

Longwood Gardens
Meadow Garden
Volunteer
Manual

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Sources:

Longwood's Landscape Evolution, Dec 2010

Interpretive Plan and Materials created for Meadow Garden Interpretation written by Gecko, Dottie Miles and consultants (Beverly Sheppard)

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Stewardship in the Meadow Garden

Introduction

Environmental stewardship is one of our core values which we all strive to embody. Through this philosophy, both the Soil to Sky Management Plan and Wildlife Management Plan were adopted and co-exist to emphasize our position of being “committed to preserving and improving the quality of all its environmental resources – its ecosystems; biodiversity; water, soil, air, and the human quality of life.” (Land Management Plan, Longwood Gardens 2010)

Our stewardship is an essential part of maintaining the Meadow Garden. Large old-field meadows are disappearing due to development, making this an increasingly rare and invaluable habitat.

Our Meadow is a critical type of habitat, home to many important, and even rare, flora and fauna. We work year-round to control invasive species; protect the watershed; maintain native plant communities; and keep the health and vigor of the Meadow balanced and resilient. We have added new plantings of native species that will gradually mature and intermingle with existing species.

The Meadow and the neighboring woodlands are living examples of different stages of landscape succession. The 150 year old Forest Walk west of the Meadow Garden, the 35 year old woodlands north of the Meadow Garden, the existing 40 year old west Meadow, and the new east Meadow all evolved from agricultural fields and pastures (which themselves were landscapes created by removing the historic forest for these uses).

Highlights

- Biodiversity - We manage this habitat to favor a balanced diversity of plant, insect and animal life. Diversity generally improves the health and resilience of an ecosystem.
- Native plantings -
 - Planting native trees, shrubs, herbaceous biennials and perennials supports the ecology and overall biodiversity in the Meadow and surrounding woodland and wetland habitats
 - Many native plants support native pollinators and increase their numbers; and/or provide habitat and food for other fauna.
 - Control and management of invasive species help native species thrive and develop.
 - Planting sweeps of large masses of native species bring both diversity and beauty to the Meadow. These areas will mature and evolve over time as the introduced species intermingle with the rest of the Meadow.
- Doubling the size of the Meadow from 40 to 86 acres increases the potential variety of species that may exist here due to a larger ecosystem.
- The presence of diverse native bird populations in the Meadow Garden is a prime indicator of Meadow health and biodiversity.

Stewardship in the Meadow Garden

- Watershed – By buffering the watershed from excess nutrients and sediment, and allowing storm water to infiltrate into the ground to support groundwater sources, the ecological and horticultural diversity of the Meadow Garden helps protect the water quantity and quality of the Pocopson Creek; a tributary of the Brandywine Creek. The Brandywine Creek is the prime source of drinking water for the city of Wilmington, Delaware.

Interpretative Stories and Tips

- Discuss how and why we keep the Meadow as Meadow
 - Discuss with guests the idea of the ever-changing landscape and the fact that we must actively manage the Meadow to keep it in its current state. Much of what Longwood does with native plantings and control of invasive plants suspends succession within the Meadow, keeping it from reverting back to woodland. The southeastern Pennsylvania Piedmont meadow landscape is always trying to evolve into woodland due to the amount of rainfall we receive every year. Each small tree and shrub that sprouts is a step in the successional change to forest.
 - If we didn't manage the Meadow it would evolve to become a forest over time and this ecosystem would be lost.
- Get guests excited about this complex and fascinating ecosystem
 - If you think about it this is just one ecosystem which is connected to millions of others. The whole world is one big connected ecosystem created from tiny ecosystems working together - just like each cell in a human being works together to make a living human being. Within the Meadow ecosystem are many micro ecosystems
 - Encourage guests to visualize how an ecosystem evolves – for example how one tree can create a microclimate that helps a new ecosystem to flourish.
 - A square foot of Meadow can be a small ecosystem filled with plants, insects, soil, mammals and microscopic nematodes and bacteria. Each organism has a role to play in order to keep the system in good working order.
 - Fun fact: A handful of soil has more organisms than all the people on earth!
 - Balance makes it all work. Encourage guests to think about what happens when one thing goes out of balance in their own lives. For example, as white-tailed deer have lost their balancing predators, the landscape they now over browse has changed dramatically, both from habitat fragmentation by humans, and from the deer's feeding activities. It is no wonder they are found in our gardens and yards are now linked and interspersed among remnant natural habitats. Likewise, if your neighbor cuts down their trees, or start a native garden that will likely affect your own land and related ecosystem. These are examples of how our personal "ecosystems" can be changed by others.

Stewardship in the Meadow Garden

- Longwood stewardship – our responsibility to the land
 - You can talk about the idea that this is part of a larger Longwood story of stewardship of all our lands and water and reducing our carbon footprint. (See the section on our Soil to Sky program on page 4)
 - Mention that we record bloom time data (phenology) during the growing season. From this data we can learn how our climate is changing and its effects on plants and wildlife.
 - Point out our bluebird houses – just some of the 170 houses on the property that we maintain. Discuss our thirty year old bluebird program and how this has successfully reinvigorated this formerly threatened species. (see the Bluebird document)
This is something guests can do at home....provide habitat for birds.
 - Control of invasive species – why is it important to control invasive species? When you remove the invasive species, you help bring balance back to the ecosystem by allowing native plant communities to flourish and support native insects and animals (e.g., pollinators).
- Personal Stewardship
 - We all have a role to play in stewardship. We all make a difference with the choices we make. You can encourage our guests to be stewards at home. By helping guests appreciate the natural processes and the relationships between different components of the Meadow Garden we can help them understand their home landscapes better as well.
This is a very careful talking point with guests as we want to encourage them to think about their actions without criticizing them personally for what they do. Knowledge and understanding will slowly build personal stewardship.
 - Talk about the Lenni Lenape – they were the first stewards of this land. It was part of their culture to value the land. They believed in ecological design although they didn't call it that!
How about our culture...maybe through discussion we can get guests to wonder if we are good stewards of the land? Many people aren't aware that some of the things they plant or actions they take negatively affect the plants, creatures, land and water we all need.
 - Suggestions for those who want to change what they do at home:
 - Their backyard gardens or even pots of plants can help support pollinators and a healthy ecosystem. Each backyard garden can contribute when native plants are planted instead of non-native ornamentals.
 - Keep and protect existing native trees, shrubs and herbaceous plants to reduce water runoff and sediment erosion.
 - Some plants may become invasive and have limited value for creating a healthy ecosystem; they often do not provide the habitat or food sources for our native fauna.

Stewardship in the Meadow Garden

- Refrain from using herbicides and pesticides which can filter into our watersheds and kill native species and insects including pollinators. Often a native garden will be healthier and reduce the need for chemical interactions and maintenance.
- Encourage them to read *Bringing Nature Home* by Doug Tallamy. This very readable and useful book clearly explains the why's and how's of protecting native species.
- Geography and the watershed
 - Soil and plant communities – The geography of the Meadow affects which plants grow well in different parts of the Meadow. You can talk about the idea that this Meadow has wet areas (Meadow Bridge and Hourglass Bridge), dry spots (well-drained ridges, windy spots and hot, south-facing slopes). Soils may be hard clay or soft loam. Each plant community is a small microclimate based on these features. Plants have been selected and planted to thrive in each unique environment within the Meadow. Do they see this in their own gardens and properties? For example, certain plants may grow better in different areas due to differences in habitat conditions such as sun or drainage.
 - Topography exploration – encourage guests to study the landscape and see what they might observe. Where does the water flow? The Meadow is a great spot to talk about what a watershed is. Use a piece of crumpled paper to illustrate how water would run down to the low spots.
 - Guests will be amazed to know that the Meadow cleanses and absorbs water runoff. This reduces flooding and improves the water quality downstream. It performs much better than turf grass in filtering and absorbing runoff. It serves this function year round. As the water percolates through the Meadow and soil layers below it is cleansed.
 - Interesting fact - Some warm season grasses have root systems that go eight feet or more into the ground! These live and even dead roots make tunnels into which rain water can absorb into the ground helping to replenish groundwater.

Soil to Sky Land Management Program

Longwood Gardens has a comprehensive long term plan to steward our land into the future, called the Soil to Sky Land Management Plan. The natural resources of Longwood Gardens are integral to the long-term sustainability of our land, the display gardens, and the community of people/flora/fauna present within. Longwood Gardens is committed to preserving and improving the quality of all its environmental resources—its ecosystems; biodiversity; water, soil, air, and the human quality of life.

Stewardship in the Meadow Garden

Longwood actively pursues ways to reduce and limit our carbon footprint through

- solar power, electric vehicles
- composting and recycling
- Greenhouse crop selections which reduce the need for heat, crop rotation and waste
- Integrated Pest Management Plans reduce our use of chemicals
- soil and water management plans
- managing plant selection for biodiversity in the 700 acres of our natural and agricultural lands

This link to our website, <http://longwoodgardens.org/sustainability>, connects to the story of Longwood's overarching Soil to Sky Land Management Program which directs all of the many steps taken to reduce our carbon footprint, reduce waste, and protect the environment.

Meadow Management

Adaptive land management is the practice of using clues from the land to help fine tune timing and frequency of stewardship activities, as well as letting the land inform us as to the success of our management. Successful stewardship is measured over decades and centuries, although major changes can take place on much shorter time scale.

We strive to maintain a balanced native habitat matrix. A **habitat matrix** is many habitats linked together by geographical proximity - each interrelates with another. Change in one habitat may affect some of the others. The sum is stronger than each individual part. Each habitat is made up of multiple plant communities. A **plant community** is a group of plants which all favor similar growing conditions, and structurally relate to each other (short, tall, spreading, etc.).

Whenever and wherever possible, we install and protect plants native to the local or regional southeastern Pennsylvania Piedmont area. This promotes a diverse meadow ecosystem.

With phenology records, we keep an ongoing database of all our Meadow plant species, including their period of bloom each year. This data is collected weekly and is important in gauging the overall plant biodiversity in the Meadow, and documenting the change in the Meadow's flora due to changes in climate over time.

Plants are added generally in spring or fall through seeding, planting herbaceous plugs, shrubs and trees. Many trees and shrubs have increased survivability if planted in the fall, due to better root establishment, and potentially less drought stress.

Invasive Plant Species Management:

The Meadow Garden is mowed or burned each spring to maintain the structure of a Meadow, preventing the incursion of woody plants such as trees and shrubs (both native and non-native invasive plants) from overtaking the desirable native herbaceous vegetation. This is usually done in mid-March to early April as this minimizes disturbance to wildlife and preserves over-wintering habitat. We always leave some areas unmowed or unburned each year to preserve habitat for over-wintering insects and animals.

Stewardship in the Meadow Garden

Note: Burning is important to our story because it is how we got where we are with the landscape. It helped us to control invasive species and diversify the Meadow with native plantings.

Mowing and burning alone are not sufficient to control certain invasive plant species. In the spring some invasive plants are cut back and/or herbicide applications applied. Others are targeted in late summer and fall when some plants bloom or change leaf color making them easier to see and target for treatment.

Many annual and perennial weeds (e.g. Mile-a-minute vine, Canada thistle) have an aggressive period of growth, bloom and seed set. We target species before they go to seed to diminish possibility of their spread into the Meadow.

Invasive vines are removed from trees by hand during the winter. Trees, a valuable resource, take many years to grow. Invasive vines like Oriental bittersweet and Japanese honeysuckle can rapidly grow into the canopy of these trees, often pulling branches and whole trees down during storm events, as well as strangling the trunks.

Water Resources

Our water resources are critical to the continued function of the Gardens, and the health of our watersheds and the organisms that depend on them. We actively promote and implement measures like riparian buffer plantings, wastewater treatment and recycling, and water-use reduction measures to conserve this resource.

Riparian buffers are created by maintaining or adding grasses, shrubs, trees or other native plants and vegetation along streams to control erosion, help filter nutrients, and keep water clean.

We strive to use the most technologically-advanced and ecologically-friendly methods available.

Soil

A diverse Meadow habitat needs healthy but not overly fertile soil. Very fertile soil often encourages the overgrowth of invasive plants which often thrive with high fertility to the detriment of native biodiversity.

Healthy soil is teeming with life. Soil is made up of distinct layers, called horizons. Topsoil is the layer that most plants grow in. Millions of insects break down organic matter in the topsoil. This organic matter provides nutrients and minerals for insects and plants. Ground water is found in the pores between the soil molecules. Microscopic bacteria and protozoa are active deep in the sub layer.

We use no-till farming, soil and fertility-monitoring practices, topsoil protection, and compost generation to protect and enhance this resource.

Stewardship in the Meadow Garden

Bird Management

We monitor native bird populations both seasonally and over time. This helps in gauging the overall biodiversity of the Meadow.

We manage habitat to favor a balanced diversity of bird life, (raptors, waterfowl, grassland, wetland, woodland, local breeding and migratory bird species).

Bolstering bird populations with the construction and maintenance of bird boxes helps our local bird populations, especially cavity nesting birds like the Eastern bluebird, Tree swallow, Purple Martin and Wood duck, whose native nesting habitat (cavities in dead, standing timber in forests) has been drastically reduced over time.

Bird box maintenance: For more than 30 years volunteers and staff have monitored blue bird nesting, -maintained existing boxes, and designed and constructed new improved boxes for species like Eastern bluebird and wood duck. During the breeding season in the spring they monitor the boxes and remove invasive bird species. We usually fledge close to 175 young bluebirds, and approximately 10-12 broods of wood ducks each year, along with numerous other native birds like tree swallows, wrens, and chickadees in our bird boxes.

Watersheds and aquatic species

We manage aquatic resources to protect and enhance water quality and native species wherever possible. Many amphibian and reptile species are in decline locally, regionally and globally. We assess the use of existing habitat by fish, amphibian and reptile species, and work to maintain and enhance these habitats.

Pollinators and other insects

We promote butterflies, bees, other invertebrates and pollinators by providing natural and man-made habitat. We pursue management techniques that support these populations when and where possible.

Nonnative honey bees are farmed for honey in our natural lands.

Deer management

Note: This topic is best left to staff for discussion. If guests ask about our deer management let them know Longwood has a detailed plan with several components. You can connect them to staff take their contact information.

Deer and goose management—An important goal is to reduce and then maintain local deer and goose populations at levels that allow sustained growth of native plants and flora and minimize damage to horticultural displays (within the constraints of state and federal wildlife management regulations). We use hunting, crop choices and other legal methods as they become available and practical to use to balance and manage our wildlife populations. The local forests can maintain their health with a deer population of no more than 25 deer per square mile- local populations in this area have been found to have over 150 deer per square mile.

A Short History of Longwood Gardens

General Longwood Garden Facts

Longwood Gardens is one of the great gardens of the world. We strive for innovation in horticulture and display. We present the arts in an unparalleled setting to bring pleasure and inspire the imagination of our guests. We contribute to society through excellent and diverse education programs, horticulture research, environmental stewardship, and cultural and community engagement.

Longwood Gardens encompasses 1077 acres; over 300 acres are open to the public. Pierre du Pont's original purchase from the Peirce family in 1906 included 202 acres. Other properties were added later.

Early History

Many generations helped create Longwood Gardens, but one individual—Pierre S. du Pont (1870-1954), industrialist, conservationist, farmer, designer, impresario, and philanthropist—made the most enduring contribution.

Pierre du Pont was the great-grandson of Eleuthère Irénée du Pont (1771-1834), who arrived from France in 1800 and founded the E. I. du Pont de Nemours and Company gunpowder works. Pierre turned the family business into a corporate empire in the early 20th century and used his resulting fortune to develop the Longwood property.

More than 200 years earlier, the land had been inhabited by the native Lenni-Lenape tribe who hunted, fished, and farmed the productive wilderness. In 1700, a Quaker family named Peirce purchased the property from William Penn and soon established a working farm. In 1798, Joshua and Samuel Peirce began planting an arboretum on the farm. By 1850, the arboretum was well known as Peirce's Park, and contained one of the finest collections of trees in the nation. For the following decades, Peirce's Park thrived as a pleasure ground for the community. However, eventually it fell into disrepair and was sold.

In 1906, at the age of 36, Pierre du Pont purchased the farm in order to save the trees. Pierre inherited a strong sense of entrepreneurship, love of horticulture and the drive to leave a personal legacy; traits that reflected his family's philosophies. Soon, Pierre was dedicating great amounts of his personal fortune to transform his property and took great pride in delighting guests with its growing beauty.

He followed no grand plan; instead he built the gardens piecemeal, beginning with the 600-foot-long Flower Garden Walk in 1907. Although his later gardens would draw heavily on Italian and French persuasion, this early effort reflected what he termed an "old-fashioned" influence, with nostalgic cottage-garden flowers, exuberant shrubs, rose-laden trellises, and even a shiny gazing ball. The scale was grand, the accessories quaint.

Five years later was the debut of the new Open Air Theatre. His inspiration was an outdoor theatre at the Villa Gori, near Siena, Italy, although his version was much larger.

A Short History of Longwood Gardens

Within a year, he equipped it with secret fountains that shot out of the stage floor to drench visiting nieces and nephews.

Pierre enhanced the domestic comforts of Longwood by enlarging the original Peirce farm house, notably in 1914 when he doubled its size. The attached conservatory was Longwood's first "winter garden" and Pierre's first experience with the aesthetics of greenhouse gardening.

The massive Conservatory opened in 1921. It would be hard to imagine a more theatrical setting for the indoor display of plants.

With the Conservatory a reality, Pierre turned his attention to another great love—fountains. He based his Italian Water Garden on the Villa Gamberaia near Florence, but he added 600 jets of recirculating water. At the Open Air Theatre, he replaced the old waterworks with 750 illuminated jets. His hydraulic masterpiece was the Main Fountain Garden in front of the Conservatory: 10,000 gallons a minute shot as high as 130 feet and illuminated in every imaginable color.

As early as 1914 with the formation of Longwood, Inc., Pierre was thinking about the eventual fate of the property after his death. In 1937 the Longwood Foundation was created to handle his charitable giving. When Pierre died in 1954 at the age of 84, he left Longwood with a well-established horticultural tradition, experienced businessmen (his nephews) as trustees, and a sizeable endowment.

After his death in 1954 Longwood's first director was hired. Since that time Longwood Gardens has matured into a magnificent horticultural showplace filled with countless opportunities for enjoyment and learning.

A Short History of Longwood Gardens

The Longwood Foundation

In 1937 Pierre du Pont created the Longwood Foundation to manage his charitable giving.

The foundation was split in two in 1970 becoming two foundations – Longwood Gardens, Inc. and the Longwood Foundation. Longwood Gardens, Inc. is the foundation which operates Longwood Gardens. About half of the money required to run Longwood Gardens comes from onsite revenue - ticket sales, special events, the restaurant, Gardens Shop, classes and members. The other half comes from the Longwood Gardens, Inc. endowment.

The Longwood Foundation has made grants to non-profits of over 2 billion dollars since 1937. Historically, investments and grants have been made primarily in education, health care, environmental, housing, arts, social services, and civic sectors. Funds are also provided to Longwood Gardens, Inc. for some large capital projects.

Longwood Staff (at time of printing)

Please know these numbers change frequently.

180 Full-time employees (including 47 gardeners and 4 arborists)

225 Part-time employees (including 42 part time gardeners)

800 volunteers

50 students

Webb Farmhouse & Galleries

Introduction to the Webb Farmhouse and Galleries

The historic **Webb Farmhouse** has stood on the property since the early 1700s. Constructed from local fieldstone, the Webb Farmhouse is an excellent example of Chester County farmhouse architecture and design. Over the years, Longwood has preserved the Webb Farmhouse as part of the historical character of this land. As part of our Meadow Garden expansion and interpretive project it was selectively restored in 2014 by John Milner Architects of Chadds Ford, PA, to reflect its appearance at the end of the eighteenth century.

Two unique **Galleries** have been created on the first floor of the house. The **West Gallery** depicts the Meadow Garden through the seasons. Imagery, illustrations, herbarium specimens, and artistic elements capture the complexity and nuance of seasonal life in the Meadow and the constant element of change. The **East Gallery**, which is the oldest section of the House, has been selectively restored and features the original, restored "Hearth Room" with its impressive walk-in fireplace. The eighteenth century kitchen represented the heart of the family, the heart of the farm and the heart of the land in its long evolution from early settlement to the present.

Highlights

- Built in the early 18th century the Webb Farmhouse served as the home for several generations of the Webb Family.
- The house was built in two stages - the eastern part was constructed in the early 1700's, and the addition to the west added more than five decades later.
- The most notable interior architectural feature in the House is the restored walk-in cooking fireplace in the East Gallery. The original white oak beam still supports the masonry wall above the opening.
- Pierre du Pont acquired the Webb Farm and property in 1916.
- During the twentieth century, the House was updated and modified. As a result of these changes, the building lost much of its original architectural integrity.
- The Webb House was extensively restored by the prominent Chester County historic architectural firm, John Milner Architects, in 2014. Building materials were carefully selected to restore the historic character of the House.
- The first floor of the house has been adapted to house two separate galleries with complementary interpretative themes.
- One original doorframe remains inside the house separating the two gallery spaces.

Stories and Interpretive Tips and Props

Engaging guests outside of the Webb Farmhouse

- Point out the amazing view down the Meadow valley from the patio area. Talk to guests about what they might see along the various paths.

Webb Farmhouse & Galleries

- Guests may ask about the enormous sugar maple just outside the door. Steps were taken to protect its root system during renovation and the sidewalk was designed to with a grid system below to protect the roots.
- For guests interested in architecture and history, share that the house is an example of 18th century Chester County construction. Discuss how it is built of local Avondale fieldstone which was likely quarried near to the location of the House. Share with guests that it was repointed during the restoration process, which only enhances the beauty of the masonry work. The also might be interested in knowing that the chimney was capped with a flagstone slab to seal it.
- Discuss the architectural changes that occurred over time to the House. Talk about how an archeological investigation helped the architect to discover historical elements which were hidden under more modern renovations (see page 5).
- While talking with guests outside near the shuttle loop, invite guests to look closely at the two doors on the south side. Explain that the south side of the House was the originally the front entrance. Now one of these is a 'faux' entrance way. When they enter into the West Gallery, they will not see a door on the south side wall. The door was carefully covered over to create more gallery space on the interior.
- Point out the beautiful new cedar shake pent roof that wraps around the three sides of the original dwelling. Ask guests if they can spot the thin projecting stone ledge which is evidence that a pent roof originally existed when the House was built.
- As guests enter the Gallery, tell them that the porch roof is a replica of the original sloping porch roof which existed on the northwest end of the House. Also, share with them that the red molding color is historically accurate red iron oxide.

Engaging guests inside the Webb Farmhouse & Galleries

- Talk to guests about the restoration of the Webb Farmhouse. John Milner, one of most prominent historic architects in the Philadelphia region, is responsible for the selective restoration of this project. Share the image flipbook which illustrates some of the transition.
- Point out the one original feature of the House which was left as is; the interior door frame between the two galleries with existing original blue paint. The color of the molding in the East Gallery was chosen from this original frame.
- Explain what each Gallery has to offer. The West Gallery is well suited to self-exploration and encouraging guests to walk the Meadow afterwards to experience what they are seeing. You can talk to guests about the amazing ecosystem that makes up a meadow

Webb Farmhouse & Galleries

and how it supports all the beauty they see on the walls. Refer to the Sustainability and Meadow Overview documents for supporting information.

- Point out the gallery guide in the woven wall basket in the East Gallery. As guests show interest in different items you can share more of the stories of the various objects in the Gallery. These details are listed below.
- Discuss with guests how the walk-in fireplace was discovered when the restoration occurred. The original room was converted into a parlor room when the west side of the House was added, and the fireplace took on more of a formal appearance. Explain how the fireplace appearance continued to be modified into the late 20th century to support new residents. The restoration process restored the fireplace back to its late 19th century appearance. You can use the image flipbook to show the large stone arch in the basement which led the architect to discover this fireplace.
- Encourage guests to browse the collection of books and herbarium for further self-exploration.
- Architects and historians will delight in the attention to detail when you point out the beaded ceiling boards and oak ceiling beams that were salvaged from an old building, and in the handmade iron nails used in the recycled random width oak floor boards. Even the heat vents were beautifully handcrafted.

Introduction to the Galleries

- The West Gallery depicts the Meadow Garden through the seasons. Art, in the form of sculpture, herbarium specimens, photography and illustrations, captures the complexity and nuance of life in the Meadow and the constant element of change. For those who are visiting for their first time or have never visited before, this display shows how the Meadow changes over the course of a year and invites our guests to return to see this change. It also highlights our theme of year-round stewardship in this Garden.
- The East Gallery, which is the oldest section of the House, has selectively been restored to create a sense of the past, and includes interpretive elements on the story of the people who have inhabited and influenced the land since the Lenni Lenape tribe.

West Gallery Details

- The West Gallery bridges the sense of time across seasons, with visual evidence of evolution captured in a single year in the Meadow. Guests are surrounded by images of the Meadow during all seasons. Each wall is layered with details and up close images that capture the complexity of life in the Meadow and the constant element of change. Throughout, the emphasis is on beauty, variety and inspiration.

Webb Farmhouse & Galleries

- The West Gallery walls are painted a pale cream that gradually transition to a sky blue at the top of the room. The walls depict the four seasons through highlights of flora and fauna.
- The spring display features a photograph of the burning of the Meadow. This practice has occurred in the past in the early spring to prevent invasive plants from overtaking the desirable native vegetation. Burning is not part of our current regime due to operational restrictions. (See more in the Stewardship document)
- Every creature featured in the Gallery can be found living in the Meadow.
- The vibrant paper bird sculptures are created by Diana Beltran Herrera. The works are completely made of paper and feature local bird species. Herrera studied design in Bogota, Colombia where she graduated in 2010.
- The contemporary bench was fabricated by Longwood Gardens' carpenters and built of black walnut.
- Original Herbarium samples by Longwood Gardens staff are featured throughout the exhibit.
 - Longwood's Herbarium is called the KEN Herbarium (for Kennett Square); Specimens from select plants, trees and shrubs on Longwood's property are carefully preserved for future reference and held in a climate controlled environment.
 - All specimens are pressed, dried, mounted and catalogued in our electronic database with a complete description. This process provides us with a physical record of the species – both living and dead – that comprise our collection.
 - The specimens in our Herbarium are used by our instructors in their classes and by researchers at Longwood and around the world. Several hundred specimens are added each year and our hope is to eventually make our Herbarium information available online.

East Gallery Details

- A salon-style timeline of maps, historic imagery, and illustration highlight the evolution of land over time, including those who lived on this land.
- Architectural features like rough plaster walls with white wash, and period oak wood flooring that was salvaged from a wood dealer in Maryland add to the historic ambiance of the East Gallery and transport the guest back in time
- An exhibit library offers further exploration for guests.
- Guests can also explore the drawers of the hutch which hold natural elements which may have been collected. Quakers were discouraged from worldly pursuits such as music or arts. They instead focused on the natural world and science was an approved area of study for Quakers.
- A gallery guide helps to self-direct guests and shares important facts about each piece.
- Reproduction furniture, tools and implements were created by local artisans. Period accessories represented are also inspired by architectural traditions of the past.
- Fireplace tools and pieces are either antique or reproduction

Webb Farmhouse & Galleries

- A painting by local artist William Trost Richards (1833-1905), of a Chester County landscape embraces the essence of the region. Richard is an important American landscape artist who often found inspiration in the rolling hills of Chester County. His 19th century paintings of the region are scenes of pastoral farmland and meadows still edged with heavy forests, as the land continued to be used for agriculture. Guests can compare his painting to what they see just outside in the Meadow Garden.
- Barclay Rubincam (1920 – 1978) is another local artist whose work is displayed. Hailed as an important realist in the Brandywine school, which includes illustrator N.C. Wyeth, Rubincam's teacher.
- Point out to guests the image of the Indian Hannah Memorial. Share the story of Indian Hannah (1730-1802), who was memorialized as the last of the Lenape Indians in Chester County in 1925. (See the History document) Share with guests that a bronze marker, dedicated to Indian Hannah can be found in front of the Chester County Visitors Center, across from Longwood Gardens entrance. William Webb (owner of this house), served as legal protector and protector of her people for many years.
- Guests can open the herbarium case and view and touch the sample herbarium of the Mayapple - *Podocarpus peltatum*. Explain how the Quaker practice of observation and study of the natural world led many to engage in botanical illustration and horticulture, in an era in which the collection and classification of plant specimens was of great interest in both the states and abroad.
- The John Singer Sargent sketch of Pierre du Pont gives you a chance to talk about our founder and his ethic of stewardship that we carry on today. Pierre S. du Pont purchased the original piece of land, Peirce's Park and the surrounding farm in 1906, to save the magnificent collection of trees. As he gradually purchased adjacent properties including the entire original Webb tract, he established an ethic of stewardship and preservation that influenced his expansion of farming activities as well.
- Point out the photograph of 1925 Eastern Guernsey Association Field Day. This is a great opportunity to talk about Pierre du Pont as a "gentleman farmer". The dairy operation at Longwood provided milk for the du Ponts, their guests and employees from 1916 to 1951. In reality, the farm was more of a hobby than a business.
- Another significant photograph to show guests is the Webb Barn. Pierre du Pont purchased the Webb farm in 1915; He demolished the original barn and built a new barn in 1919, and moved his dairy operations here in 1928. The Webb Barn and surrounding Longwood buildings are not open to the public at this time.
- The walk-in fireplace was remodeled in the 19th century when this room was converted into a more formal parlor room. When the House was surveyed, the fireplace arch support found in the basement indicated that the fireplace in this room was larger than its appearance. Removing 20th century paneling revealed the walk-in fireplace.
- A blue bluebird house can be found on the hutch. It is over 20 years old and was one of our first bluebird boxes originally located in the Meadow.

A reproduction Herbarium sample box is featured that guests can open and view. A Herbarium is a library of plants. It is a systematically arranged collection of preserved plant material that is pressed, dried, and mounted on a sheet. The herbarium at Longwood began in 1955 and currently has about 12,000 plant specimens.

Webb Farmhouse & Galleries

Evolution of the Webb Farmhouse

We do not have a definitive history of the development of the Webb Farmhouse and its site over time. The architect, John Milner surveyed the building and completed architectural investigations of the existing house. He discovered some interesting elements.

1. The thin projecting stone ledge near the bottom of the second floor windows indicated to the possible position of an original pent roof.
2. There was a porch on the south face of the newer section of the house. The stone ledge is still evident where it was located.
3. Removal of a section of the stucco revealed the scars of the original pent roof. Similar scars were revealed above to confirm the existence of the original wrap-around cornice.
4. The size and configuration of this masonry arch in the basement indicated to the architect that it was built to support a large walk-in cooking fireplace on the first floor. Removal of the woodwork upstairs revealed that a small arched-top fireplace had been inserted into the large original walk-in cooking fireplace, probably in the late-eighteenth century when the western addition was constructed. Removal of the small fireplace located there revealed the original cooking fireplace with its large white oak beam, spanning the full width of the opening. The bottom of the beam was cut out in the late-eighteenth century to accommodate the insertion of the small arched-top fireplace.

The architect determined that the eastern section is likely to have been built during the middle of the eighteenth century, possibly about 1750. Architectural evidence indicates that the original mid-eighteenth century section of the Webb Farmhouse may have been similar in appearance to the 1724 John Chad's House in nearby Chadds Ford.

This two and one-half story east section appears to have consisted of a single room with a large cooking fireplace on the first floor, a single room on the second floor with a fireplace, an attic room (possibly with a fireplace), and a full basement. The front façade of the house faced south and exterior walls were constructed of fieldstone, with a gable roof covered with wood shingles. A pent roof projected from the building between the first and second floor windows, and wrapped around the north, east and south sides.

At the end of the eighteenth century, the building appears to have been expanded with a two and one-half story addition to the west. At this time, the original cooking fireplace was reduced in size to a parlor fireplace, and two first floor rooms were created in the new addition, one with a cooking fireplace and the other with a small corner fireplace. Covered porches were built on the north and south facades of the addition. It is unclear when the pent roofs on the original section were removed.

During the twentieth century, many changes took place. The fireplaces in the late eighteenth century section were removed and the first and second floors of the building were modified to provide updated residential accommodations. The exterior windows and doors were replaced,

Webb Farmhouse & Galleries

the porches were removed, a new stairway was installed, and the second floor structure in the eastern section was removed and reconstructed. As a result of these changes, the building lost much of its earlier historic character.

Resources

John Milner, architect Webb Farmhouse

John Milner Architects specializes in the restoration and adaptation of historic buildings and the design of new buildings, primarily residences, which reflect the rich architectural traditions of the past. The firm's firsthand experience with the history and construction technology of three centuries of American architecture informs its approach to both historic preservation and design. Mr. Milner's expertise is in the detailed analysis of historic buildings to document their physical and cultural history, and the development of strategies, technical procedures and design solutions for their restoration and adaptive reuse.

In addition to his professional practice, Mr. Milner has for thirty years been an Adjunct Professor of Architecture in the University of Pennsylvania's Graduate School of Design, receiving the Perkins Award for Distinguished Teaching in 2007. He was selected by the National Endowment for the Arts and the General Services Administration to serve as a National Peer Architect for the review of designs for major new federal buildings. Mr. Milner is a past Chairman of the Historic Preservation Board of the Pennsylvania Historical and Museum Commission.
www.johnmilnerarchitects.com

Jonathan Alderson, landscape architect

Jonathan Alderson is the founder and design leader of the firm Johnathan Alderson Landscape Architects. Mr. Alderson has a BA from the University of Reading, United Kingdom, and holds a Master of Landscape Architecture with Certificate in Urban Design from the University of Pennsylvania. Mr. Alderson, who has taught at Temple University, is a registered Landscape Architect in Delaware, Indiana, Maryland, New York, and Pennsylvania and a member of the Council of Landscape Architecture Registration Boards. www.jonathanalderson.com

Exhibit Resources

- Benches are fabricated by Longwood Gardens' carpenters from walnut
- Paper Bird Sculptures by Diana Beltran Herrera: www.dianabeltranherrera.com
The works are completely made of paper and feature local bird species.
- Metal Spider Sculpture by ART research
- Longwood Gardens Herbarium collection and Garden Highlights
http://longwoodgardens.org/gardens/about_our_plants/research/herbarium

Webb Farmhouse & Galleries

- Reproduction table and chairs - The Federalist.
<http://www.thefederalistonline.com/company.shtml>
- Reproduction Hutch - Charles Ginty Associates.
Route 82
Unionville, PA 19375
610.347.2222
www.charlesgintyassociates.com
- Michael M. Coldren Company, Inc.
www.coldrencompany.com
p. 410.287.2082
f.410.287.1434
100 Race Street
North East, MD 21901
Historically accurate architectural hardware and fine home accessories
- Chester County Historical Society
225 N. High Street
West Chester, PA 19380-2658
610-692-4800
<http://www.chestercohistorical.org>
- Hagley Museum and Library
200 Hagley Road
Wilmington, Delaware
302-658-2400
<http://www.hagley.org>