

## **Revealing IU's Earliest Cultural Landscapes through Heritage Archaeology\***

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The Glenn A. Black Laboratory of Archaeology (GBL) and Wylie House Museum (WHM) propose a collaborative investigation into the cultural landscape of IU's early history, centering on the home site of IU's first president, Andrew Wylie. The larger project explores the development of academic culture and scientific philosophy in Bloomington through the work of Andrew and Theophilus Wylie both on the old campus and at the home they successively occupied on Second Street. A principal goal of this project is to bring archaeology and historic research to bear on understanding the social and cultural impact that IU had on Bloomington, Monroe County, and Indiana. The project focuses on the residents of the Wylie House, their daily lives, and their contributions to the development of Bloomington as both an agricultural and academic community.

### *Bloomington Blooms: Farming, Science, and Domesticity in a University Town*

Andrew Wylie, as an immigrant to Bloomington from Pennsylvania in 1829, settled into a seminary presidency on the expanding western frontier. By the time his family moved into the newly built Wylie House in 1835, Indiana had been a state for 19 years, the Blackhawk War was recent to the West, and Indian removal was still occurring to the north. More and more settlers entered the southern part of the state from Kentucky and points east to build a better life by clearing vacated Indian land for farming, building mills on spring-fed waterways, and engaging in commerce (Madison 1986). The state was looking to expand its connections to east and west through public infrastructure projects such as roads and canals. Bloomington was a small town of around 700 people (Bowen & Co. 1914). The Wylie family, although well educated, would also have established an active farm just like any settler, to meet daily needs. Andrew Wylie acquired 25 acres for growing plants, husbanding livestock, and for accommodating the many activities that small-scale farming involved.

Bloomington's growth diverged from many settlement period county seats precisely because the seminary brought a theological and academic focus to the town. With the university, and its professors such as Andrew and his half-cousin Theophilus Wylie, Bloomington developed as a seat of learning, adding to the centers established previously at Vincennes University, founded in 1801, and New Harmony, which in the 1820s attracted naturalists and intellectuals to Richard Owen's socialist experiment on the Wabash River. This would have been an exciting time.

Wylie House owners Andrew and then Theophilus Wylie provided, with their grand federal-style home in close proximity to the seminary campus, a social center for Bloomington. Both Andrew and Theophilus, as gentleman farmers, combined 19th century sensibilities and aesthetics with attention to natural science and philosophy to create domestic spaces. They would have likely socialized with other nearby resident farmers including the Dunn and the Legg families, among others.

Eventually, town growth reduced farming activities within Bloomington, and larger scale farming moved to the periphery. In-town farms shrank, giving way to more leisurely gardening to augment food sources. Bloomington's cachet is captured in its name, evoking a sense of flowering plants. Overwintering plants would have been a way to maintain landscape or medicinal plants' longevity. It remains unclear what role decorative plants may have played in the mid-1800s, and although we know that flowers and herbs may have been part of frontier medicine, little is known about practices specific to Bloomington. Cold frames built into the front lawn of Wylie House offer a glimpse into how plant propagating activities were linked to everyday life in an academically focused household. While the Wylie House itself has been preserved and restored, the cultural landscape surrounding the house today would be unrecognizable to Wylie. Now surrounded by a residential neighborhood, the original Wylie farm is greatly reduced and devoid of original outbuildings and other features. Archaeological work at Wylie House stands to add significantly to the documentation of IU's oldest property.

A focus on how the Wylies used plants, and how plant use changed in response to larger scale agriculture will reveal how broader economic forces at work might have affected the Wylie families. It is known that Theophilus Wylie's wife and daughter maintained plantings around their home. In particular, activities related to the family's gardening practices, including using the cold frames to mitigate winter temperatures is significant in the perpetuation of Bloomington's identity, and will add to general interpretive efforts at the Wylie House. Also, research into particular plant varieties informs on and supports current WHM historic gardening programs.

We can also consider the sustainability of small-scale 19<sup>th</sup> century farming as a model for the future, as residential garden plots, local organic farms, and limited domestic animals such as chickens return to Bloomington today.

### *Project Timeliness*

Every historic home resides on an archaeological site and Wylie House (Indiana site number 12Mo1310) is no exception. No archaeological research projects in Monroe County to date have included substantial excavation at a historical site as early as the Wylie House, or explored the lifeways of Bloomington's university faculty or early residents. Other farmstead archaeology in the broader region includes work done at the rural industrial settlement at Spring Mill State Park (Sievert and Pope 2011), Lincoln Boyhood Home State Park (Peterson, et al. 2011), as well work in Illinois (Mazrim 2007). There is still ample room for exploring a critical period in Indiana's history through the lens of the Wylie House and family. Because the house is the oldest in Bloomington, it will allow a look into the archaeological record of Bloomington in the first half of the 19<sup>th</sup> century when residents used external spaces for outdoor activities including cooking, gardening, tending animals, and storage both in the open air and outbuildings. The Wylie farm landscape accommodated a barn, laundry, carriage house, ice house, well, and other structures. While these structures no longer stand, archaeological traces undoubtedly remain. Much of the Wylie property in the vicinity of the house has been minimally disturbed, and so provides excellent possibilities for the recovery of early materials in their original context. IU Bloomington has never had an archaeological survey, let alone an excavation to reveal the important historic resources associated with campus. Furthermore, an archaeological

investigation will teach about the process that turned Bloomington's hilly terrain into terraced streetscapes during construction episodes spanning the past 200 years.

IU lost an opportunity to explore the property archaeologically in 2009 when, during construction of the Morton C. Bradley Educational Center, an intact buried foundation and well-preserved deposit of archaeological materials was uncovered at a depth of probably over two meters. At that time, neither campus archaeologists nor local or state historic preservation staff were notified and the feature was demolished. WHM staff member Sharon Wise rescued some artifacts and took some photographs, now the only primary source of information about this discovery. A find such as this would have greatly expanded understanding of the property and its history, as well as the history of the Wylie family. This buried structure may have represented foundations of the original carriage house and the objects recovered, because of their excellent preservation, may have been in a storage cellar. The loss was as tragic as if a fire had destroyed some of Andrew Wylie's papers, and underscores the need for awareness of, literally, the depth of IU's history.

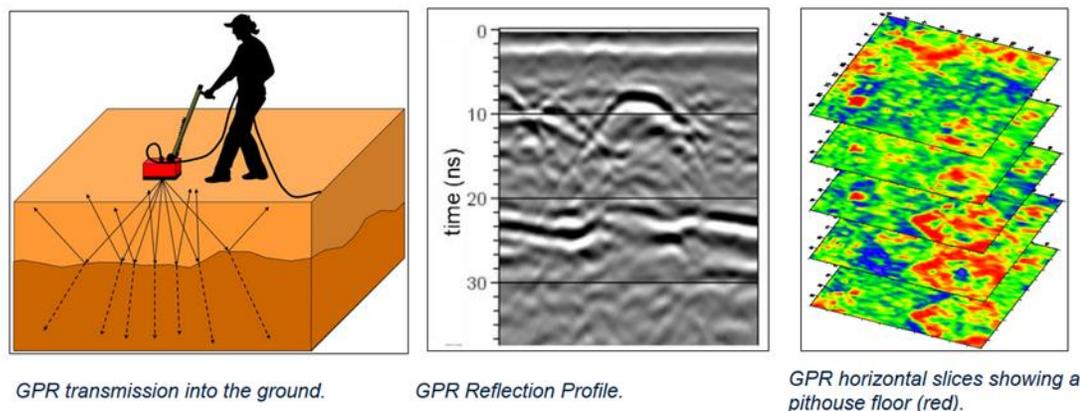
Archaeological work can be possibly the most public of all endeavors of discovery in which the university engages. A single researcher may make a discovery in a box of documents, or a team may work together in a laboratory, but the WHM project will constitute an outdoor public laboratory for any and all to see. This activity pulls the research mission of the university into the open, providing a powerful way to demonstrate the university's work to a diverse public. Work at the WHM will strengthen the academic mission of the museum by cultivating a place-based, experiential learning program to serve as a model for future on-site courses. The work will demonstrate integration of unique campus assets—historic sites and special collections—with course curricular goals. This integration can increase documentation, stewardship and preservation as multiple IU units combine forces toward that purpose. The Wylie House project shows the potential for archaeologists and students to work with other units to locate and record archaeological sites on campus, thereby contributing to the campus survey of historic sites and structures, as mandated by state preservation statute (Indiana Code §14-21-1-18d).

### *Archaeological research plan*

Historical archaeology makes ample use of documentary sources, so initial work will be heavily weighted toward gathering archival evidence of the Wylie property to guide archaeological fieldwork and interpretation. Building on documentary evidence, we will create a geospatial database and comprehensive map of the Wylie House property during the fall of 2017 and spring of 2018. GIS equipment (including the GBL's *total station* and handheld GPS) will be used to create base maps that will serve as the foundation upon which new layers of geospatial information will be compiled throughout each phase of the project, including the results of remote sensing, testing, and excavation. In addition to mapping the property, GIS systems provide a preliminary step in laying out survey grids in preparation for remote sensing.

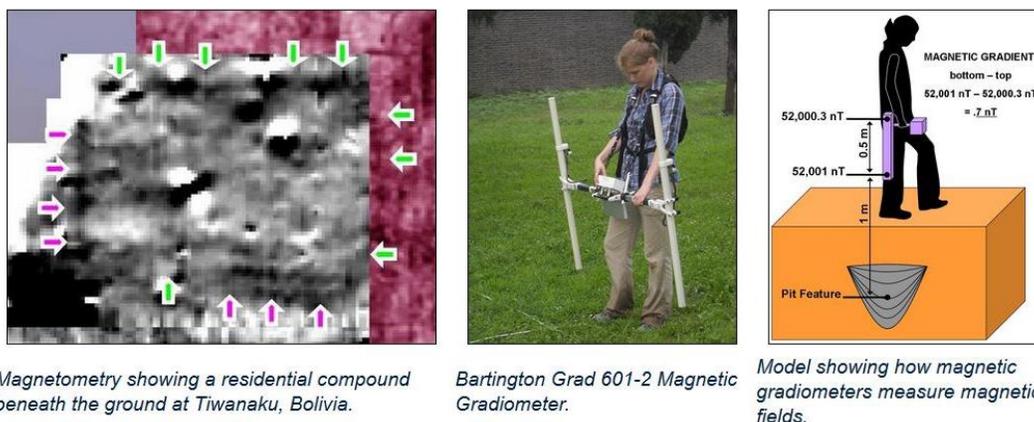
Advances in remote sensing techniques allow archaeologists to successfully detect and record subsurface archaeological features and materials through non-invasive surface surveys. The first method proposed here, *ground-penetrating radar* (GPR), distributes radio waves into the ground

and measures the intensity of subsurface radar reflections leading to the detection of both natural and cultural strata. Discontinuities in the natural horizons may represent buried archaeological features or historic disturbances such as foundations, other structural architecture, privies, and refuse pits. GPR data is collected in vertical reflection profiles which are then stacked and sliced horizontally to create composite plan images at different depths (see figure below). GPR is well-suited for historic-era remote sensing and will provide a nuanced representation of subsurface archaeological deposits and features.



(Image Courtesy of Eileen Ernenwein <http://faculty.etsu.edu/ernenwei/Research.aspx>)

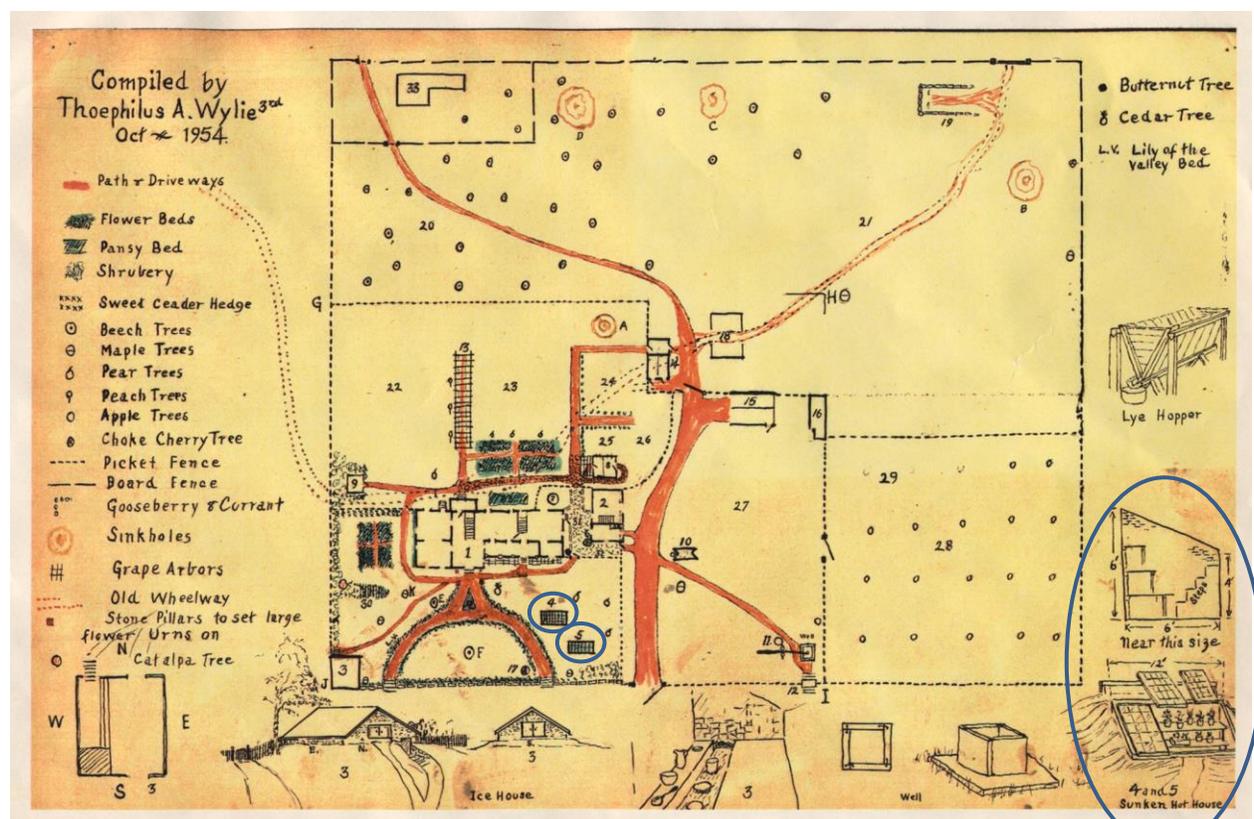
A complementary remote sensing method, *magnetic gradiometry*, detects variations in the earth's magnetic fields affected by subsurface soils and artifacts that may indicate archaeological features. The magnetic signature of cultural disturbances differs from the signature of undisturbed natural strata; buried archaeological features, historic disturbances, and iron-metal artifacts produce a strong positive signature that are visualized as black or dark grey anomalies in the resulting data image. Because of sensitivity to iron rich objects and features, magnetometry surveys aren't always optimal for historic-era sites. However, testing the use of magnetometry at Wylie House will provide a useful basis for comparison with GPR and will provide insights for future remote sensing at Seminary Square and locating the IU Centennial time-capsule in Phase Two of our proposed project.



(Image Courtesy of Eileen Ernenwein <http://faculty.etsu.edu/ernenwei/Research.aspx>)

During the spring of 2018, we will partner with IU geoarchaeologists to assist with a GPR survey of portions of the Wylie House property. Using a GPR data collector, a series of six 20 meter by 20 meter grids will be walked in one meter intervals. Then, using a Bardinton Dual-Fluxgate Grad-901 Gradiometer data collector, a series of eight 20 meter by 20 meter grids will be walked in one meter intervals. Based on local historic records, Wylie House archives, and previous disturbance from construction, we anticipate that the results of GPR and magnetometry will reveal subsurface anomalies that correspond to remnants of the Wylie House cold frames structures as well as any number of previously unrecorded or unidentified historical structures and features.

To understand 19th century attitudes about floricultural practices and landscape design that gave Bloomington its special character better, fieldwork will initially focus on the Wylie House through locating and excavating the two subterranean cold frame greenhouses used by the family of Theophilus Wylie to overwinter flowers and possibly other plants. Theophilus A. Wylie III, grandson of Theophilus Wylie, created a map of the Wylie House property in 1954 that detailed the location and dimensions of the "sunken hot houses" (see circled features and sketches on map below). Each 'hot house' was recorded with dimensions of approximate 3.66 meters by 1.83 meters and depth ranging from 1.22-1.83 meters.



**KEY TO MEMORY MAP OF WYLIE PROPERTY**

- |                        |                |                    |                              |                      |                       |
|------------------------|----------------|--------------------|------------------------------|----------------------|-----------------------|
| 1. House               | 6. Rain barrel | 11. Watering tub   | 17. Sun dial                 | 23. Vegetable garden | 29. Sweet corn        |
| 2. Utility building    | 7. Cistern     | 12. Stile          | 18. Foundation of first barn | 24. Herbs/vegetables | 30. Rock garden       |
| 3. Ice house           | 8. Outhouse    | 13. Grape arbor    | 19. Cattle well              | 25. Asparagus bed    | 31. Flagstone yard    |
| 4. Hothouse/cold frame | 9. Smoke house | 14. Barn           | 20. Beech tree grove         | 26. Berry patch      | 32. Repotting benches |
| 5. Hothouse/cold frame | 10. Lye hopper | 15. Carriage house | 21. Pasture                  | 27. Chicken run      | 33. Small house       |
|                        |                | 16. Chicken house  | 22. Corn                     | 28. Orchard          |                       |

Based on the results of the remote sensing at Wylie House, excavations will begin with a series of three, one meter by one meter excavation units along the eastern edge of 'hot houses #5' in order to ground-truth the location and size of the feature. Additional one meter by one meter units will then be excavated to expose the feature in horizontal plan and vertical profiles. Per standard archaeological excavation methods, units will be excavated in 10 centimeter arbitrary levels, until natural and cultural levels are determined. All soil will be screened through ¼" mesh, all artifacts will be collected, and bricks, stone, and masonry architectural elements will be thoroughly photographed and mapped before disturbance or removal. Materials collected will be processed, analyzed, and curated by the GBL and the WHM, and will be integrated into WHM collections.

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