

# LANDMARKS

PUBLICATION OF THE WORMSLOE INSTITUTE FOR ENVIRONMENTAL HISTORY



VOLUME I | NUMBER III

# LANDMARKS

PUBLICATION OF THE WORMSLOE INSTITUTE FOR ENVIRONMENTAL HISTORY

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VOLUME I | NUMBER III

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LANDMARKS is published biannually  
by The Wormsloe Institute for  
Environmental History.

Featured on the cover of this issue of *Landmarks* is a botanical print of *Morus alba*, the white mulberry tree. Those who are familiar with the history of Wormsloe will recognize the white mulberry as central to Noble Jones' vision of a thriving coastal plantation. Although the white mulberry was ill-suited to Savannah's climate and dreams of a silk-plantation at Wormsloe were abandoned, white mulberry trees can be found throughout Wormsloe's forests today.

The white mulberry at Wormsloe reminds us that the past follows us into the future, often leaving physical remnants that are left to be interpreted by following generations. Today's scholars are tasked with studying our historical relationship with the natural world, giving us the opportunity to learn from the past to become better stewards of our future. This ideal makes up the core of the field of environmental history: the study of humans and nature, and the interaction between the two over time.

As an organization grounded in environmental history, the Wormsloe Institute is proud to support multidisciplinary research that provides insight into the human relationship with the Wormsloe landscape. Projects spanning archaeological investigations to species-specific studies build on a robust foundation of research, helping us to identify the strengths and weaknesses of Wormsloe's past in order to optimally plan for its future resilience, and ultimately its preservation - which is the mission of the Wormsloe Institute. You'll find details of some of the exciting projects that the Wormsloe Institute is supporting in the pages ahead.

First, UGA-CREW Director, Mary Socci, welcomes two new Wormsloe Fellows, Diane Klement and Daniel Gilley, relays intriguing updates from Wormsloe's Motus tower, and delivers news of the campus' bustling summertime activity.

The colorful painted bunting (*Passerina ciris*), a declining migratory songbird found in high numbers at Wormsloe, is the subject of Diane Klement's research highlighted on page four. By studying the painted bunting's life cycle, Diane hopes to discover how to bolster conservation planning efforts. Wormsloe's optimal location and precedence of pollinator-based research will assist Daniel Gilley as he studies the yellow-legged hornet (*Vespa velutina*), an invasive pest currently targeting pollinators in the United States. On page six, Daniel outlines his research and goals: to better protect our pollinators by understanding the hornet's adaptive strategies.

University of Georgia graduate student Aiyana Thomas provides a terrific recap of the four week Enfulletv-Moevse in Archaeology Field School on page eight. The field school, hosted at UGA-CREW, gave undergraduate students hands-on experience with archaeological technical skills in the field and lab, and resulted in exciting new discoveries of Wormsloe's buried history.

On Page twelve we continue our Wormsloe Fellows Spotlight with Dr. Drew Swanson, one of the inaugural Wormsloe Fellows (2008-2010). Dr. Swanson writes of his experience researching and documenting the environmental history of Wormsloe and how his fellowship helped to shape his career as an influential environmental historian.

Read more about the history of the white mulberry at Wormsloe from Lydia Moore on page twenty. Lydia also shares research updates from the Wormsloe Institute's Bat Ecology Initiative (WIBEI) on page twenty-two, which is followed by letters from the WIEH's first summer interns, Sydney Mosley and Macy Hills, on page twenty-six.

The mission of the Wormsloe Institute is to *preserve Wormsloe in its entirety*. By promoting the study of Wormsloe's environmental history through robust multidisciplinary areas of research, we are one step closer to achieving this mission. I hope that you are delighted with this issue.

Sincerely,  
Keeli M. W. Knight  
President, The Wormsloe Institute for Environmental History





THIS PAGE: Sunrise over  
Wormsloe's Long Island.  
*Photograph by Craig Barrow.*

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# Dear Friends,

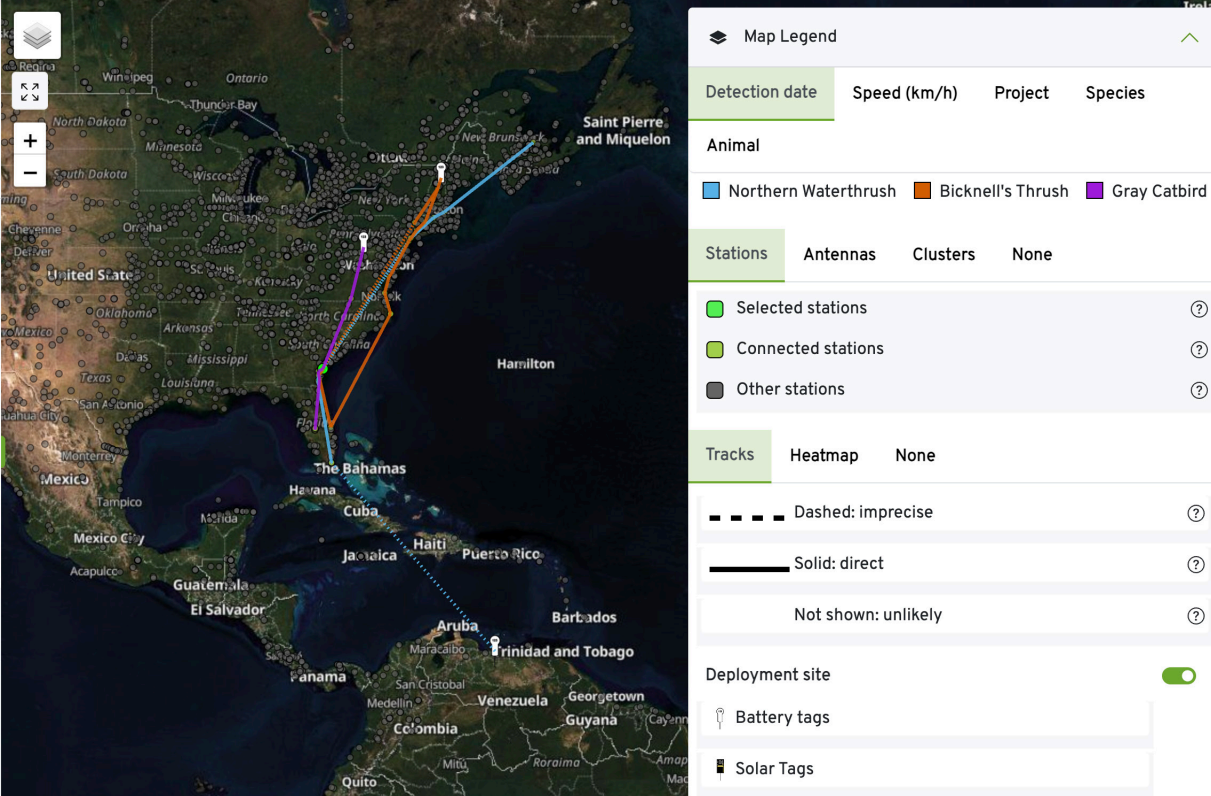
I am delighted to welcome two new Wormsloe Fellows to the Center for Research and Education at Wormsloe (CREW). Diane Klement and Daniel Gilley have been awarded this prestigious, three-year fellowship which includes a tuition waiver by the University of Georgia Graduate School and an annual stipend funded by the Wormsloe Foundation and the Graduate School. In this issue of *Landmarks*, Diane and Daniel share their research interests and objectives. After reading their contributions, I believe you will see why they stood out in a highly competitive pool of applicants. I look forward to watching their studies unfold.

The University of Georgia's 2025 Enfulletv-Mocvse in Archaeology Field School, whose name means "new ways of doing" in Muskogean, spent four weeks at CREW in May and June. The name is especially fitting this year, as this was the first time the field school was based at CREW. Students gained hands-on experience in excavation and laboratory methods, applying their skills to investigate a shell midden eroding into the marsh at the Wormsloe State Historic Site. They also had the opportunity to showcase their newly acquired expertise during the Public Archaeology Day hosted by the state park.

RIGHT: UGA-CREW director Mary Socci and WIEH ecologist Lydia Moore at the Public Archaeology Day.  
*Photograph by Craig Barrow.*



LEFT: The UGA-CREW and Georgia DNR informational tables setup for the 2025 Public Archaeology Day at the Wormsloe State Historic Site, with the tabby ruins in the background. *Photograph by Craig Barrow.*



LEFT: Flight paths of birds detected by the Motus Wildlife Tracking System (Motus) tower at Wormsloe. Screen-captured from [www.motus.org](http://www.motus.org), November 3, 2025.

There are some exciting updates from the Motus tower that connects Wormsloe to a global network of radio receivers. The tower was installed on the roof of the Barrows' residence in January, and it picked up the signal of its first bird in May. A Bicknell's thrush (*Catharus bicknelli*) tagged in July 2024 in Quebec passed by Wormsloe on May 8 on its way north after wintering in the Caribbean. Sixteen days later, a northern waterthrush (*Parkesia noveboracensis*) tagged in Venezuela flew by Wormsloe on its way to its breeding grounds on Prince Edward Island, Canada. After a quiet summer, the first fall migrant, a gray catbird (*Dumetella carolinensis*), was within range of Wormsloe's tower on September 24. This bird was tagged in Pennsylvania and was last detected there four days before arriving at Wormsloe. The next few weeks should reveal its winter destination. Biologists around the world, including at the University of Georgia, rely on data like these to deepen our understanding of bird migration and ecology. (You too can follow the birds detected by Wormsloe's tower at <https://motus.org>.)

If you are in the area and would like to see how your generous support of the Wormsloe Institute is helping both emerging and established researchers discover new insights into the natural and cultural environment, please let me know. I would be happy to share more about the important work that is happening at CREW.

Warm regards,  
Mary Socci  
Director, Center for Research and Education at Wormsloe

RIGHT: Field School students Mallory Stratton and Morgan Barlett measuring the depth of an excavation unit. Photograph by Victor Thompson and Faith Macdonald.



# MEET DIANE



THIS PAGE: Recording bird banding data and measurements for a painted bunting on Little Saint Simons Island, Georgia. *Photograph by UGA Marine Extension and Georgia Sea Grant.*

# KLEMENT, *WORMSLOE FELLOW*

Diane Klement, a native of Augusta, is working on her PhD in Wildlife Science at UGA's Warnell School of Forestry and Natural Resources, after earning both her bachelor's and master's degrees from UGA. She has held positions on Georgia's coast as a bird technician on Little Saint Simons Island and as a marine education fellow with UGA Marine Extension and Georgia Sea Grant, inspiring her to continue her graduate training in the region.

Diane visited Wormsloe with her family as a kid, learning more about the rich natural and cultural history of the site, but she was first exposed to the research occurring at Wormsloe after meeting the Barrows on Little Saint Simons Island. Wormsloe's storied legacy of supporting southeastern naturalists, wonderful community, diverse ecosystems, and research drew her to study at the site.

RIGHT: A female painted bunting in the Laura Barrow McIntosh Memorial Garden at Wormsloe.  
*Photograph by Jackie Quinones.*



RIGHT: Diane inspecting the feathers of a male painted bunting.  
*Photograph by Sonja Brandt.*



At Wormsloe and on nearby Little Saint Simons Island, Klement plans to study poorly understood factors in the life cycle of the painted bunting (*Passerina ciris*), a declining migratory songbird. She is working under the direction of Dr. Clark Rushing, associate professor of wildlife, to examine the buntings' diet, space use, and migratory phenology during the post-breeding season. The post-breeding period, after birds raise young but before they migrate, is poorly understood for most songbird species; however, birds can often rely on different plant communities and food during this period opposed to the breeding period. Wormsloe has a high abundance of painted buntings, and understanding where these birds spend time after the breeding season can help with conservation planning efforts for the declining species.

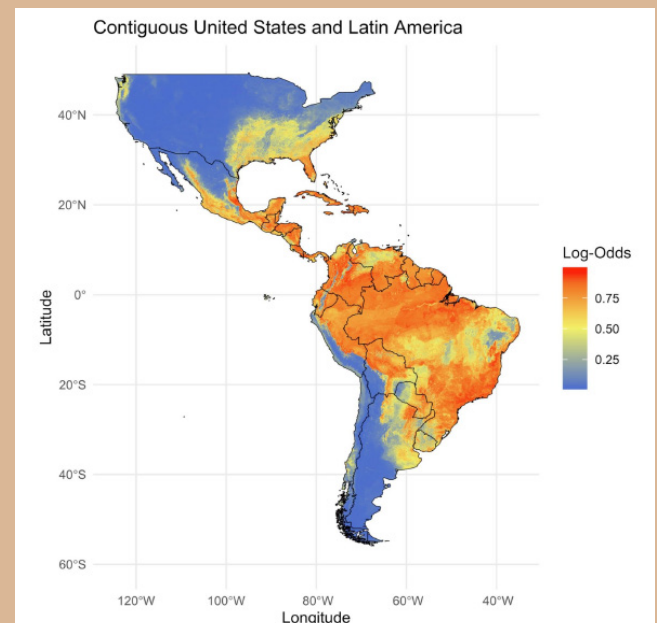
After graduation, Diane plans to continue working in migratory bird conservation in the southeastern U.S., helping to protect vulnerable landscapes for future generations.

# IT TAKES A VILLAGE

## *A Coordinated Effort to Combat the Invasive Yellow-Legged Hornet*

BY DANIEL GILLEY  
Wormsloe Fellow

In August 2023 the first yellow-legged hornet (YLH), *Vespa velutina*, sighting in the Americas was confirmed in Savannah, Georgia. This invasive hornet preys upon a variety of species to feed its carnivorous larvae, including the Asian honeybee, *Apis cerana*, in its native range as well as the European honeybee, *Apis mellifera*, which is the most prominent honeybee in the United States. It utilizes a hawking method to track the flight patterns of honeybees back to their home apiary and intercepts them outside the hive. This successful hunting strategy leads to a decrease of honeybee foraging, loss of worker bees, and ultimately results in colony collapse. The YLH's invasion began in countries near its home range of Asia, and has been expanding west through Europe, resulting in tens of millions of dollars in losses to agriculture and apiaries. This invasion through Europe has resulted in as much as a thirty percent reduction in honeybee hives.



ABOVE: Species Distribution Model / Maximum Invasion Extent forecast of the yellow-legged hornet prepared by Bartlett Lab for the contiguous US and Latin America.

RIGHT, BOTTOM: Yellow-legged hornet adult, larvae, and fecal samples stored in the University of Georgia Honeybee Lab for future work. Courtesy of Daniel Gilley.

To protect our local pollinators, mitigation efforts, including bait traps and nest removal, across multiple divisions have been put in place to combat the YLH in the Savannah area, including at Wormsloe. Thanks to a combination of an advantageous location and established pollinator infrastructure, Wormsloe is in a unique position to be the center for research on YLH in the Americas. Being at the epicenter of the invasion provides a one-of-a-kind opportunity for research on the genetics and evolution of the YLH to be based out of Wormsloe. Broad scale goals of research include understanding invasion dynamics and determining diet composition of the YLH. CREW has already been incredibly important in storage and sample collection of the YLH.



ABOVE: Yellow-legged hornet nest. *Courtesy of the Georgia Department of Agriculture.*



LEFT: Yellow-legged hornet nest extermination efforts. *Courtesy of the Georgia Department of Agriculture.*

Methods established and utilized by UGA researcher Anna Willoughby through CREW have already resulted in thousands of samples, now stored at the UGA Honeybee Lab, for these research goals. Additionally, thanks to the Wormsloe Foundation, I now have funding and a base of operations to help in conducting my dissertation research on the diet of the YLH as well as additional research on honeybee foraging. With important coordination between Wormsloe, the UGA Honeybee Lab, and the Georgia Department of Agriculture, we hope to understand and mitigate the threat of the yellow-legged hornet to our honeybee and native pollinator populations in the Southeast.



Daniel Gilley

# NEW WAYS OF DOING

BY AIYANA THOMAS

*University of Georgia Graduate Student*

*This summer, under the direction of Dr. Carey Garland (Department of Anthropology), the University of Georgia's Laboratory of Archaeology conducted their first archaeological field season at the Wormsloe Historic Site (hereinafter referred to as Wormsloe) to investigate the rich history of the historic site.*

The Enfulletv-Mocvse in Archaeology Field School (Muskogean for “new ways of doing”) is a collaborative project involving the Department of Anthropology, the Center for Research and Education at Wormsloe (CREW) and the Muscogee (Creek) Nation, that provides undergraduate students with the opportunity to gain hands-on experience in proper methods in archaeological field and lab work.

In addition to gaining hands-on experience, students contribute to the preservation of one of the many cultural sites on the coast that are endangered by increased storms and sea level rise.

Wormsloe is particularly intriguing to archaeologists because of its unique environmental and cultural landscape, which has been modified by various communities throughout history. The ancestors of the Muscogee (Creek) Nation, enslaved African Americans, Civil War soldiers, and the Jones DeRenne family have all contributed to a diverse cultural assemblage of prime for asking questions on topics like environmental change, resource management, community building, and ceramic exchange on the Georgia coast.



**2025 Enfulletv-Mocvse in Archaeology Field School  
UGA Center for Research and Education at Wormsloe  
Wormsloe Historic Site**

LEFT: The members of the 2025 Enfulletv-Mocvse in Archaeology Field School at the University of Georgia Experiential Learning Center. Courtesy of The UGA Laboratory of Archaeology.



ABOVE: Dr. Ted Gragson (Department of Anthropology) and UGA undergraduate students perform a Ground Penetrating Radar demonstration at the tabby fort for Public Archaeology Day. *Photograph by Kristine Schenk.*

During field work, students learned an array of archaeological skills, including excavation and survey methods, plotting stratigraphy of excavation units, mapping shovel tests in ArcGIS, and artifact documentation. A variety of Indigenous cultural materials were recovered during excavations along the marsh, including Deptford Check Stamped, Irene Complicated Stamped, and Altamaha ceramics, dating the site to the Early Woodland (1200-300 BCE) through early Historic (17th century) periods.

Additionally, processed deer bones and a small quantity of chert were present. These artifacts coincided with dense oyster shell and periwinkle snails within midden deposits, suggesting this area of Wormsloe may have been a shellfish processing site or seasonally occupied residence. All analyses of cultural materials were conducted under the guidance of Dr. Amanda Roberts Thompson (Department of Anthropology) and Dr. Victor Thompson (Department of Anthropology).



LEFT: UGA undergraduate students clean the walls of an excavation unit at Wormsloe. *Photograph by Faith Macdonald.*

RIGHT, TOP: UGA graduate students (Department of Anthropology) conduct a shovel test near the tabby fort for Public Archaeology Day. *Photograph by Jay Boyd.*

RIGHT, BOTTOM: UGA undergraduate students screen soil from a shovel test. *Photograph by Faith Macdonald.*

In addition to excavation and artifact analysis, students had the opportunity to explore Wormsloe's landscape using Light Detection and Ranging (LiDAR) and Ground Penetrating Radar (GPR). Dr. Matt Howland of Wichita State instructed students on techniques for flying a LiDAR drone, which provided an aerial view of the complex marsh system at Wormsloe. Dr. Garland and graduate students from UGA's Department of Anthropology assisted the undergraduates in conducting a GPR survey behind a cabin historically occupied by formerly enslaved African Americans, revealing a structure resembling a privy.

Later in the field season students applied their new skill sets during Public Archaeology Day at Wormsloe, engaging visitors through demonstrations on GPR led by Dr. Ted Gragson (Department of Anthropology), shovel test surveys, and artifact identification using 3D printed models. The University of Georgia's Laboratory of Archaeology plans to continue investigations the summer of 2026 and looks forward to uncovering more of Wormsloe's rich cultural heritage and history.



# CONSERVING THE COASTAL PAST AND

BY DREW SWANSON  
*Georgia Southern University*

A sepia-toned photograph of a person in a hat standing in a small boat on a body of water, surrounded by other boats and reeds. The person is wearing a dark coat and a hat, and is holding a long pole. The water is calm, and there are some small islands or peninsulas in the background. The overall tone is historical and serene.

# D PRESENT



*I first learned about Wormsloe as a graduate student in the History Department at the University of Georgia (UGA). Paul Sutter, my dissertation advisor, told me about a new fellowship opportunity in environmental history and I jumped at the opportunity; envisioning not just a way to help pay for school but also days spent on the banks of the tidal marsh. What could be better?*

Alongside archeology student Jessica Cook-Hale, I became one of the inaugural Wormsloe Fellows. Jessica conducted surveys on site, I pieced together historical records preserved in the archives, and together we worked on creating a detailed account of how the landscape had changed over the last quarter millennium. Sadly, it turned out most of the records I needed to complete my work were located in the UGA library's Hargrett Special Collections, located just up the hill from my Athens office! But I did visit Wormsloe on numerous occasions and grew to love its human and natural histories.

Few experiences have shaped my career more than that time as a Wormsloe Fellow. Over a period of two years, I compiled a land-use history of the site from the time of colonial settlement to the present, emphasizing how people have been influenced by and changed the coastal environment. This work was used to inform Wormsloe's management, and ultimately led to a book using the site to explore broader histories of conservation in the coastal South.

Along the way the experience taught me the true value of interdisciplinary work. In addition to guidance from Paul and my work with Jessica, I benefited from the expertise of Sarah Ross, the first Director of the Wormsloe Institute for Environmental History (WIEH); the wisdom and research of UGA professors in other fields, like geographers Tommy Jordan and Marguerite Madden; and the talented faculty on the WIEH's Scientific Advisory Council. The fellowship also led me to appreciate the vital importance of personal connections to place and conservation causes. Human networks are vital elements of conservation work. One key to Wormsloe's preservation as a resource for all Georgians is the landowners' long belief that the property was a special place. Craig and Diana Barrow have dedicated their time, energy, and resources to the property's preservation and interpretation, and that love is a vital part of what makes Wormsloe so special.

Environmental historians often emphasize the importance of the details of place. Landscapes and other living creatures are more than just backdrops for human history, they are entwined with it, shaping our experiences even as we affect them. Nature matters. Exploring Wormsloe's history alongside other researchers really brought those lessons home for me.

I learned about the importance of the salt marsh as a site of human activity and a vital ecosystem; the disease environment of the colonial coast; and the tremendous economic and ecological impacts of insects like the southern pine beetle. Work in this landscape brought the lessons of the classroom and archive home.

THIS PAGE: Wormsloe’s historic library holds some materials, but the bulk of papers related to the site are found at the rare book and special collections library at the University of Georgia.

# WORMSLOE PLANTATION LIBRARY

ISLE OF HOPE, GEORGIA • 1903

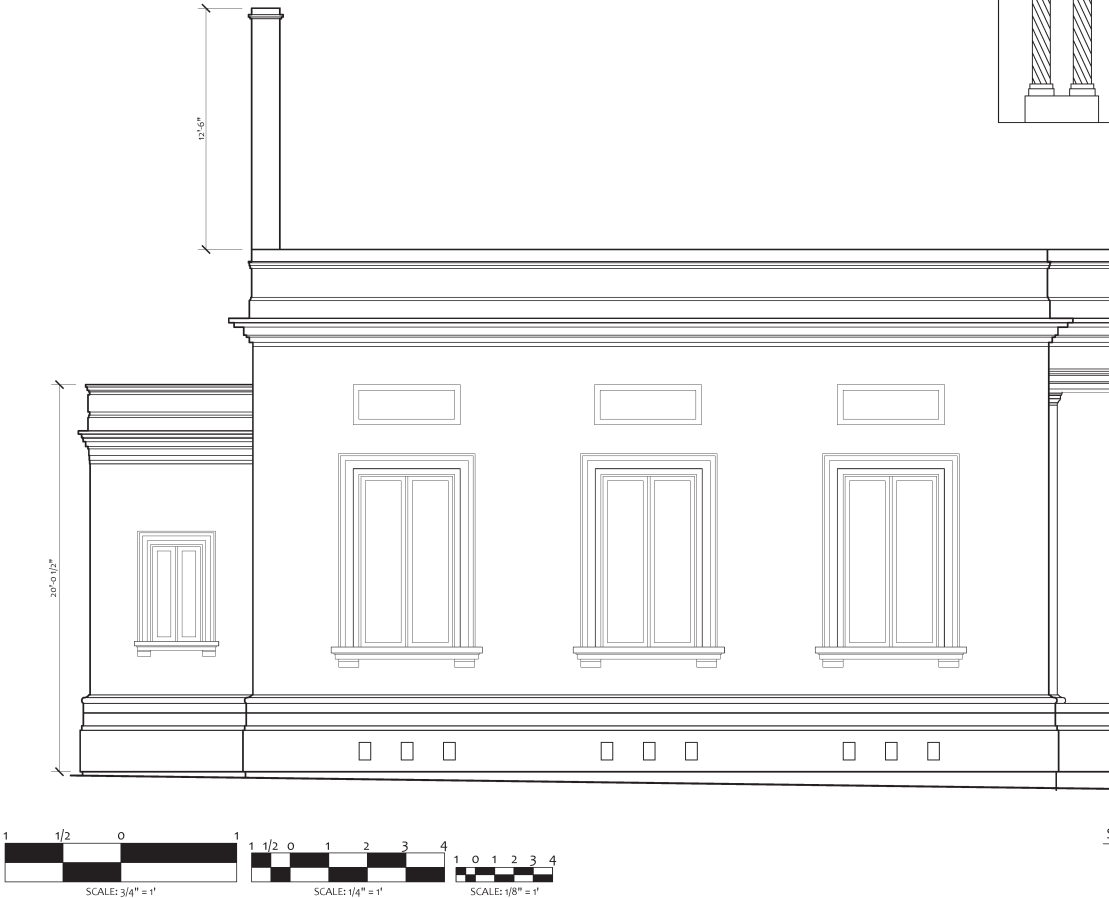
Wormsloe Plantation is located about ten miles south of Savannah, Georgia, on the southern portion of the Isle of Hope peninsula. It was established in 1736 by Noble Jones, a physician and architect from England. Jones was leased the land by James Oglethorpe, as an outlying plantation outside the newly established colony in Savannah. Jones began to cultivate the land, and also constructed a fortified tabby compound on the property, the remains of which stand today as a historic site operated by the Georgia Department of Natural Resources.

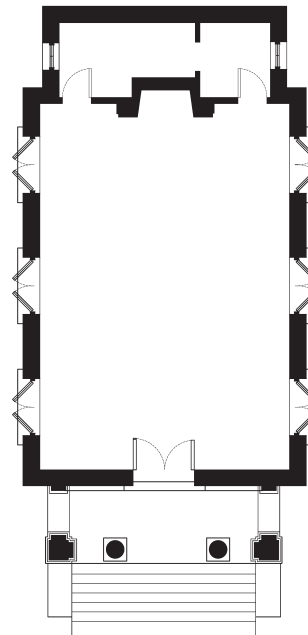
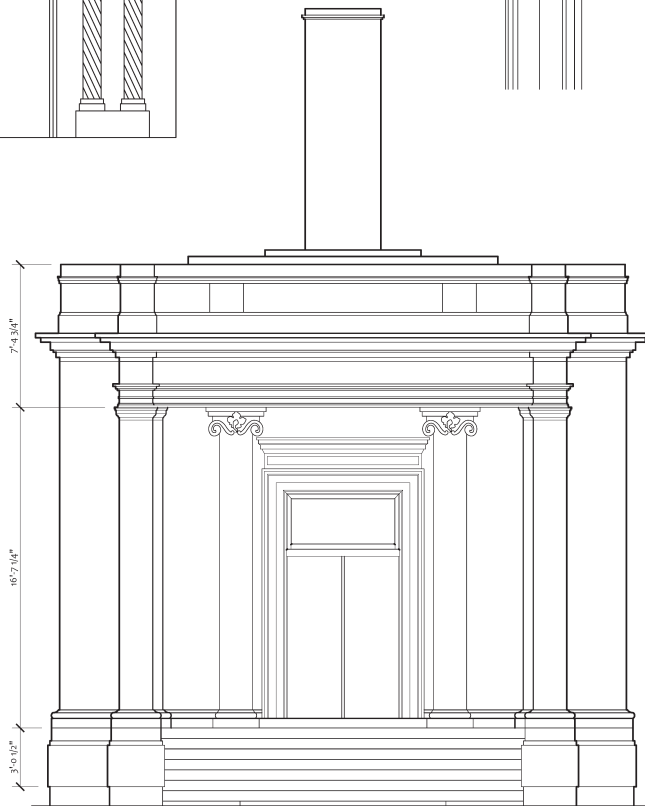
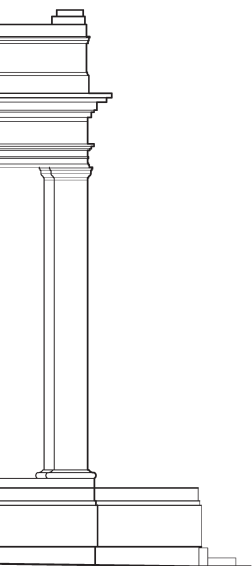
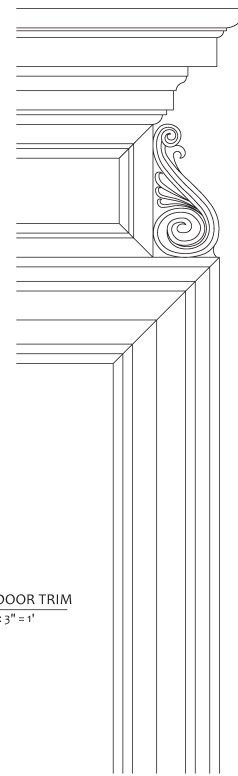
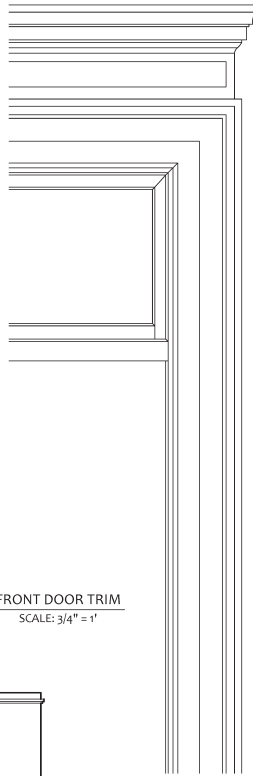
Jones became a prominent citizen in Savannah, and went on to serve the colony as a political figure, doctor, and surveyor. Making use of his location in the marsh, he also commanded a military defense against the Spanish, defending the colony from attacks from the south.

Jones' descendants carried his legacy onward after his death in 1775, continuing to cultivate the land and run the plantation. A larger, wood structure plantation house was built on the property and has since undergone many renovations. In 1906, one of Jones' descendants, Wymberly Jones De Renne, constructed a fireproof, masonry library adjacent to the marsh and near to the main house. De Renne was an avid collector of books and manuscripts related to Georgia history.

Wormsloe Plantation is currently under cooperative ownership by the Georgia Department of Natural Resources, the University of Georgia, and Mr. and Mrs. Craig Barrow III, the ninth generation of Jones' to own the property.

2014 LEICESTER B. HOLLAND PRIZE ENTRY





INDEX NUMBER

HISTORIC AMERICAN  
BUILDINGS SURVEY  
SHEET 1 OF 1 SHEETS

SURVEY NO.  
GA-2126-A

GEORGIA

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SAVANNAH CHATHAM COUNTY

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This experience influenced my professional arc. It provided valuable experience that I could draw on while on the job market, but more critically, it informed my thinking and interests in lasting ways. My subsequent books and articles on the South's environmental history have drawn on sources from the sciences as well as humanities, inspired by my fellowship experience. I spent nearly a decade at a university in the Midwest, and even there the Georgia coast enriched my teaching, research, and service. For part of that time, I led a public history graduate program informed by my Wormsloe experience, always stressing to my students the importance of public/private relationships in cultural and natural preservation.

Three years ago, I had the opportunity to return to South Georgia as the Jack N. and Addie D. Averitt Professor at Georgia Southern University and editor of the journal *Agricultural History*, where it has been wonderful to refresh those old connections and once again live and work in the region I study.

I've been pleased to maintain connections to Wormsloe. This has included consulting with various Wormsloe Fellows over the years, contributing to a symposium and edited collections on the Georgia Lowcountry, and bringing groups of students and colleagues to visit the site. Most recently, I organized the annual workshop of the Southern Forum on Agricultural, Rural, and Environmental History, which met at Wormsloe in 2024. Scholars from as far afield as Canada and from institutions like Harvard and Washington University were able to experience the wonders of Wormsloe thanks to the generosity and assistance of the WIEH, UGA's Center for Research and Education at Wormsloe, and the Barrow family. It takes a team to preserve a place like Wormsloe, and I am proud to have been a part of that work for nearly two decades.



Drew Swanson

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IMAGE CITATIONS (listed in order of appearance):

"Skidaway Bridge from Wormsloe," Artwork of Savannah (Savannah, GA: W. H. Parish, 1893), Lane Library, Georgia Southern University, Savannah, GA.

"Wormsloe Plantation, Savannah vic., Chatham County, Georgia," Frances Benjamin Johnston, Carnegie Survey of the Architecture of the South, Library of Congress, Prints and Photographs Division.

"Wormsloe, Library, Isle of Hope, 7601 Skidaway Road, Savannah, Chatham County, GA," Historic American Buildings Survey, Library of Congress.

"Tabby Fort at Wormsloe, Savannah, Chatham County, Georgia," Frances Benjamin Johnston, Carnegie Survey of the Architecture of the South, Library of Congress, Prints and Photographs Division.

Author photograph by Margret Swanson.

LEFT: Understanding and interpreting sites like the colonial fort requires interdisciplinary research.

# LASTING IMPRESSIONS

BY LYDIA MOORE

WIEH Ecologist

*We hear about non-native plants accidentally making their way to Georgia, but some plants were intentionally introduced to the Southeast to establish an economically viable crop and then became naturalized over time. The history of the white mulberry tree (*Morus alba*) is one such story.*

White mulberry is native to China and was brought to Savannah in 1734 when James Oglethorpe established the Trustees Garden. White mulberry would serve as food for silkworms, making it the backbone of the silk industry, the first major crop in Georgia, with hopes it would compete with silk from Italy and Spain. The Georgian environment seemed like a place where silk production would thrive. The climate was subtropical and there was a native red mulberry tree (*Morus rubra*) that thrived here. The colonists were so determined to produce silk that there were requirements for English settlers to plant white mulberry trees on their property as part of their agreement to receive land.

Silk production occurred in Georgia between the 1730s and 1760s, with production peaking in the 1750s, which, coincidentally, is when Noble Jones established Wormsloe and began growing

white mulberry on the property. In fact, the majority of silkworms distributed to mulberry growers in Savannah came from Wormsloe.

Unfortunately, silk was not a successful industry for Georgia. Contrary to the assumptions of English colonists, the Georgian climate did not lend itself to the growth of white mulberry or to the survival of silkworms. Temperature fluctuations deterred growth of silkworms and white mulberry trees were unable to cope with freezing temperatures. Additionally, silk production and processing were labor intensive and required special training. Because of these environmental limitations on the ecology of silkworms and their host plant as well as the need for specialized labor, Georgia was never able to realize its goal of exporting more silk than it imported.

Although white mulberry did not thrive along the Georgia coast, individual trees can be found scattered around the Isle of Hope and elsewhere in Savannah. Remnants of non-native species like white mulberry leave an impact, reminding us of past land use, the hubris of our assumptions, and the importance of fully understanding ecology. It is a humbling reminder that the choices we make today leave lasting impressions on the landscape.



ABOVE: *Morus alba*.  
Photograph by GerardM - Luis Fernández  
García L. Fdez. / 2005-06-05 / Parque  
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# THE WORMSLOE INSTITUTE *BAT ECOLOGY INITIATIVE*

RESEARCH UPDATE BY LYDIA MOORE

*The Wormsloe Institute Bat Ecology Initiative (WIBEI) completed its first spring and summer of research. The main purposes of this project are to monitor bat populations at Wormsloe over several decades while simultaneously informing visitors about the ecological significance of these flying mammals.*

We captured 237 bats spanning 8 species over 35 nights between February and August. The evening bat (*Nycticeius humeralis*) was the most captured species of 2025, followed by tricolored (*Perimyotis subflavus*), Seminole (*Lasiurus seminolus*), southeastern (*Myotis austroriparius*), big brown (*Eptesicus fuscus*), northern yellow (*Dasypterus intermedius*), eastern red (*Lasiurus borealis*), and Brazilian free-tailed bats (*Tadarida brasiliensis*). Of the 237 captures, 24 (or 10%) were recaptures. Most recaptures were evening bats, but we also had one big brown and one Seminole bat recapture.

LEFT: Two GADNR biologists erect a mist net over the DeRenne Library Pond.

Our best night of the year was at the end of May, when we netted the DeRenne Library Pond on the Barrows' property. We were joined by a U.S. Fish and Wildlife Service biologist and a biologist for a consulting company. A few UGA students staying at the CREW campus joined in to get an up-close look at bats. We had a whirlwind evening and caught 44 bats, which is a record number of bats captured in one night at Wormsloe!

This exceptional night included our first documentation of an eastern red bat at Wormsloe, which was very far along in her pregnancy. While eastern red bats are common throughout the majority of their range, they are not as common on the coast as they are in the Piedmont and other ecoregions in north Georgia.

Occasionally we catch bats with wing damage, either because they have flown into an obstacle or escaped capture by a predator. This year we caught a juvenile Seminole bat with the largest wing tear I have seen to date. The tear ran almost the full length of the wing below the elbow with a smaller tear along the tail. I suspect she escaped the clutches of an owl. The membrane had already begun scarring over and healing, but it is doubtful the membrane will fuse back together and completely heal. It is an incredible feat that she is still able to fly!

WIBEI hosted several bat-focused outreach events during the summer to raise awareness, not just of our research, but of how vital bats are to our ecosystems. Visiting researchers are always welcome to see what we are doing, and throughout the year we had several UGA graduate and undergraduate students join us for a few hours of netting.

The first WIBEI supported bat walk was held in partnership with the Wormsloe Historic Site, which was well attended by enthusiastic participants. We also hosted an evening of netting with a private group. Participants at all of these events were able to see bats up close, learn how we catch and study bats, and learn about how different species coexist and use the landscape at Wormsloe.



RIGHT: Evening bats were the most frequently captured species in 2025.

LEFT, TOP:  
Southeastern myotis  
frequent hardwood  
forests.



LEFT, MIDDLE:  
Intact wing  
membrane of an  
adult Seminole bat.



LEFT, BOTTOM:  
Torn wing  
membrane of a  
juvenile Seminole  
bat.



ABOVE: Macy Hills, student at Kennesaw State University, removes a bat from a net.

The Wormsloe Institute was thrilled to host its first two interns this summer and they were invaluable in helping achieve the WIBEI's goals. Sydney Mosley, a high school student enrolled at the Effingham College and Career Academy, gained experience setting up nets, documenting data, and learning bat ecology. Macy Hills, undergraduate student at Kennesaw State University, had all required vaccinations to handle bats and was able to gain experience processing bats, taking samples, and learning about research methods. You can read more about their experiences on the next few pages. The WIBEI is off to an exciting start! We will continue netting throughout the fall and winter and look forward to providing more research updates in future *Landmarks*.

*All photographs are courtesy of Lydia Moore.*

# NOTES FROM THE WIEH SUMMER INTERNS



Sydney Mosley

*This past summer, I had the incredible opportunity to work with ecologist Lydia Moore at the Wormsloe Institute in Savannah, Georgia. Our main focus was studying bats. Most evenings, we set up nets before sundown and checked them every seven minutes for bats. Some nights were quiet, but others were full of excitement — one night we caught over twenty-five bats! After collecting data about each bat's species, weight, and wingspan, we would release them safely back into the environment.*

*When I wasn't working with bats, I helped repair holes in the nets and assisted with projects to introduce more native plants into the environment. Through it all, I learned how small details — like the health of a single bat population or the presence of native plants — can reveal so much about the bigger ecosystem.*

*I've always been interested in science and the environment, and this internship deepened my curiosity about ecology and conservation. Getting hands-on experience reminded me that research isn't just about data — it's about discovery and connection with the natural world. In the future, I hope to continue studying environmental science and find ways to protect the wildlife that makes places like Wormsloe so special.*

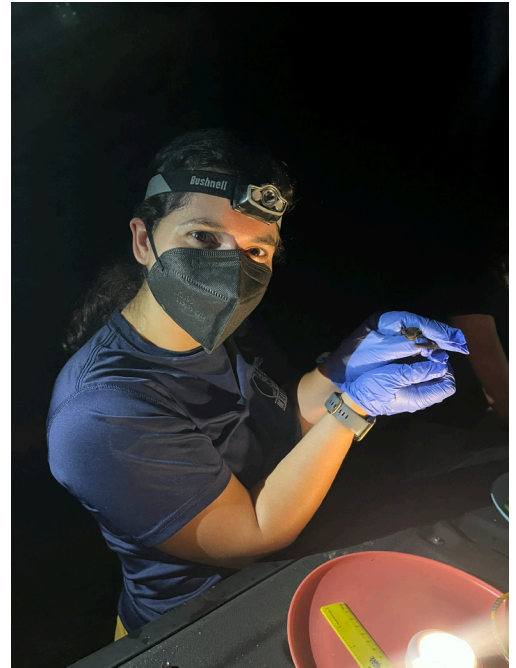
*- Sydney Mosley*

As a summer 2025 intern for the Wormsloe Institute for Environmental History (WIEH), I arrived unsure of what to expect but was welcomed with hospitality and an enriching environment. This was my first time visiting Wormsloe, the one thing that struck me upon my arrival was the oak grove tunnel when driving in, it made me eager to discover the history behind this place and explore the grounds. I was also met with fellowship from other students to guide me in the experience at Wormsloe and welcome me in. During my five week stay at the Center for Research and Education (CREW), I had the opportunity to put my hands to work in diverse research areas. Primarily, I assisted Lydia Moore with the WIEH bat research by mist netting and processing bats. This typically involved us setting up nets before sunset and waiting for bats to fly into the net so that we can then carefully remove them and record data such as their forearm length, observe their wing integrity, and identify the species and sex of the bat. One of our goals for this work was to find a way to successfully attach transmitters to evening bats (*Nycticeius humeralis*) with the hope of eventually tracking their nightly movement to learn more about their behavior.

I also had the pleasure of running Anabat routes for the GA-DNR to help collect bat calls on designated routes. Anabat is a system that detects the echolocation calls from bats and can be attached to a moving vehicle, this is important in revealing where bats are located and identifying the species in that area. Beyond assisting with the WIEH and DNR bat research,

I enjoyed working in the CREW pollinator garden, planting pollinator species including bee balm (*Monarda punctata*) and red salvia (*Salvia coccinea*). I am grateful for the time I spent contributing to Wormsloe's larger goals and to have my hands rooted in something bigger. This experience helped me explore my future interests with small mammal biology and made me realize my love for working with the outdoor community. I would love the chance to work with Wormsloe again on future projects and I hope future interns get to play a part in the continuous research at the Wormsloe Institute.

- Macy Hills



ABOVE: Macy learning the techniques of bat processing with Lydia Moore. Courtesy of Macy Hills.



ABOVE: My final day at Wormsloe, captured by the CREW sign outside the cabins that became home during my stay. Courtesy of Macy Hills.





Details of the DeRenne Library mantle.

A photograph of a tree-lined path, likely in a park or historic district. The trees are large, mature oaks with thick trunks and dense foliage. Spanish moss hangs in long, thick strands from the branches, creating a canopy effect. A gravel path winds through the trees on the right side of the image. The ground is covered in grass and some small plants. The overall atmosphere is serene and historic.

The original Live Oak Avenue.



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