his academic work, Loucks served on the Nature Conservancy's National Board of Governors as well as working on open space advocacy around Oxford and the Miami Valley. He was the first editor of Valley Trust News.



A. Dwight Baldwin (1938-

Holding degrees from Bowdoin College, the University of Kansas and Stanford, Baldwin came to Miami in 1966 with his wife Barbara and their young family. He began his long and productive career as an assistant professor in the Department of Geology. During the next several decades, his multifaceted professional achievements and passion centered on social impacts on landscapes and water quality. In 1970, Baldwin collaborated with Gary Barrett (Zoology), Roger Wilson (Botany) and John Doli-bois (then Director of Miami's Alumni Office) in creating the Institute of Environmental Sciences (IES) where he served as the first Deputy Director. Since 1969, IES has

trained over 800 professionals and over 1400 alumni have been involved in his research. In 1976, he was awarded a Fulbright to examine agricultural methods in Malaysia. From 1977-1985 Dwight was Chair of the Department of Geology. Baldwin authored *Beyond Preservation: Restoring and Inventing Landscapes* (1993), with contributions from both natural and social scientists and co-edited with Judith DeLuce and Carl Pletsch. In 2002, the Dept. of Geology inaugurated the Baldwin Frontiers in Geology Lecture Series. Dwight retired from Miami in 2001 and he and Barbara moved to New Hampshire where he continues his passion and service to land conservation with Chocorua Lake Conservancy, located near the White Mountains.

Thomas Wissing (1940-2022)

It was perhaps inevitable that Tom Wissing would become involved in what would become Three Valley Conservation Trust. Born in Milwaukee, he received undergraduate and master's degrees in biology from Marquette University and a doctorate in limnology (the study of fresh-water ecosystems) from the University of Wisconsin, Madison, where one of his professors was Orie Loucks. Their paths would cross again at Miami University when both were involved in the formation of the Four Mile Valley Conservation Trust. For ecology students at UW, part of the cultural heritage's conservationist Aldo Leopold's call to see land not as a commodity but as a community to which we all belong. In 1969, Tom married Holly, accepted a faculty position at Miami, and moved to Oxford. They soon bought 11 acres of woods, fields, and a creek in Reily Township and began stewardship efforts that continued throughout Tom's life. Tom's devotion to conservation included putting their land, which by this point had become a wildflower preserve, in a conservation easement with the Trust in 2008.



Executive Director's Report

Spring is here! As usual during this time of the year, our staff is busy in the field checking on current easements, visiting properties with owners applying for easements, and monitoring the success of our recent restoration projects. I recently spent time with representatives of the Miami Conservancy District, who are monitoring the water quality at the Hoffmann wetlands. We were overjoyed to see a great blue heron rookery forming with six nests in construction. We also recently visited the Henshaw Corner wetland with partners from the Ohio EPA. Our new wetland and pollinator plantings appear healthy, and some signs of life are appearing in the newly formed vernal pools.



By Randy Evans
Executive Director

This spring feels like a renewal for Three Valley as a whole. Now in our 30th year, we are emerging as a leading regional organization focusing again on water quality and habitat issues. We have begun another watershed assessment, our seventh so far, to assess water quality issues for the Cotton Run-Four Mile Creek watershed. These plans benefit not only our region, but also contribute toward a landscape-scale strategic conservation plan we are working on with partner agencies led by the Greenspace Alliance.

Our board and staff have a big vision for conservation and a thirst for understanding how we can contribute on a state and national scale. But we haven't forgotten to tend our own backyards either. As I write this, our Ruder construction volunteers (Mark Boardman, Tom Farmer, and Steve Nimis) are ordering more lumber and starting to build the next and final sections of our beautiful boardwalk. Donna McCollum and Steve Gordon are leading student volunteer groups to eradicate invasive plants in the preserve. We have installed four native wildflower seed libraries around Butler County; they are so popular Teri can't refill them fast enough. We have six more to install around the county with the hope they will help expand habitat for our struggling pollinators.

For the past 30 years, we have focused our efforts on conserving land and keeping it under private ownership, as we believe that farmers and landowners are the best stewards of their land. While continuing to help private landowners, we also recognize the value of managing our own property, Ruder Preserve, as a local resource. For the next 30 years, we want to provide future generations priceless opportunities to learn, connect, and enjoy being part of the natural world. We are so honored and thankful to be doing this with you...our community of supporters and donors.

Semper Gratus! – Randy

SAVE THE DATES!

ANNUAL PICNIC

DATE: Sat. July 20

TIME: 6:00-9:30

(Moonrise at 9:00)

LOCATION: TBD

This year's annual picnic will be a lunar feast! We will have an evening meal, with 3VCT providing beverages, hamburgers and hot dogs (veggie and meat). Participants should bring a covered dish to share.

FARM-TO-TABLE DINNER ANNIVERSARY PARTY!

September or October
Stay tuned for details!

Perennials 4 Pollinators



Hosted by 3 Valley Conservation Trust
and Riverside Native Perennials



SWAMP MILKWEED



COLUMBINE



POKE MILKWEED



SMOOTH BLUE ASTER



BEARDTONGUE

Price: 1.5 pt containers \$8-\$12

Date: Thursday, May 9th from 3pm to 6 pm

Address: 5995 Fairfield Road, Oxford, OH 45069

Contact: office@3vct.org or 513-524-2150

Order Online at:

<https://riversidenativeperennials.com/shop/>

Help support pollinators and the 3 Valley Conservation Trust at the same time! 3VCT and RNP are teaming up again to offer 40+ new native perennial species. Use our website search feature to find native plants perfectly suited to your home landscape. When checking out use the promo code "3VCT" and select "fundraisers only" for delivery.

Stewardship Update

3VCT currently has six easements in the works. Three are funded through Ohio Department of Agriculture's LAEPP, two are funded with NRCS' ACEP-ALE program, and one is being donated. We are finishing two agricultural easement applications for ODA's 2024 funding round and had five applications submitted for NRCS' 2024 funding round. NRCS' next funding round is expected to open in November 2024.

What Have Members Been Doing Lately?

Article and photos by Julie Primack

Annual Meeting - "Looking Back & Planning Ahead"

Members of 3VCT met at the Knolls of Oxford on Feb. 25 for our 2024 annual meeting. We used this occasion to celebrate the 30 years 3VCT has been in existence. All five of the Executive Directors who have worked for the trust were able to join us for a wonderful evening reviewing 3VCT's past achievements, current efforts and future hopes. So much talent! It was a delight to thank them for their individual achievements and to have them share their perspectives on 3VCT's future.



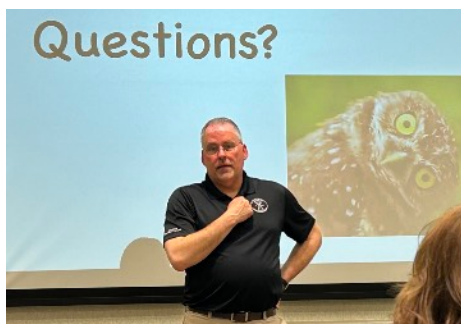
Panel moderator Stephen Gordon introduced Executive Directors Larry Frimmerman, Mark Boardman, Chad Smith, Randy Evans and Liz Woodl.



We were given a generous matching grant that evening from Vogel Farm Enterprises.

The 3VCT members present generously rose to the occasion allowing us to raise over \$20,000 Thank you also to The Knolls of Oxford, La Rosa's, LPL Financial and Oxford Coffee Co., and all the other behind-the-scenes volunteers who helped make the evening a great success!

Second Annual Bourbon Tasting



Mike Crowder, Miami University professor of chemistry, our bourbon aficionado

On March 16th, Michael Crowder delighted about 50 guests wearing his "bourbon aficionado" hat. Mike not only knows all about bourbon, but he has fun sharing its history, its many stories, and his delight in figuring out all things chemical about it!

We had a fabulous evening that spoke to all of us, Mike's presentation for bourbon aficionados and science and history nerds, the Farmer and the Crow for bluegrass music fans, and a lovely four-course dinner from MU catering for foodies!

Thank you to: Mike Crowder (bourbon expert extraordinaire), Dale Farmer & Ma Crow, who donated their time, and talent to this event, and to the Marcum Center Staff, who did a great job preparing the venue and serving us a wonderful meal! A special thank you to our sponsors: Mark Rentschler, the Old Stone Dog Kennel, Teri Wickham, Randy Evans, and the Edge of the Farm Conservation Area.



Dale Farmer & Ma Crow (below) entertained guests (above) with their well-known bluegrass band "The Farmer and the Crow".

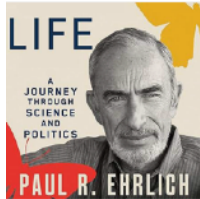
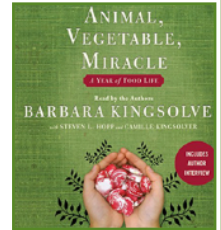


Outreach and Education News

Book Club

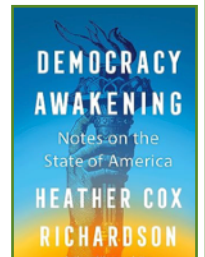
The Three Valley book club is well into its 2024 reads but you still have a chance to join us for the last four books! Meetings are held online on Thursday evenings at 7 pm. Email Ben Mattox (benmattox50@yahoo.com) or visit 3VCT online at www.3VCT.org/events-activities-news for meeting links or other information.

May 9, *Animal, Vegetable, Miracle* by Barbara Kingsolver, discussion by Donna McCollum Part memoir and part journalism, this book follows its famous author's family as they search for another way to eat and live, trying to recover our nation's lost appreciation for farms and the natural processes of food production.



July 11, *Life* by Paul Ehrlich, discussion by Ben Mattox This biography is ... "what you'd hope from the greatest living population biologist, who has thrived in science and policy controversies for 70 years." (Jared Diamond)

Sept 12, *Democracy Awakening* by Heather Cox Richardson, discussion by Cori Yeager Richardson, an acclaimed historian and author of the newsletter "Letters from an American," here "examines the historical forces that have led to the current political climate...Richardson wrangles a chaotic news feed into a coherent story that singles out what we should pay attention to and what possible paths lie ahead."



Nov 14, *The Comfort of Crows* by Margaret Renkl, discussion by Karl Mattox

Nope - not a book all about crows! It is weekly essays that follow the plants and animals in Renkl's back yard through a year. "As we move through the seasons—from a crow spied on New Year's Day, its resourcefulness and sense of community setting a theme for the year."

Spring 2024 - Hikes for Acres

Article and photos by Julie Primack



WOW! Our first hike set a bar very hard to meet! Thank you so much to Frank House and his family for hosting this wonderful event. Some highlights of the evening included a great blue heron rookery, a bog with skunk cabbages (left) and marsh marigolds, 100+ acres of relatively honeysuckle-free forests, a stream filled with fossils from a shallow sea 450 million years ago, and an unexpected, beautiful meal waiting at the end of our adventure (right).



Having said that...all of the 3VCT hikes have become very popular! Each hike introduces the participants to a protected outdoor space where we meet up with friends, learn about the habitat and creatures that are protected and remind ourselves of why 3VCT's work is so important.

Coming up:

April 25: 5:30 to 7:30 pm We return to the beautiful **Ruder Preserve** (SE corner of Bonham Rd and Shadowy Hills Dr., Oxford) where we hope to engage naturalists of all ages in a scavenger hunt for the many invasive species of the area... can you and your family find 10? We will spend time discussing problems faced when removing these invasive species and why they are such a huge problem!

May 30: 6:00 to 8:00 pm Hoffmann Wetland (Near: 2094 Indian Creek Rd) The restoration of this beautiful stream bank and riparian wetland is now complete. We will be returning to see the difference and talk about the changes already seen, like herons nesting for the first time in many years, and the changes we hope/expect to see over the next few years.



Going Digital

We are excited to announce that 3VCT is taking another step towards sustainability and environmental stewardship. In line with our commitment to conservation, we have decided to transition our newsletter to digital platforms starting in 2025. By going digital, we aim to reduce our ecological footprint and set an example as a forward-thinking conservation agency. Embracing a digital newsletter will allow us to significantly decrease our paper usage, minimize waste, and ultimately contribute to the preservation of our natural resources.

This decision reflects our dedication to the core principles of conservation while also embracing modern technologies to better connect with our community and stakeholders. We appreciate your understanding and support as we embark on this journey towards a more sustainable future. Together, we can make a positive difference for our planet.

Make sure we have your preferred email address and thank you for being a part of Three Valley's mission!

Natural History Moment - Vernal Pools

Article and photos by Jeff Davis

Amphibian larvae are essentially soft little packets of protein, excellent food for fish and other aquatic predators. Some might be distasteful, causing fish to avoid them, but most are vulnerable to predation. Those species whose larvae are eaten by fish often counter predation loss by producing huge numbers of eggs, sometimes in the thousands. But perhaps the best way to avoid predation is to lay eggs in bodies of water that don't have fish.



Depressions in swamp forests flood with fall rains and winter snow melt. This one is used by Spotted, Jefferson, and Marbled Salamanders, Spring Peepers, and Wood Frogs.

The most important fishless habitats for amphibians are pools that form when woodland depressions fill with autumn rains and winter snow melt. These pools typically dry up as the summer dry season arrives, so fish cannot survive in them. These pools, referred to as **vernal pools** (literally "spring" pools), are most important when they are in forested areas. They are essential for Spotted, Jefferson, and Tiger Salamanders. These species breed during late winter, often shortly after vernal pools fill and sometimes before the ice has completely melted from their edges. As fairy shrimp, fingernail clams, aquatic isopods, amphipods, and other tiny invertebrates hatch from eggs deposited in the mud the previous year, they provide food for the salamander larvae until they undergo metamorphosis, which is about when the vernal pools begin to dry. In some years, the pools dry early, and the larvae die, their decomposing bodies leaving nutrients for the following year's tiny invertebrates that will provide for the next year's salamander larvae.

One species of salamander, the Red-spotted Newt, is aquatic as an adult, but after metamorphosis, it leaves its pond and wanders the forest floor as a subadult. These bright red-orange subadults are called eft. They find a body of water, often a vernal pool, where they mature into aquatic adults and eat eggs laid by early-spring-breeding amphibians such as the aforementioned salamanders and Wood Frogs.

The Marbled Salamander, although related to early spring breeders, lays eggs in the fall under leaf litter or logs at the edge of depressions that will fill with autumn rains - with a great benefit. The eggs hatch as the pools fill in the fall and grow, albeit slowly, through the winter. By March or early April, they are large enough to eat the larvae of their early-spring-breeding cousins, which provides a real boom to their growth and development. There is only one Marbled Salamander population remaining in southwest Ohio and it is protected by Three Valley Conservation Trust's work with the Ohio EPA through the Paddys Run Conservation Project!

Regardless of the season, most amphibian species can't exist without vernal pools. Where deforestation has occurred, vernal pools often dry up early. If they are at a woodland edge, adjacent to an agricultural field, they're susceptible to runoff contaminated with agrochemicals, which can be deadly to amphibian larvae or can reduce their fitness because they cannot capture food resources. They need a buffer zone of surrounding forest.



Some vernal pools form when large trees blow over and a depression remains where the root mass was.



This female Marbled Salamander is guarding her eggs under a log at the edge of a vernal pool. When autumn rains flood the pool, the eggs will hatch.

(continued on next page)



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Newsletter prepared by: Donna McCollum



*“Valley Trust News,”
the newsletter for members
of Three Valley
Conservation Trust,
is published twice a year.*

(continued from page 6 - Vernal Pools)

If you want to promote amphibian populations and other species in your woodlot, excavating a vernal pool is a great way to do so. A friend of mine who lives in Hamilton County adjacent to Miami Whitewater Forest dug a small pool in his yard that measures about 15 x 12 feet and is 18 inches deep (picture at right). It is situated under a patch of trees to provide shade that protects it from the sun and evaporation. Jefferson and Spotted Salamanders, Wood Frogs, Green Frogs, Cope's Gray Treefrogs and Spring Peepers bred in it the first couple of years, some in the very first year. As an added bonus, he installed a trail camera last fall and found that it's being used as a watering hole by deer, opossums, raccoons, striped skunks, gray squirrels, and chipmunks! I guess it's true what they say, "if you build it they will come."



This hand-dug vernal pool serves not only as an amphibian breeding site, but as water for a variety of mammals.

If you don't have a shaded area available, ponds in the open sun may be warmer, but they still are inviting to frogs and toads. The bottom line is, amphibians require water to complete their life cycle; providing them with vernal pools is a great way to promote their conservation.

Support Three Valley Conservation Trust

Membership - show your commitment to land conservation in SW Ohio by becoming a member, renewing your membership, or providing a gift membership. As a Three Valley member, you join people committed to conserving open land, preserving agricultural legacy, clean air and water, and habitats.



Donations - provide additional support to monitor and protect current easements and acquire new ones.

To become a member or to donate, go to www.3vct.org/donate or call the 3VCT office at 513-524-2150 ext. 5.

Attention current easement holders

Please remember that if you plan to transfer your property title through sale or gift, you are required by your easement to notify Three Valley Conservation Trust 30 days in advance. This insures that new owners of the property are aware of the easement.

Would you like to help?

Three Valley has always relied on volunteers in many ways, from helping with the auction and other fundraisers to getting newsletters ready to mail or working on restoration at Ruder Preserve. Another way to help is to join one of the ongoing committees. If you would like to help in any way, contact the 3VCT office at 513-524-2150 for information.

Outreach and Education - recruits the next generation of 3VCT supporters and educates current ones, plans and executes fundraising events

Land Protection and Stewardship - evaluates properties proposed for easements

Property Management - makes decisions about activities at Trust-owned properties

Development - determines strategies for developing a financially sustainable organization through key partnerships and donors

Finance - keeps track of accounts, formulates the budget and informs the board on all financial matters

Three Valley Conservation Trust is a member-funded, not-for-profit, charitable organizations certified by the IRS under section 501(c)(3) of the Internal Revenue Code. Your contribution/donations can be tax deductible.