

FERN GARDEN

Ferns consist of underground rhizomes with leaves and spore-producing stalks projected at various places above ground. Ferns are non-flowering plants, which reproduce by tiny spores dispersed by water and wind. Most ferns require relatively shady conditions, including the species planted here: Ostrich (*Matteuccia struthiopteris*), Cinnamon (*Osmunda cinnamomea*), Interrupted (*Osmunda claytoniana*), Lady (*Athyrium filix-femina*), and Maidenhair (*Adiantum pedatum*).



Cinnamon Fern



Interrupted Fern

WOODLAND

Sites with rich soils and relatively high moisture support woody species like the early successional Paper Birch (*Betula papyrifera*) and Alternate-leaf Dogwood (*Cornus alternifolia*) exhibited here. Woodland wildflowers in the Great Lakes region must cope with the shade produced by a woody canopy. These plants have built-in adaptations for shade tolerance or they flower and establish seeds very early, before the canopy leaves have fully formed. In general, native wildflowers are difficult to grow in open places like the Lenfestey Family Courtyard due to the very adaptations that make them successful in moist, shady woodlands.

NATIVE AMERICAN HERBS

Humans recognized the value of plant chemicals in leaves and seeds long before the development of modern agriculture. Many of the chemicals produced by plants for protection from insect predators or diseases are beneficial to people as medicines or flavorings. For example, Queen of the Prairie (*Filipendula rubra*) contains salicin, a chemical relative of aspirin. Lavender Hyssop (*Agastache foeniculum*) contains camphor, glucosides, and marrubin, making it useful as a medicine, sweetener, and flavoring. The Native American herb garden includes just a few of the medicinal or culinary herbs used by the Potawatomi, Menominee, and other Midwestern tribes. Early European settlers quickly recognized the value of these plants, which became some of the earliest flowers to be cultivated in American cottage gardens.

HEIRLOOM VEGETABLES

Today, humanity depends more than ever on the genetic diversity of native and domesticated plant species. Unfortunately, commercial varieties of plants often consist of only a few, selectively bred genetic strains. Heirloom plants preserve some of the many varieties of crops that have been used during the past. These plants provide a much richer and more interesting selection of food items than can be found in today's supermarkets. This heirloom vegetable garden illustrates some of the many varieties of heirloom vegetables that have been preserved.



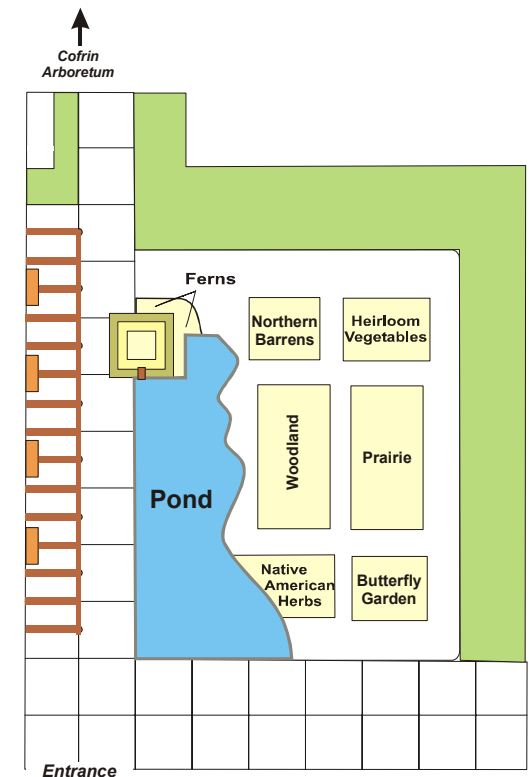
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AN EDUCATIONAL BOTANIC EXHIBIT

LENFESTEY FAMILY COURTYARD

UNIVERSITY of WISCONSIN-GREEN BAY



LENFESTEY FAMILY COURTYARD GARDENS

ABOUT THE GARDENS

Seven garden plots in the Lenfestey Family Courtyard were established during spring 2002 by the Cofrin Center for Biodiversity. These ongoing educational exhibits represent suites of ecologically related native plants and cultivars found in the Great Lakes region.

Plants are necessary for the survival of all species, including humans. In addition to their direct benefits as food and medicines, plants provide vital ecological resources and services like wildlife habitat, soil stabilization, pollution abatement, and even life-sustaining gases. Without plants, for example, the oxygen that we breathe would be quickly depleted. More than 350,000 species of plants occur on earth, including at least 2,436 native and 792 introduced species in Wisconsin. Plants in the Great Lakes region inhabit a wide variety of ecological communities, from dry barrens to rich mesic forests to agricultural fields. The gardens in the Lenfestey Family Courtyard introduce some of Wisconsin's characteristic plant communities, each illustrating important interactions between species and local environmental conditions.

The Lenfestey Family generously provided support for the construction of the gardens and other features of the courtyard. Like Mary Ann Cofrin Hall itself, this area was designed to illustrate some fundamental principles of responsible architecture. Rainwater is captured from the roof for the cistern and pond. Use of native plant species reduces the need for herbicides and insecticides, and the wooden trellis (constructed from discarded utility poles) supports Virginia Creeper (*Parthenocissus quinquefolia*), a native vine that helps shade the west-facing windows.

BUTTERFLY GARDEN

Butterflies and plants have many mutually beneficial relationships. By visiting flowers, butterflies transfer pollen from one plant to another, a critical step for plant reproduction.



Flower shape, color and fragrance are cues for attracting insect pollinators. Butterflies favor flowers with adequate landing structure and easy access to nectar. Insects are attracted to bright flower colors such as orange, yellow and purple, in addition to ultraviolet “color” invisible to human eyes.

The Butterfly Garden contains nectar-rich plants like Rough Goldenrod (*Solidago rigida*), New England Aster (*Aster novae-angliae*), Purple Bergamot (*Monarda fistulosa*), Showy Goldenrod (*Solidago speciosa*), and Smooth Aster (*Aster laevis*). In order to complete their life cycles, butterflies also need appropriate host plants for larval feeding. These plants tend to be more specific, sometimes involving a single plant species.

NORTHERN BARRENS

Open barrens occur in the northern Great Lakes region on infertile soils where fires are relatively frequent. These conditions make barrens similar to prairies, although the dominant plant species are often low woody plants like blueberries (*Vaccinium* spp.) and Sweet Fern (*Comptonia peregrina*). Many of our northern barrens have been converted to pine plantations or farmland. Lack of disturbance and invasion by non-native species threaten many of the remaining examples of this vanishing habitat type.

TALLGRASS PRAIRIE

Native prairies and savannas once covered much of the southern third of Wisconsin. Today, only small remnants remain, some of them along railroad right-of-ways, roadsides, and other uncultivated lands. Successful prairie plants must be able to cope with drought, fire, and grazing. Consequently, many prairie plants have deep roots that sustain the plant even when the above-ground biomass is removed. Prairie plants exhibited in the Lenfestey Family Courtyard include Prairie Blazing Star (*Liatris pycnostachya*), Spiderwort (*Tradescantia obiensis*), Yellow Coneflower (*Ratibida pinnata*), Prairie Dock (*Silphium terebinthinaceum*), and Rattlesnake Master (*Eryngium yuccifolium*). Also growing here are the three dominant grasses that define North America's tallgrass prairie: Big Bluestem (*Andropogon gerardii*), Indian Grass (*Sorghastrum nutans*), and Switchgrass (*Panicum virgatum*). These native species are called “warm-season” grasses because they undergo most of their annual growth between June and September, unlike agricultural grasses introduced from Europe and Asia, which undergo much of their annual growth before June 1.



SAND PRAIRIE

Variations in prairie plant communities occur in different substrates or in different climatic zones. Prairie plants adapted to dry, sandy soils are exhibited at one end of the prairie garden where sandy soil has been provided. These species include Little Bluestem (*Shizachyrium scoparium*), Prairie Smoke (*Geum triflorum*), Butterflyweed (*Asclepias tuberosa*), and Bird's-foot Violet (*Viola pedata*).