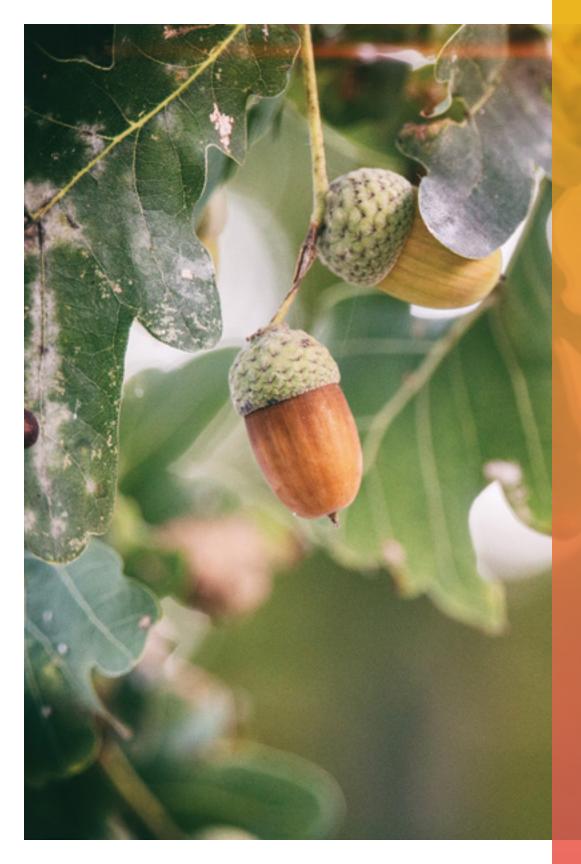
the allegheny ARBORETUM at Indiana University of Pennsylvania Annual Report 2021-22



One Step at a Time

I am happy to report that a major step has been taken on the Confluence Discovery Park (CDP) project. The environmental consulting firm ARM Group LLC has been hired to evaluate the environmental studies that have been done on the site of the proposed CDP. This important step will be the first time that all environmental reports for the site will be analyzed, providing important information to the arboretum and IUP. The Action Plan that ARM Group develops will provide us with the next steps on the project.

This report also highlights the installation of the "Crimson Hawk" sculpture near the Oak Grove, the birds of the CDP site, and some examples of how the arboretum is being utilized by IUP students and faculty.

On behalf of the arboretum board and IUP, I wish to express our gratitude to all of you who have generously provided support to the Allegheny Arboretum. The

arboretum is an ongoing project that will continue to evolve as part of IUP and the Indiana community. Without your support, we will not be able to accomplish our goals.

There are many ways in which you can help the arboretum succeed. Toward that end, a form for your use is included on the last page of this report. We thank you in advance for your support. Please feel free to contact me. Until the next report, please stay in touch.

Cordially,

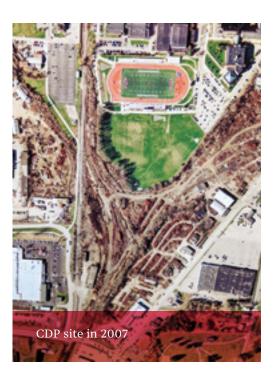
Jerry L. Pickering, Executive Director Allegheny Arboretum Board jlpicker@live.iup.edu Indiana University of Pennsylvania Robertshaw Building 650 South 13th Street Indiana, PA 15705-1087

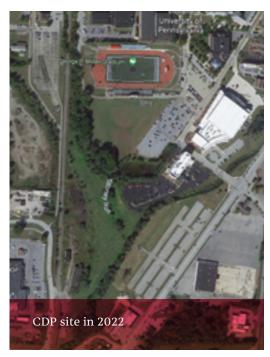
Confluence Discovery Park 2030 Master Plan

The Allegheny Arboretum and IUP have hired environmental engineering firm ARM Group to review the environmental studies that have been completed on the four properties constituting the proposed 39-acre Confluence Discovery Park. ARM Group, headquartered in Hershey, is a nationally recognized engineering and science firm that performs civil, environmental, and other work in the mid-Atlantic area and throughout the United States. It has been recognized nationally by the Engineering News-Record as a Top 200 Environmental Firm and a Top 500 Design Firm in the US.

The CDP Committee and the arboretum board hired ARM Group due to the firm's insights and qualifications following a field tour of the future CDP site on March 16, 2022. ARM came to our attention as an approved IUP vendor, having performed work for the Punxsutawney campus. The Pennsylvania Department of Environmental Protection (PADEP) supports the firm's selection.

In spring 2021, Anita Stainbrook, Environmental Program Manager, and A. Lee Negotte, Project Officer, from the Northwest Regional Office of the PADEP recommended that an environmental







engineering consulting firm be hired to review the environmental studies done on-site and that IUP select a project manager. Mitchell Peffer, IUP Director of Planning and Construction, and Steven Markiewicz, IUP Associate Director of Facilities Planning and Construction, have been selected as co-project managers for the CDP project.

ARM Group's review is designed to assess the technical, financial, and regulatory feasibility of implementing the master plan. It will provide guidance on the next steps needed to begin to bring the plan to fruition. The study is funded by private donations to the arboretum.

ARM Group will also coordinate meetings with representatives from the Confluence Discovery Park Arboretum Committee, IUP, and the PADEP Northwest Regional Office about the intended future use of the site. The final report is expected to be completed by the end of 2022.

The mission of the *Confluence Discovery Park 2030 Master Plan* is to transform a historically flooded, abandoned, industrial parcel into a multi-use and aesthetically attractive property that occupies a strategically important gateway to the university and the Indiana community. It leverages strategic physical improvements, including accessible trails, the Allegheny Arboretum Visitor Center, ecological restoration, rainwater management, educational and research opportunities, and community engagement.

The CDP Master Plan is available at the arboretum's website: *IUP.edu/arboretum*

Tree Plantings

Two dedication trees were planted this past year.

 2201-01, Tulip Tree, Liriodendron tulipifera

Brian and Olivia – Your family is a circle of strength and love. Founded on faith, joined in love. Kept by God together forever. Give your children roots of responsibility to grow and wings of independence to fly.

Brian & Olivia, Brody, Ian, Tanner, and Avery Ludwig

Love Always, Grammy and Pappy Ludwig

2022-02, White Oak, Quercus alba
 To our smart, funny, and spunky grandnephews and grandniece
 Aidan Ray, Joshua Jay, and Zachary

Scott Carnahan

Andrew Robert, Cayden James, and Jaelynn Rae Patterson

Thank you for all the joy you bring us, you enrich our lives beyond measure.

With all our love and support,

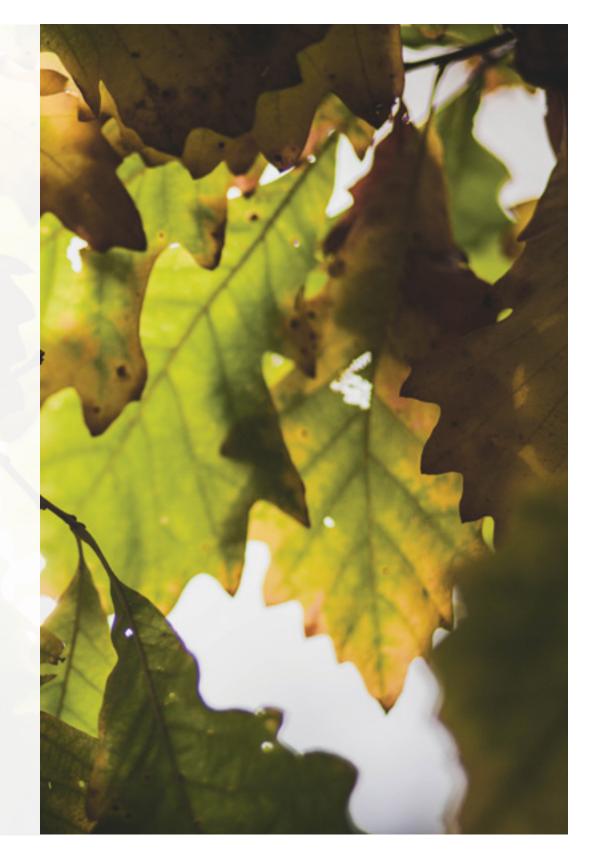
Aunt Tonya and Aunt Tina Patterson

One dedication tree was selected.

2019-01A, American Beech,
 Fagus grandiflora
 In memory of Joann Klausing
 Coach Klausing's wife and greatest
 cheerleader
 Donated by the Klausing children

In addition, the following seven trees were planted.

- 2021-02A, 02B: Steller Pink Dogwoods, *Cornus x* 'Rutgan' (one a replacement for a dead tree)
- 2021-03A, 03B, 03C: Golden Spirit Smoke Trees, Cotiinus coggygria
- 2021-04: Eastern Hop Hornbeam, Ostrya virginiana (replacement of dead tree)
- 2022-03, White Oak, Quercus alba



Benches

Five plaques were placed on dedicated benches.

One from the Journalism Department:

 Honoring the 50-year Legacy of The IUP Journalism & PR Program "The Gold Standard"
 Faculty and Global Alumni
 Dedicated with Pride – September 2022

Four from Raymond C. Kinter '67, M'68 in honor of his aunts:

- In honor of my wonderful aunt Irene Kinter Hoyt 1907-1999
 With love, Raymond C. Kinter '67 M'68
- In honor of my wonderful aunt Florence Kinter 1920-2014
 With love, Raymond C. Kinter '67 M'68
- In honor of my wonderful aunt Theda Kinter 1928-2020
 With love, Raymond C. Kinter '67 M'68
- In honor of my wonderful aunt
 Isabel Kinter 1927With love, Raymond C. Kinter '67
 M'68





Academic Committee

A partnership with IUP and Soil Hub, LLC is supporting soil training and research conducted on the IUP south woods and is coordinated by Lara Homsey-Messer in the Department of Anthropology. Soil Hub is an approved PA Department of Environmental Protection training sponsor for Sewage Enforcement Officers (SEOs) and is contracted to

develop and administer mandatory soils training courses for individuals in private industry, the public sector at the municipal, county, and state levels, and—importantly for IUP—to students interested in baccalaureate and graduate careers in environmental and natural resource sciences fields.

Three large, permanent backhoe pits in the south woods are available for training at 6 feet wide, 10 feet long, and 3-to-6 feet deep. The soil pits on south campus are being used by Homsey-Messer's students, including

an effort to train students on how to describe and analyze soils in her fall 2021 geoarchaeology class. Archaeologists employed in Cultural Resources
Management need this critical skill to properly interpret soils to assess the potential for deeply buried sites, determine the age of past landforms, assess site preservation potential, and accurately prepare quotes for excavation costs based on local geologic conditions.

Soil Hub and the PA Department of Environmental Protection also used the pits in summer 2022 to hold two two-day training sessions, mandated for professionals in sewage and waste management as well as sand mound instruction. Most recently, Mitzy Shaney, a Soil Science professor at the University of Pittsburgh at Greensburg, has used the pits for several weekends to train geology and soils students to prepare for the 2022 National Collegiate Soils Contest, a state and national competition for college students training in the fields of soil science, agronomy, etc.

Andrea Palmiotto is in the process of developing an area in the south woods for Forensic Decomposition research. She is working with Facilities Management to develop this project.

Ben Ford and his students use the "East Lawn" in front of Sutton Hall to demonstrate mock surveys and geophysical surveys for classes. They also use it for Archaeology Day activities.

Brian Okey's students in his GEOG 341 Climatology classes use a meter to measure weather parameters in the Oak Grove and other locations on campus.

In the Biology Department, Holly Travis makes use of natural spaces on campus for her classes, including usage of the Heritage Garden and Oak Grove for lab several times per semester during the SCI 104 course. Her students use the Discovery Center by Stouffer Hall and walk around many parts of campus to view a variety of plant and tree specimens. The wilder areas near the football fields, south campus, and the Kovalchick Center are used for the SCI 104 class as well as for the field courses she teaches (Spring Flora and Ferns), in which she assigns students to observe and examine diversity, pollinators, seed dispersal adaptations, and more in key locations

Joe Duchamp in the Biology Department uses the South Woods for Mammal surveys in his mammalogy class BIOL 475/575. Students do surveys to estimate deer density, camera trapping for species diversity, and live trapping of small mammals to estimate abundance. They have documented at least 13 species of mammals in the woods, including a coyote and gray fox.





Ellen Yerger's BIOL 201 Ecology and Evolution lab sections visit the south woods for the cover board lab. which includes about 5 lab sections per year. Students look under the 2' by 2' plywood boards for soil invertebrates. This fall. all boards were replaced because of the amount of use they've received since the original placement in 2015. Also in the south woods in October, she and a crew of students pulled out invasive barberry, honeysuckle, and multiflora rose for "Weed Wrangle". This was their 5th Weed Wrangle this year, but the first on campus. "Weed Wrangle" is a trademarked name for gatherings of volunteers to remove invasive plants from public places.

Michael Tyree's students in BIOL 210 Plant Biology class have conducted a tree phenology project. They will select a tree or shrub on campus and track its progress (phenological stages; leaf color change, bud development, flowering, leaf drop) weekly by photographing the plant repeatedly. This will culminate in data being collected each year to track the long-term changes to plant phenology in Indiana, PA.

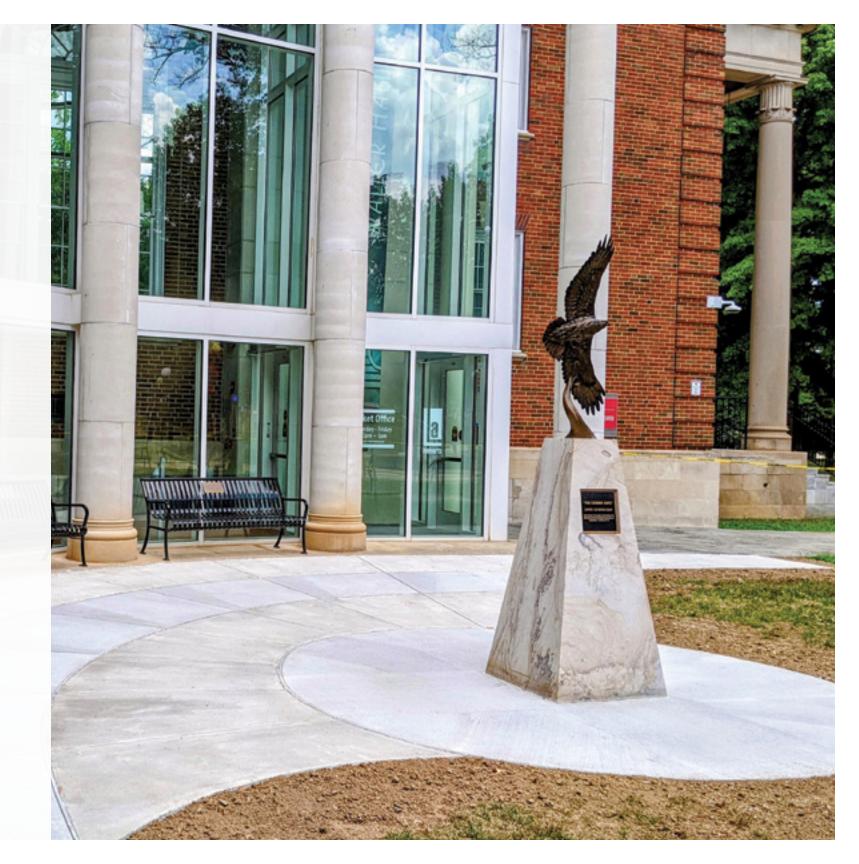
Josiah Townsend's students in BIOL 104, 116, and 201 use the arboretum during both fall and spring semesters, primarily for their first "observations of nature" labs, which consist of five sections each teaching about 24 students. His students also use the Oak Grove, south woods, and the Heritage Garden for various class projects.

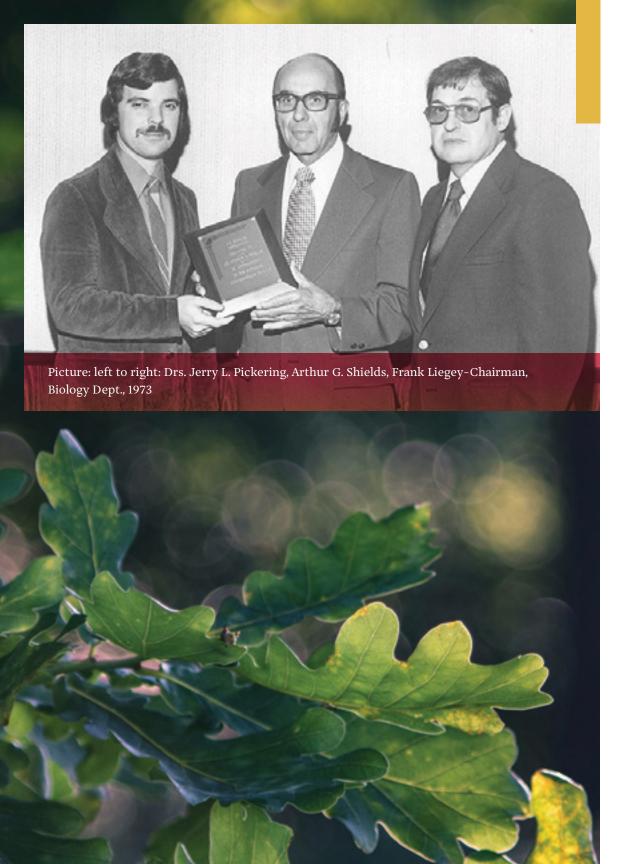
Hawk Sculpture

Raymond Kinter, '67, M'68, provided the funds to purchase a Crimson Hawk sculpture that was placed in front of the Performing Arts Buildings. The sculpture title, *Soar Like a Hawk*, reflects a positive encouragement to the students. A Crimson Hawk Statue Dedication Ceremony honoring the philanthropy of Mr. Kinter was held in April 2022. The ceremony was attended by several of Mr. Kinter's relatives.

Renowned sculptor Raymond Gibby created the bronze sculpture. Using wildlife subject matter as a medium of expression, Gibby attempts to depict aspects of human behavior and to share lessons about humanity. The IUP Facilities Department coordinated the installation of the sculpture.

It is with sadness we were informed that Raymond Kinter died in September 2022. His support of the arboretum (including his idea for the Art in the Arboretum project) and IUP is greatly appreciated. His gifts are a legacy to the university.





Dr. Arthur G. Shields Herbarium

When Jerry L. Pickering came to IUP in 1969, Arthur G. Shields was the curator of the Biology Department Herbarium. Shields received his doctorate from Penn State University with a floristic study as his thesis. The specimens were placed in a separate "Shields Collection" in the herbarium at IUP. After Shields retired in 1972, Pickering suggested the herbarium be named in his honor. In 1973, a ceremony was held to honor Shields.

Starting in the fall of 1972, Pickering became the curator of the herbarium. In 1972, Pickering's first graduate student Jack McMillen developed a computerized system and specimen ID code for his MS thesis. This enabled the creation of a specific ID number for each herbarium specimen. McMillen started entering data from the annotation slips for each of the plant specimens. After he graduated, students continued to put data into the university's system. At that time, the data was entered on tapes that were housed in the university mainframe located in Stright Hall.

About 20% of the collection was entered when the university decided to eliminate

the mainframe and tapes. As a result, all herbarium data was lost. Over the next several years, Pickering supervised student help to carry out various duties that upgraded the herbarium collection.

Over the years, many classes used the herbarium. In addition, some research and special topics projects also used the herbarium, and special collections were developed by students and faculty.

During the last eight years, Michael Tyree has been the A.G. Shields Herbarium curator. He has reestablished the Plant Biology Library and created an Herbarium Committee while supervising a full inventory of the collections. To date, the main collection and the Honduras collection consist of approximately 9,500 fully inventoried items.

Work continues inventorying the other special collections. In addition, the A.G. Shields Herbarium has become a member of the Mid-Atlantic Herbaria Consortium, an online database that makes specimen information and eventually digitized specimens available to the public. This work, along with the work to digitize the collection (i.e., creating a database of the annotation slips for all the specimens and scanning the plant specimen sheets), will bring the plant collection into the 21st century and increase its usefulness and value. Through this consortium, access to equipment will allow the herbarium to capture high-definition images of all specimens that can be uploaded to the online database.

The herbarium is moving into another exciting phase as it is being prepared to move into the new Kopchick Science Building in 2023. The new building will have a designated Natural History Museum that will house the A.G. Shields Herbarium as well as the other collections within the Biology Department. Additionally, Tyree's membership on the Allegheny Arboretum Board has catalyzed discussion and planning of creating a cooperative relationship between the A.G. Shields Herbarium and the Allegheny Arboretum. This will be an ongoing relationship that will benefit all parties, but especially students. The Arboretum Board is encouraged by the possibilities as we move forward.

Learn more on the A.G. Shields Herbarium website:
IUP.edu/biology/
herbarium/



Illustrated by Karli M. Rogers Of *Monarda didyma*, scarlet beebalm Indiana County Flower



Birds of the Confluence Discovery Park Site

More than 20 years ago, Drs. John Taylor and Thomas Lord noticed various bird species along their exercise route, which included the future site of the proposed Confluence Discovery Park at IUP. Over the past 15 years, Taylor, a retired faculty member of the IUP Geoscience Department and member of the Todd Bird Club of Indiana, has observed 125 bird species at the CDP site.

What is the explanation for such a diversity of birds in one location? One of the key reasons is the variety of habitats found at the site, which includes open meadows, mixed tree groupings along the waterways, and an intermittent pond fringed by wetlands. Willows and other trees provide nest cavities for woodpeckers of various sizes, from the small, familiar Downy Woodpecker to the raucous, flamboyant Pileated Woodpecker. Treetops serve as ideal perches from which hawks can scan the area for prey, while the lower branches host countless insects for warblers and other brightly colored insectivores to glean from the foliage. Airborne insects are no safer, as a variety of flycatchers and Cedar Waxwings sally out from perches, and half a dozen different species of swallows and Chimney Swifts glide over the water, snatching them from the air.

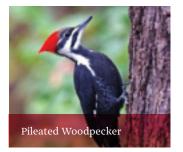
But the major attraction for birds (and birders) is the water impounded on the site to create what can be called Confluence Pond. Several species of waterfowl have nested in the CDP, including Canada Geese, Mallards, and Wood Ducks. Indeed, if you stroll around Confluence Pond in the early summer, there's a good chance you can say hello to Mother Goose (literally) as she sits on her nest. But be prepared for a less-thanwarm welcome from a protective gander.

You might also get to watch waders like herons and egrets feeding along the shoreline, admiring their graceful form and stealthy movement. You'll most likely see common resident species like the Great Blue Heron and Green Heron. But you might get lucky and encounter a rarity such as a Great Egret, American Bittern, or Black-crowned Night Heron stopping by on its way north or south during migration. The CDP site boasts the only sighting of the Yellow-crowned Night Heron on record for Indiana County.

And that's just the tip of the avian iceberg. At the peak of waterfowl migration in the spring or fall, a dizzying number of waterfowl species might be found resting on the open water. Indeed, even before substantial development, the CDP site has already acquired a

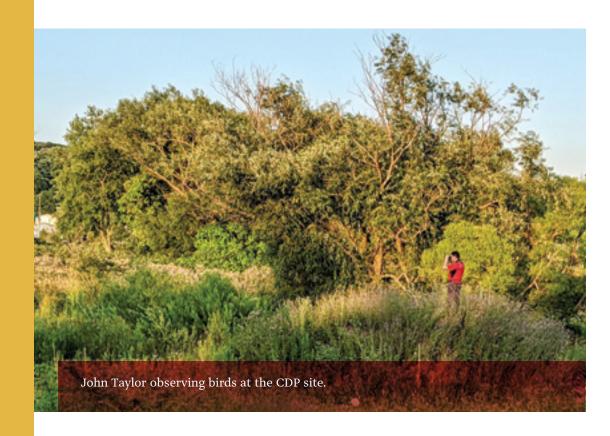






reputation as a "hot spot" with birders in the surrounding area. Its suitability for providing that valuable community service will only improve with the construction of three bird blinds proposed for the CDP and the potential addition of nest boxes designed to attract certain waterfowl, bluebirds, and other cavity-nesting species.

The value of the CDP site extends well beyond what it provides in the way of recreation. It is hard to overstate the educational value of the site, as a location for faculty and students at IUP to conduct course-related field trips and field-based research projects. Add in the scientific value of the observational data that both professional ornithologists and avocational bird enthusiasts contribute to eBird, the web-based data entry site maintained by Cornell University, and you begin to appreciate what a remarkable resource the CDP site has become, and ultimately will be. Quite a remarkable transformation.



Harvest To Use Project

The two large clusters of Katsura trees (*Cercidiphyllum japonicum*) that were removed due to the construction of Kopchick Hall have been cut into timbers and dried. Chris Weiland, former Director of the IUP Wood Center, turned a 12" platter from the Katsura wood. The distinct grain of the wood is beautifully demonstrated in the platter, and Chris described the wood as very soft and light, and a joy to work with.









Plant Selection Committee

In spring 2022, the arboretum purchased 70 seedling plants from the Tree Pittsburgh Heritage Nursery. The plants will continue to be cared for at the Twolick Valley Nursery until they are an adequate size to transplant in two to three years. Many of the plants were selected because they are difficult to obtain. Examples of this are black oak, umbrella magnolia, and spicebush.

Board Changes

Whit Watts, a retired faculty member from the Geography and Regional Planning Department at IUP and an original member of the board, left the board. His 21 years on the board were especially important in the early years when the arboretum was being established. We appreciate all his contributions to the board.

Daniel Waterhouse was replaced by Laurence Miller, Director of Facilities Maintenance and Operations at IUP.

Susanna Sink, Interim Vice President for Administration and Finance at IUP, has retired and left the board.

Budget

Balance 7/01/21	\$57,908.97
Donations	\$409,777.48
Expenditures	\$246,488.83
American Public Garden Association Dues	\$150.00
Annual Report	\$2,718.75
ARM Group Consultation Fee	\$29,034.00
Benches	8,860.00
Crimson Hawk Sculpture Dedication	\$551.75
IUP Foundation Arboretum Endowment Fund	\$200,000.00
IUP Foundation Fees	\$488.62
Plaques, Accession Tags	\$124.10
Trees	\$4,561.61
Balance 6/31/22	\$221,197.62



2022 - 2023 Proposed Activities

- Coordinate efforts with ARM Group, PADEP, the CDP Committee, and the arboretum board to implement the recommendations of the action plan developed by ARM Group based on their review of the environmental studies of the proposed CDP site.
- Continue to inform the university and Indiana community about the Confluence Discovery Park 2030 Master Plan.
- Begin discussion between the arboretum board and IUP to develop a strategy to implement an Allegheny Arboretum Management,
 Operations, and Business Plan.
- **4** Continue to carry out arboretum "basic" functions:
 - · Coordinate tree plantings and bench donations
 - Update, maintain, and mount accession tags Maintain tree accession list
 - Update, order, maintain and mount tree plaques
 - Coordinate bill payments and budget
 - · Write and supervise the publication of the annual report
 - Maintain and update the "Friends of the Arboretum" donor wall
- **5** Continue to implement the goals of the following committees.
 - Fern Hollow Committee
 - Plant Selection Committee
 - Confluence Discovery Park Committee
- **6** Continue to evaluate and revise the Allegheny Arboretum web page.
- **7** Continue to cultivate contacts with local organizations.
- 8 Continue to work with administrators, faculty, and students at IUP to promote arboretum-related projects.
- **9** Continue to implement the goals and objectives of the Allegheny Arboretum.

Allegheny Arboretum Board Members

W. Thomas Borellis

Assistant to the VP for Administration and Finance for Special Projects, IUP, retired

Marge Bucci

Indiana Garden Club

Carla Eichman

Evergreen Garden Club of Indiana

Charles Flynn

Musser Forest, retired Treasured Trees Nursery, owner

Beth Ann Harrington

Director, Wood Center Art Department, IUP

Barbara Hauge, RLA, ASLA

UpStreet Architects, Inc. Assistant Executive Director, Allegheny Arboretum Board

Laura Herrington

Executive Director, Indiana County Tourist Bureau

John Kilmarx

Associate Vice President for Academic Administration, IUP

Christina J. Koren

Corporate and Foundation Relations, University Advancement, IUP

Laurence Miller

Director of Facilities Maintenance and Operations, IUP

Jerry L. Pickering

Executive Director, Allegheny Arboretum Board Biology Department, IUP, retired

Robert Pollock

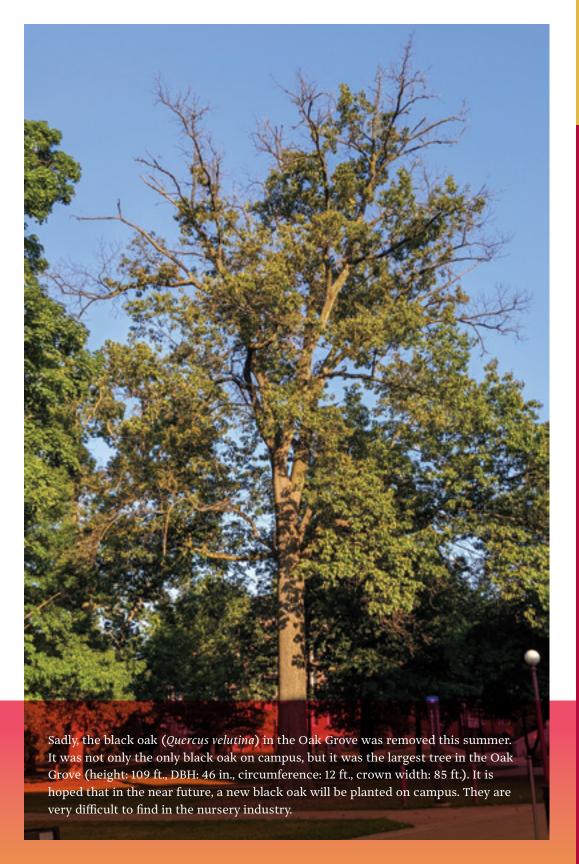
Penn State Cooperative Extension

Holly Travis

Biology Department, IUP

Michael Tyree

Biology Department, IUP



Friends of the Arboretum

Caroline Anderson

Anonymous (2)

Frank Baker

Royce Billings and Marylou Billings

Faye Bradwick and Donald Lancaster

Kathy Vargo Cauthen '79

Michael Charnego '65, M'67 and Sheila Johnston Charnego '67

Thomas Clemente '85 and Shirley Sato

George Evans and Karen Evans

Michelle Fryling and Calvin Fryling

John Geisler '93 and Jamie Hetrick Geisler '91. M'92

Timothy Hayes '82 and Ellen Kelsesky Hayes '82

John Kilmarx and Beth Kilmarx

Raymond Kinter '67, M'68*

R Craig Martin '72 and Margaret Kremer

Pat Mazanek '73, M'82 and Patti Shannahan Mazanek '74, M'86 Jack McMillen '75, M'79

Darla Mechling and William Mechling*

Mary Ordakowski Morgan '91 and Scott Morgan

Tonya Patterson

Susan Pickering '85, M'89 and

Jerry Pickering

Robert Sechrist and Gail Sechrist

Brian Sell '05 and Stephanie Sell '10, M'19

Wesley Semple M'69 and Susan Semple

Daniel Shively and Joanne Shively

Vanessa Tolino '94

Holly Travis M'03, D'07

Audrey Vargo

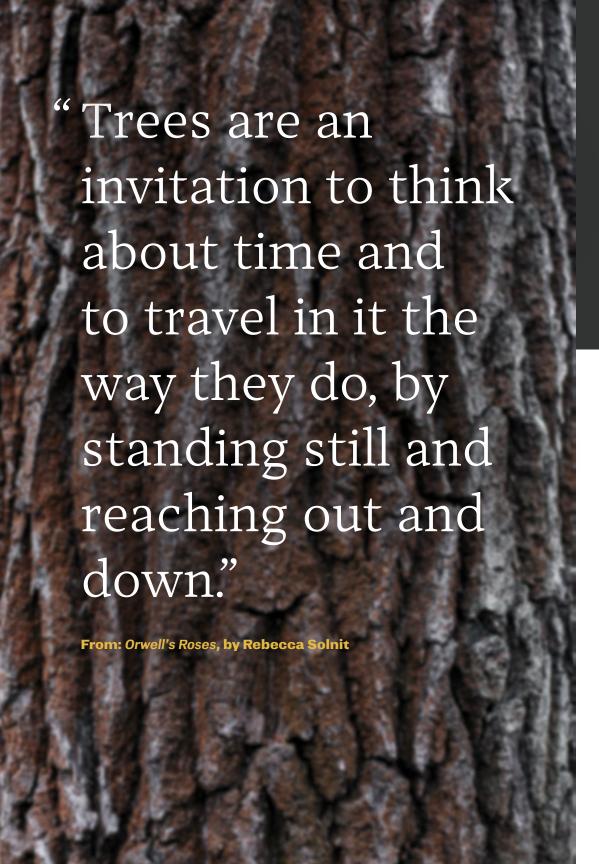
Joseph Vargo and Rachel Vargo

Sandra Whitson

Transverse Park Productions LLC

*Deceased





With Your Support... The Allegheny Arboretum at IUP continues to grow, but additional funding is needed in order to continue the efforts of the arboretum. Operating solely through private funding, the Allegheny Arboretum is grateful for the continued support of individuals, businesses, organizations, and foundations.

Since January 2000, the arboretum has planted, nurtured, and developed green spaces on the IUP campus. The restoration and revitalization of the Oak Grove; planting of trees and placing of benches in recognition of friends, family, and loved ones; creation of new niche gardens; and so many other developments have been accomplished through the efforts of everyone involved with the Allegheny Arboretum at IUP.

Your gift makes a difference. Each tree, each garden, each bench leaves a legacy of memories for students, families, friends, and the Indiana community. To make your gift, complete the form below, visit IUP.edu/giveagift, or call the Office of Annual Giving at 724-357-5555.

NAME		
ADDRESS		
CITY	STATE	ZIP
PHONE		
EMAIL		
8-Digit ID # from Arboretum Annual Report	mailing label @	
Please accept my gift to the Foundation for	r IUP and designate it to	
Project of greatest need Project o	of my choice	
Please charge my gift of \$to my	1	
☐ VISA ☐ MASTERCARD ☐ AMERICAN E	XPRESS DISCOVER	
CARD#	EXPIRATION DATE	CVV CODE
SIGNATURE		
Or, I would like to make a pledge of \$	and have reminders s	ent
1 2 3 4 consecutive mo	onths	
Visit IUP.edu/giveagift to make a one-time	or recurring gift online.	
Or, please make checks payable to the Four Sutton Hall, Room G1, 1011 South Drive, Inc		Foundation for IUP,

Does your employer, spouse's employer, or former employer (for retirees) match contributions to higher education? Visit IUP.edu/supportiup/waystogive to see if you can double the impact of your gift by including a matching gift form from your employer.



The Foundation for IUP is a 501(c)(3) organization; gifts to the foundation are tax deductible as per IRS regulations. The official registration and financial information of the Foundation for Indiana University of Pennsylvania may be obtained from the Pennsylvania Department of State by calling toll-free, within Pennsylvania, 800-732-0999. For calls that originate outside of Pennsylvania, the telephone number is 717-783-1720. Registration does not imply endorsement.



NON-PROFIT ORG. U.S. POSTAGE PAID PERMIT NO. 198 INDIANA, PA 15701

Allegheny Arboretum at IUP Robertshaw Building 650 South 13th St. Indiana, PA 15705-1087

This report summarizes the activities of the Allegheny Arboretum Board from July 1, 2021 through June 30, 2022, and presents some projects the board will pursue in the coming year.