TOURS

Lincoln Park Conservatory and Gardens

Docent Training

April 11, 2020

CONTENTS

Reading assignments supplement each week's lectures. Please read before the lecture

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Essential Facts: Lincoln Park Conservatory

THE CONSERVATORY:

1. Built from 1890-95. Designed by Silsbee and Bell
2. Heated by a steam system built in 1889.
3. Air conditioned by opening air vents with wheel and chain mechanism
4. Humidity 50-60%. Temps between 65 and 75.
5. Front vestibule added in 1950s
6. Whitewashed in summer to protect plants from extreme heat. Whitewashing wears off in time for winter.

THE PALM ROOM:

1. Showcases vegetation found in rainforests (area just north and south of equator)
2. The Palm Room contains both palms and non-palms
2. These plants and trees are economically important. They provide food, shelter, drink, clothing, fuel, fiber and medicine.
3. They are environmentally essential. Rainforests are the "lungs of the planet." They produce more than 20% of the world's oxygen.
4. 1⁄2 of the world's 10 million species of plants, animals and insects live in tropical rainforests
5. LPC has 25 species of palms ranging in size from 2' to 50+'
6. Palms first appeared on earth 80 million years ago.

THE FERN ROOM:

1. Ferns are ancient plants that coexisted with dinosaurs
2. Ferns are spore bearing plants. They lack flowers, fruit and seeds.
3. Ferns depend on water to complete their life cycle.
4. Coal is made of compressed remains of ferns.
5. Ferns were the dominant plant on the planet 65 million years ago when dinosaurs were also dominant.

THE ORCHID ROOM:

1. There are 30,000 species of orchids. They are found on all continents except Antarctica
2. Orchids are classified by how they live:
   Epiphytes – receive nutrients from moisture in air.
   Terrestrial – receive nutrients from soil.
   Lithophytes – grow on rocky surfaces and receive nutrients from air.
3. Other types of plants in Orchid Room:
   Bromeliads – rosette of leaves creates water reservoir to collect nutrients. Tropical cacti, Carnivorous plants and Ant Plants.

Talking Points for the Lincoln Park Conservatory

Palm Room

- Sausage Tree
- Giant Taro or Elephant Ear Taro
- Striped Bamboo
- Cacao Tree Coffee
- Tree Banana plant
- Banyan Tree
- Beehive ginger
- Screw Pine Ylang
- Ylang Avocado
- Tree Mahogany
- Tree Philodendron
- Coconut palm – feather
- Bismarck Palm – fan
- Fishtail Palm – fish
- Candle Tree
- Lipstick palm
- Soursop Tree
- Lollipop plant
- Curare vine
- Bottle brush plant
- Crossandra – firecracker plant
- Buddha's Hand/Fingered Citron
- Curry leaf-tree
- Papaya Mango
- Sour Orange
- Dumb cane
- Calabash Tree
- Bougainvillea

Fern Room

- Princess vine
- Leather-leaf Fern
- Silver Dollar fern –
- Maiden Hair Fern
- Bird's Nest Fern
- Dwarf Mother Fern
- Sago Palm – Cycad
- Australian Tree Fern
- Rabbit's foot fern
- Staghorn Fern
- Skeleton Fork Fern

Orchid Room

- Pitcher plant
- Popcorn orchid
- Lady Slipper
- Bromeliads
- Spanish moss
- Cactus
- Ant plants – Bullhorn acacia
- Koi fish

Show House

- Three Seasonal Shows each year
- Spring Show
- Summer Show
- Winter Show

Greenhouse Information

Each Greenhouse of the Conservatory grows a different type of material for the Conservatories and the Park District. This is a list of what each greenhouse grows.

The Ten Greenhouses off the Headhouse

Greenhouse #1	First year Poinsettias are grown here for Garfield Park Conservatory. New cuttings are started and potted in early summer then the plants develop and mature here until use in mid- November. Once the poinsettias move out, summer annuals are started and grown in here until they are ready to plant in May.
Greenhouse #2	First year Poinsettias in here are grown for Lincoln Park Conservatory from summer until mid-November. Once the poinsettias are gone, spring annuals are started and grown in here until they are ready to plant
Greenhouse #3	First year Poinsettias in here are grown for Lincoln Park Conservatory from summer until mid-November. Once the poinsettias are gone, spring annuals are started and grown in here until they are ready to plant
Greenhouse #4	Older Poinsettias, larger specimens, rarer varieties, mature tree standard Poinsettias are grown here for use in both conservatories. Post-holiday show use, the poinsettias are cut back left to dry out, then watered and regrown again in early summer.
Greenhouse #5	The Cold Greenhouse house, all spring perennials, Bamboos, temperate Carnivorous plants and orchids from tropical mountain highlands such as Bletilla, Cymbidiums and certain Dendrobium species.
Greenhouse #6	Subtropical cooler growing bulbs, perennials and shrubs
Greenhouse #7	Outdoor Chicago Park District floriculture team grows their summer annuals for various gardens throughout the park district.
Greenhouse #8	Orchid greenhouse, warmer orchids (Phaius, Phalaenopsis, Vandas, tropical cactus, epiphytes and all Bromeliads are grown in the front of house 8, the back is kept 10 degrees cooler where Cattleyas, Dendrobiums, Miltoniopsis, Odontoglossums, Oncidiums, and Paphiopedilums orchids are grown.
Greenhouse #9	Larger woody trees for the spring show display, mostly Azaleas and Camellias Greenhouse #10 Smaller and medium sized woody spring flowering shrubs, mostly Azaleas and Camellias.

At the South End of the Greenhouses

Greenhouse #11	condemned and not in operation

Greenhouse Information

Greenhouses Connected to the Conservatory

Greenhouse #12	supplemental tropical annuals and large Cycads
Greenhouse #13	Various tropical Plants for show and to be grown on for the Palm House
Greenhouse #14	Various tropical plants for shows and to be grown on for the Palm House
Greenhouse #15	Ferns and Aquatics

Southernmost Greenhouse at the Conservatory

Greenhouse #16	Outdoor Chicago Park District floriculture team grows their summer annuals for various gardens throughout the park district.

Spring Flower Show

Consolidated information from Bev Perret (2014) and Norm Raidl (2015)

General Info:

1. The show generally runs from February to May (Mother's Day).
2. There are a variety of flowers at any time in the show but there will also be a progression of flowers throughout the duration of the show. Listed below is the general order.
    a. Azaleas and camellias
    b. Spring bulbs
    c. Cool season annuals (snapdragons and stock among others)
    d. Early blooming perennials and shrubs
    e. Easter and Asiatic lilies
    f. Hydrangeas
    g. Fuchsias
3. Of the three flower shows at the Conservatory, this show attracts the most visitors. A great number of the visitors come on and around the major holidays (Valentine's Day, Palm Sunday, Easter Weekend, Mother's Day) and weekends.
4. The spring bulbs that are displayed in the spring show must go through and dark rooting and chilling period. They are stored in the big coolers in the basement. If you don't know what I'm talking about, ask a staff member to show you. The bulbs need at least 8 weeks of cool temperatures and 3 weeks in warmth and light in order to produce flowers.
5. Producing a flowering plant for this show is tricky because of outside weather conditions and reduced lighting in winter. When it's very sunny, it's also generally very cold outside and when it's a bit warmer, the days are usually quite cloudy.

Camellias

Flowering tree or shrub found in the wild in mainland China, Taiwan, southern Korea and southern Japan. Flowering is between January and March. Introduced into Europe during 18th century by Dutch East India Company. Grown in the outdoors in the US South.

Valued for its flowers which can be single, semi-double or double in red, pink or white. Also multi-colored stripes or specks.

Considered lucky symbols for Chinese New Year. A related plant is the one tea comes from.

Camellias are grown successfully out of doors in the United States from Long Island, NY, down along the Atlantic Coast, the Gulf Coast, and along the Pacific Coast from California to Washington. The camellia plant usually survives occasional

temperatures as low as +10 degrees to 0 degrees F. Camellia flower buds are damaged at temperatures below +10 degrees to +15 degrees F.

Azaleas

Flowering shrub comprised of 2 of the 8 subgenera of Rhododendron.

First introduced to outdoor landscaping in 1830's on a rice plantation in Charleston, South Carolina.

Spring festivals celebrating azaleas in Japan, Korea and many locations in the US.

All azaleas are in the genus Rhododendron, with evergreen azaleas in the subgenus Tsutsusi and deciduous azaleas in the subgenus Pentanthera. You can usually distinguish between azaleas and rhododendrons by their leaves: azalea leaves tend to have long straight hairs parallel to the leaf surface, usually along the midrib on the underside of the leaf, and they tend to be thinner, softer and more pointed than rhododendron leaves.

Azaleas are classified as being species or hybrids. A species is a population that interbreeds and is reproductively isolated from other populations. Seedlings from such isolated species populations look like the parents, or "grow true from seed". Hybrids are crosses between other species or hybrids. Hybrids will not grow true from seed and may be faithfully reproduced only from cuttings, which are clones of the mother plant. Azaleas have been hybridized for hundreds of years. Around 10,000 different plants have been registered or named, although far fewer are in the trade. This provides a very wide variety of plant habits, sizes, colors and bloom times to meet almost every landscaping need or personal preference.

All North American species azaleas, also called native azaleas, are deciduous (drop their leaves in the fall), with flower colors ranging from white to purple, pink, red, orange and yellow. Evergreen azaleas, native primarily to Japan, have flower colors including white and various shades of purple, pink, red and reddish orange, but not yellow. Color patterns include single colors and bicolor as well as sectors, stripes and flecks. For many azalea varieties, all the flowers on the plant are similar. For other varieties, the flowers on the plant may be a mixture of color variations, with a different mixture from one year to the next.

Plant habits of the different varieties range from stiffly upright, to broad spreading, to irregular. Plant height can range from under a foot to well over 15 feet. A few evergreen varieties ('Pink Cascade') are weeping and may be grown as a hanging basket. Many varieties are dense and compact, others are quite open, and some almost tree-like.

Spring Flower Show

Most azalea varieties bloom in the spring, around May in the mid-Atlantic area of the United States, with some blooming a month or so earlier, and a few as late as August and September. Blooms typically last for one or two weeks. In warm climates such as the deep south of the United States, some azalea varieties bloom again in the fall.

Azaleas are long lived plants when their requirements are met. There are azaleas in Japan which are hundreds of years old, and may appear more as a small tree than a shrub, with (rarely) trunks 12 inches or more in diameter.

Azaleas are woody shrubs which keep growing all their lives. Some varieties can get quite tall, into the tens of feet, while others remain spreading groundcovers less than 12 inches in height. Upright varieties tend to also spread out with age.

Tulip:

Spring-blooming perennial that grows from bulbs. Can be between 4 and 28 inches high. Bulbs planted from late summer to fall to a depth of 4 to 8 inches.

Cultivation began in Persia probably in the tenth century. Name derived from the Persian. It was fashionable in the Ottoman Empire to wear tulips on turbans. Tulips were considered a sign of abundance and indulgence.

Introduced to Western Europe in late 16th century and to Netherlands in 1594 which led to 'tulip mania". Tulip bulbs became so expensive that they were treated as a kind of currency.

Bev Perret, 2014 Updated by Rebecca Conant, 2018

Winter Flower and Train Show

Poinsettias:
The plant originated near Taxco, Mexico and was cultivated by the Aztecs of central Mexico. They used bracts to produce a reddish-purple dye and the sap as medicine for fever.

It is called the Christmas Eve Flower (La Flor de Noche Buena). Its association with Christmas began in 16th century Mexico where legend tells of a girl too poor to provide a gift for the celebration of Jesus' birthday. The tale goes that the child was inspired by an angel to gather weeds from the roadside and place them at the foot of the Christmas altar. Crimson blossoms sprouted from the weeds. From the 17th century, Franciscan friars near Taxco included the plants in their Christ- mas celebrations. The star shaped leaf pattern is said to symbolize Star of Bethlehem.

The poinsettia flower is really a modified leaf or colored bract. In the center of the bracts is the real yellow flower with pollen. While the poinsettia is not poisonous, people with latex allergies have a skin reaction to the plant (probably the sap). Color is created through a process known as “photoperiodism,” meaning that the plant must experience 12 hours of darkness at a time for at least five days in a row to change color. Then they have to have lots of sunlight in order to pro- duce the brightest color. There are more than 100 varieties available, with red being the most common, though pink, yellow, white, orange, and multi-colored varieties also exist.

Poinsettias were Introduced to the US in 1828 by Joel Poinsett who was the first American Ambassador to Mexico in 1825. Poinsett was an avid amateur botanist and sent back cuttings to his South Carolina plantation. (National poinsettia day: December 12; the anniversary of Poinsett's death in 1851).
Paul Ecke, Jr is considered father of the Poinsettia industry due to his discovery of a technique which caused seedlings to branch in order to create a fuller plant. Breeding programs outdoors began in 1950's and then moved into greenhouse production in 1960's. Ecke ranch in southern California and a location in Guatemala grows over 70% of all Poinsettias purchased in the US and about 50% of world-wide sales. Ecke sold the operation to a Dutch company in 2012.

They are the best selling potted plant in the US and Canada – over 34 million plants a year. In Mexico, Poinsettias are a perennial flowering shrub that can grow up to 15 feet tall.

Some of the most common questions about poinsettias concern how to keep them and encourage them to bloom again. It is possible, but takes work. To keep your current poinsettias looking good, remember to put them in well-lit areas, but keep in mind that direct sunlight can dry them out. Keep them warm (between 60 and 70oF), and keep them out of hot and cold drafts (especially on the way home from the store). And remember to water them when the soil be- gins to dry. To get them to bloom again next year, you’ll need to move them to a dark closet between 5pm and 7am every day for about 8-10 weeks. Don’t forget to take them out during the day so they can get sunlight!

Pedro raises all of these from small cuttings that we receive in March. In fact we have a greenhouse dedicated to these plants. Because poinsettias need to spend at least 12 hours in the darkness for several days, the conservatory covers its exterior light so the greenhouse is in total darkness overnight to facilitate this process. Some of the poinsettias are kept from year-to-year.

- Mid May_ everything begins by collecting different size pots for the new poinsettias for Garfield Park Conservatory and Lincoln Park Conservatory.
- Early June, old poinsettias saved from previous years get pruned to give them shape. White wash is applied to glass to keep the greenhouse cooler during the hot summer.
- Pots get filled with soil in preparation for rooted cuttings coming in June/July/August from different greenhouse suppliers.
- Fertilization begins with the second week of planting new cuttings, fertilize every two weeks until mid-November (when daylight is less).
- Early October we block any source of light by using shades on the doors to ensure flower and bract formation.
- Fungicides are applied as needed. Insecticides are applied to control whitefly along with beneficial insects as supplement.
- We keep the greenhouses at 75 day and 65 night during production.
- The goal is to have plants in color by Thanksgiving November 24 through January 6 2019.
- After the holiday is over some of the new varieties get saved for next year's Christmas show, the rest get composted.

References:

http://extension.illinois.edu/poinsettia/facts.cfm https://pss.uvm.edu/ppp/articles/points.htm
http://solutionsforyourlife.ufl.edu/hot_topics/environment/interesting_poinsettia_facts.shtml
http://www.aces.uiuc.edu/vista/html_pubs/point/point.htm

Three Gardens Tour (Version One)

Conservatory Gardens – Grandma's Garden – Alfred Caldwell Lily Pool
The tour begins in front of the Lincoln Park Conservatory

Introduction:
This is a new tour focusing on the evolution of Gardens in America. This site offers a unique opportunity today to see three different garden styles co-existing within the same area of the park. Today as we tour the Conservatory Gardens, Grandma's Garden and the Alfred Caldwell Lily Pool we will learn about early precedents from ancient times to the present that influenced these Lincoln Park gardens.

Overview History of Lincoln Park

- Lincoln Park began as a small public cemetery on the northern most boundary of Chicago where victims of cholera and smallpox were buried in shallow lakeside graves. After citizens who were fearful of the public health threat rallied for its conversion to parkland, the city reserved a 60-acre unused section as Lake Park.
- Shortly after the assassination of Abraham Lincoln (1809-65), the park was renamed in his honor and the city hired Swedish landscape gardener Swain Nelson to design and implement the park's first plan.
- In 1869 the Lincoln Park Commission was formed, and the park was expanded to Diversey at the north and North Ave. at the south, including exhuming bodies and moving them to other cemeteries.
- The Lincoln Park Commission was known throughout the nation for having an excellent Floral Dept. In the 1877 a series of four greenhouses were built just south of the present Palm house to propagate the flowers for all of Lincoln Park's display gardens. At the same time formal garden was planted adjacent to the green houses.

Overview of Formal Gardens in History

- Gardens are defined by the purposes for which they exist: food, ornamental, followed by deer parks, woodlands and public parks.
- Gardening is about lifestyles; for the rich they are symbols of social & economic position; for some they were a means of survival and for others an expression of personal gardening expertise. They also provide a cool, quiet, restful refuge for relaxation and recreation.
- Formal design is based on geometric patterns and symmetry. They used shade, water, and plants.
- As early as 1400 BC the Egyptians began creating formal gardens using flowers, clumps of reeds, fruit trees and fishponds.
- Moslem gardens embraced the idea of Islamic Paradise with fountains, shade and fruit trees. Persian carpets reflect what early gardens looked like because they were a stylized representation of their gardens.
- The Greeks loved absolutes; mathematics and especially geometry represented a world of perfection by creating a refuge with straight lines.

Three Gardens Tour (Version One)

- The Romans imposed unity on the chaotic natural landscape with the use of trimmed box-wood hedges, box topiary and a multitude of fountains fed via waterworks built by expert Roman engineers.
- During the Italian Renaissance, extensive grounds were landscaped in the Roman tradition with borders of tall, dark cypresses, geometric flower beds, and stone balustrades.
- In France, during the 17th century, the immense gardens in the Classic French style of Versailles, for example, had many imitations throughout Europe during the period. They were symmetrically arranged, designed to give an impression of limitless grandeur and embellished with fountains, pavilions, and statuary.

Lincoln Park Conservatory History

- Developments in iron and glass technology made the construction possible the construction of Conservatories in Europe during the early 19th century.
- One of the most influential early glass structures was the Crystal Palace, built in London's Hyde Park for the 1851 Great Exhibition which highlighted Britain's achievements during the Industrial Revolution.
- Within a few years of the completion of the Crystal Palace conservatories began appearing in the United States; the Lincoln Park Conservatory is construction of glass and metal.
- Two architects designed the structure which was built between 1890 and 1895. Joseph Lyman Silsbee & Miflin E. Bell. Silsbee, the more famous of the two, designed other prominent buildings in Chicago and was the first employer of Frank Lloyd Wright and George Washington Maher.
- During the Victorian era, there was great fascination with nature. Studying and classifying plants, animals, insects became common hobbies. People were increasingly concerned about the ill effects of industrialization and conservatories became popular because they provided "tropical paradises" within cities.
- The Lincoln Park Conservatory propagating houses produced one-quarter million plants for the outdoor gardens in the 1890s.

Formal Garden Changes Over Time

- The formal gardens, first planted in 1877, were hugely popular. In October of 1877, a large number of bulbs were imported from Holland and added to the garden. A few months later, the head gardener (Carl Strombach) went to Washington and obtained choice plants from the Smithsonian.
- Plan of 1887 shows the Formal Garden with its French style path system, Bates Fountain and Schiller in place, and the birch tree canal is still in place running along the entire east edge of the garden.
- By 1903 the Birch Tree Canal had been filled in. Around 1905, all of the paths were removed in the formal garden (grandma's garden too). At that time, a small lily pool was added east of the garden along part of the area that was the Birch Tree Canal. This lily pool had rocky

edges and was artificially heated. There were a variety of types of lilies. Some were very large lilies such as Victoria Regalia or Victoria Amazonica were propagated in tanks in the conservatory and transplanted to the lily pool. (These are the kind of lily pads that you see pictures with children sitting on them.)

- The Lily Pools in Lincoln Park were so famous throughout the world that in 1897, the financial advisor of the Khedive of Egypt requested seeds from some of the lilies.
- By the 1950s, the old small Lily Pool had been converted to a rock garden. Vestiges of this garden can be seen today.
- The recent master plan for the garden proposes a water garden with both native and exotic emergent plants. This would be a heated lily pond.

Formal Garden Statuary

- **The Bates Fountain**, also known as **Storks at Play**. Composed of birds, fish and childlike creatures that are 1⁄2 boy 1⁄2 fish, the bronze elements were sculpted by Augustus Saint-Gaudens and Frederick MacMonnies.
- The fountain's donor, Eli Bates left $25,000 in his will for the Lincoln monument in Lincoln Park and an additional $10,000 for an ornamental fountain in the park. The Lincoln Park Commission installed the monument in 1887. The Lincoln statue is located east of the Chicago Historical Society. Other Chicago statues by Saint-Gaudens are General John A Logan Memorial and the Abraham Lincoln (seated Lincoln) in Grant Park.
- The sculptures are attributed to both St. Gaudens and MacMonnies, but the children and birds closely resemble MacMonnies later works. MacMonnies began as an errand boy in St. Gaudens studio at the age of 16. St. Gaudens felt that the young man had talent and helped to mentor him. MacMonnies studied art at night school in NY and went on to study sculpture in Paris. He returned to America and began working as an assistant to St. Gaudens in 1887, the same year that the fountain was created.
- **Schiller Statue**: was erected in Lincoln Park by a group known as Chicago Citizens of German Descent in 1886. Ernst Rau sculptured this traditionally posed and idealized bronze figure of Schiller. The work is regarded as a masterpiece by the artist, who was born and worked in Germany. The carved granite base is typical of the stonework done in late Victorian America.
- **Johann Christoph Friederich von Schiller** (1759 – 1805) was a great German playwright, poet, and literary theorist. The constant theme of Schiller's writings was the human need for freedom. Schiller considered himself a 'sentimental' or reflective writer. Schiller's words don't always translate well into English; however, many Americans are familiar with his verses from Beethoven's 9 Symphony Ode to Joy.
- The monument was donated by a group of Chicagoans of German descent.

Grandma's Garden (cross Stockton)

- The 1887 plan shows the continuation of elliptical paths in this area with lawn panels in between. The plan does show undulating beds along the edges. This was likely the

beginning of Grandma's garden.

- A photograph of the Garden is published in the 1899 History of Lincoln Park. Here it is called the Country Flower Garden.
- The English Country Garden has always been nicknamed Grandma's Garden because during the 19th Century, a cutting garden of perennials was often thought of as a grandmother's garden, particularly in England. Some flowers have changed but it has always had an undulating lawn edged by irregular floral beds and trees.
- This garden could be described as a border Garden. These often had narrow plantings along some division or boundary such as a walkway, road or lawn and could be a mix from trees, shrubs to seasonal plants.
- Jens Jensen (1860 – 1951) a Danish Immigrant (considered "dean of the World's Landscape Architects" in New York Times obituary) and was the creator of the Prairie style of landscape architecture wrote an article about the formal gardens and Grandma's Garden in 1901. Jensen described how unusual it is to have two examples of distinctly different garden styles right next to each other. He was much more favorable to Grandma's Garden than the formal garden.
- Americans, obsessed with their lawns, are saying many things about themselves too: they both define our property and connect us to our neighbor.
- A 1907 guidebook to Lincoln Park reported that there were 450 species in Grandma's Garden, and that the flowers were all carefully labeled. The document suggests that the garden was in constant bloom from early spring through late fall. It suggests that in some parts of the country, some of these plants are commonly thought of as weeds.
- The 1907 guidebook says "the place is a textbook for the student, a joy to the horticulturalist, a trysting place for the lover, and altogether a place of delight.

Grandma's Garden Statuary

- The **William Shakespeare Monument** sits in the Grandmother's Garden. It is an appropriate location for the Bard, considering that this is an Old English Garden. The monument was purchased through a bequest from Samuel Johnston, a real estate and railway tycoon.
- William Ordway Partridge, then a little-known sculptor, won a competition to create the monument. No one knows exactly what Shakespeare looked like, so Partridge studied over 100 existing portraits of the famous playwright. He also visited Stratford-on-Avon and also had Henry Irving, a Shakespearian actor help him research the appropriate clothing.
- Shakespeare is a good example of the naturalistic or realistic style of sculpture that became increasingly popular in the 1890s and early 20th century. The monument was installed in 1894.
- A Beethoven bust was donated and installed in Grandmother's Garden in 1897. It remained on its base at Webster and Stockton until it was stolen in 1970. A Lincoln Park Beethoven society had hoped to replicate the bust and base in the late 1980s, but the project never materialized.

Three Gardens Tour (Version One)

History of English Gardens

- As a result of Henry VIII's dissolution of the monasteries, great parcels of land were made available to favorites and the well-connected. It made possible the great country estates which led to rapid introduction of new plant material from all over the world as exploration flourished.
- In the mid-1600, great concern arose that for many centuries before, the cutting down of the English woodland had left parts of the county almost treeless; in response, planting came to be regarded as a patriotic duty.
- In the 18th century there arose English Landscape Movement which came about from the need for country life to be more comfortable and profitable for the landowners and which made the reputations of England's' great landscape designers such as Capability Brown.
- Deer parks, associated with these estates, provided venison, the meat of the elite but were also, status symbols; of wealth, success and power. These parks, bounded by palings or stone, also provided a view – the landowner was then, "lord of all he surveyed".
- The Landscape Movement, which arose out of the deer park, exemplified a way of creating a great swatch of land around the residence, but it also insulated the owners from the growing problem of the poor.
- The beginnings of a revolt – from the formal to natural –followed during the 18th century during the Enlightenment and a Romantic Age in which people were obsessed with nature and horticulture.
- This period brought into fashion the English cottage garden with their romantic aura and finally elevated the ordinary citizen in society with practical and aesthetically pleasing in their own gardens.
- The cottage gardens, which provided common people with their own perennial cutting gardens, very prevalent in the Cotswolds, were often called Grandmother's Gardens.

Alfred Caldwell Lily Pool

- Designed by Alfred Caldwell in 1936-37, the Lily Pool replaced an earlier Victorian garden and lily pond dating from 1889. By the 1930s, the earlier landscape had fallen into disrepair.
- Alfred Caldwell (1903- 1998) was a Chicago Park District landscape designer when he was assigned to redesign the Lincoln Park Lily Pool. The project was one of many improvements funded by the federal government's Works Progress Administration.Alfred Caldwell was the last living Prairie School landscape designer of the 2 th century. He was a disciple of the renowned conservationist and landscape architect, Jen Jensen (1860- 1951). Caldwell's design style was shaped and defined by his deep understanding and appreciation of Jensen's philosophies and his work.
- Alfred Caldwell personally knew Jens Jensen, Frank Lloyd Wright and Mies van der Rohe and was highly respected by each of them.
- Jensen's influence on Caldwell is particularly evident in the Alfred Caldwell Lily Pool.

Creating an introspective place that he believed city dwellers needed, Caldwell included Jensen's favorite elements such as native plants, natural-looking water features, and local stone.

- Alfred Caldwell called the Lily Pool "A hidden garden for the people of Megalopolis" and "a sanctuary of the native landscape" in the city.
- Sun Opening- Sun Openings or clearings are another element that Jensen and Caldwell both used. These are carved out spaces in the vegetation, allowing sunlight to come through, illuminate, and nourish the water and surrounding plants. The edges were more densely planted, creating an enclosed and protected space and allowing the lily pool to be an oasis in a built-up urban environment.
- Paths- Like Jensen, Caldwell used curving walkways, meandering steppingstone paths and irregular masses of vegetation. He did not like formal geometric spaces, rigid trimmed hedges or straight walkways. The curved stone paths are more organic.
- Council ring- Around 1910 Jensen began using council rings in his landscape designs. He considered them "friendship circles" or "story rings." Because these were circular benches, Jensen thought they were democratic spaces, i.e. no one sits in a superior position. Reminiscent of Native American traditions, there was often a hearthstone in the middle, allowing people to gather around a campfire. The council ring was one of the most significant of Caldwell's elements that pays homage to Jensen.
- Shelter- The shelter represents the influence of Frank Lloyd Wright. In the 1920s, Caldwell met Wright through Jensen. Caldwell spent time with Wright at Taliesin in Wisconsin, and the two corresponded from time to time. Caldwell respected Wright's ideas about organic architecture; the relating of a building in plan, elevation, and materials to the landscape; emphasis on horizontality; an understanding of how to guide people through uninterrupted spaces; and both drew from the forms and simplicity Japanese design.
- When describing the shelter, Caldwell said "The spreading horizontal structure is like a tree, rooted in a rock ledge."
- Planting design- Like Jensen, Caldwell intended for his designs to look natural and to honor nature. His planting technique relied on a layering or stratification of materials. Masses of large canopy trees were planted around the edges, to enclose the space. Irregular groupings of smaller under-story trees and shrubs were used in the interior to frame views and heighten the experience of the sun- opening. Wildflowers were scattered along the ground and planted between the stones.
- In 1938, after being frustrated that the Chicago Park District would not purchase the wild-flowers that had been indicated on his original plan, Caldwell decided to cash-in his $300 insurance policy to buy plant materials himself. He collected plants in Wisconsin and brought them back to Chicago to plant them without official permission from his employer.
- On the day that Caldwell was setting the wildflowers in the Lily Pool, three "foreign looking" men who spoke German wandered into the Lily Pool. "The big guy" was very interested in the pavilions. He liked their touch of Frank Lloyd Wright. The little guy and the middle guy were fascinated with the wildflowers that could be planted in rocks." The three men were:

Ludwig Mies van der Rohe, Walter Peterhans, and Ludwig Hilberseimer, who were the architecture faculty from the Armour Institute, now known as the Illinois Institute of Technology. This was Caldwell's first meeting with Mies, and the two went on to have a long and productive relationship.

- Caldwell wrote: "The trees shrubs and flowers planted in this garden were native to the Chicago Plain. They represented scientifically the ecology of the region. They were those plants which, over thousands of years had achieved perfect adaptation to the environment of climate and soil. Consequently, they were at once the most beautiful and healthy. Sickness is never beautiful. Thus, these plants, true to their ecology, were at once the most practical and the most poetic."
- Stone & Water- Caldwell designed the lagoon to emulate the effect of prehistoric glacial waters cutting through and layering native limestone. According to Caldwell "the stone bluffs are a veritable statement of the natural forces that created the terrain of Chicago." Caldwell's use of stratified stone emulates the natural striation of ancient limestone bluffs throughout the region.
- Cascade/ Waterfall- The cascade (or waterfall) is another element that symbolizes the natural history of the glacial waters cutting through stone. Jensen also used waterfalls to represent a natural spring or the source of the water feature. Water is also a symbol of nourishment.
- Caldwell wrote: "This waterfall, as a work of art, is a celebration."
- Fullerton Gate- Caldwell designed the Fullerton Gate as a Prairie style entryway into the landscape. The use of stratified stone relates to the stonework he used throughout the land- scape. This natural-looking wall between the Lily Pool and outside spaces is somewhat reminiscent of a Japanese screen. Caldwell was an excellent draftsman and he drew beautiful sketches of this gate that are evocative of Japanese art. The Japanese quality also shows Frank Lloyd Wright's influence on Caldwell.
- Caldwell said "This garden is a biographical footnote on the meaning of the Chicago Plain. That is its 'Nature.' Nature is the sum total of reality. Therefore, Nature is History."

Tour Conclusion:

Today you've seen three gardens of distinctly different styles on our tour. We started with the formal gardens that echo the straight lines and control of the Italian Renaissance landscapes and Classic French Gardens. We also learned about the more nature-looking spaces that were introduced in England and often had flowing lines and irregular plantings. This leads to a premier example of a New American style, celebrating the natural prairie landscapes of the Midwest- ern Region. The Alfred Caldwell Lily Pool exemplifies a new way of thinking about garden design: one of considering our social needs, the "rationality" of place, expressing – who we are. The ideas of Jens Jensen and Alfred Caldwell continue to influence garden designers today who are concerned with sustainability, water conservation, soil conservation and other stewardship issues.

Three Gardens Tour (Version Two)

Conservatory – English Garden – Alfred Caldwell Lily Pool

Guide to Garden Context History

By Evelyn Current

Brief History of Gardens: Shaped by Social Change:

Gardens are defined by the purposes for which they exist: food, ornamental, followed by deer parks, woodlands and public parks.

Gardening is about lifestyles; for the rich they are symbols of social & economic position; for some they were a means of survival and for others an expression of personal gardening expertise.

The British Museum has an Egyptian painting depicting a fish pond from 1400 BC, with flowers, clumps of reeds surrounded with fruit trees.

The Hanging Gardens of Babylon, in present day Iraq, was a terraced garden

Some of our first public parks were in the ancient Middle East, then Greece and America's first public park – Boston Commons - dates to early 1600's.

Moslem gardens embraced the idea of Islamic Paradise with fountains, shade and fruit. Persian carpets reflect what early gardens looked like because they were a stylized representation of their gardens.

Before the 15th century the Moors in Spain built enclosed courts surrounded by cool arcades; enlivened with colored tile, pools and fountains and so too, in the 17th & 18th century in India such as the Taj Mahal.

In our American southwest, the town center in Santa Fe, New Mexico is a public space bordered by a colonnade where present day American Indians still gather to sell their wares and stay cool.

Garden designs varied widely to fit the geography, weather, social and religious environment from very ancient times forward: OUR TOUR TODAY CENTERS ON THREE VERY DISTRINCT STYLES:

A question we might ask:
WHY DO WE HAVE GARDENS AT ALL?

a. They provide food; ornament, they express our social aspirations;
b. They proclaim our position in society, show off our gardening expertise and what we know the world.

Three Gardens Tour (Version Two)

Formal Garden Design:
Formal design is based on geometric patterns:
The Greeks loved absolutes; mathematics and especially geometry represented a world of perfection and purity, unlike the realities of daily life. They created a refuge with straight lines. Imposing ones will upon nature is a central theme of formal garden where content becomes subservient to form.

The Romans, collectors of Greek statuary, often used them to line their walkways. imposed unity on the chaotic natural landscape with the use of trimmed boxwood hedges, box topiary and a multitude of fountains fed via waterworks built by expert Roman engineers

As the Roman Empire declined to the medieval period in Europe the Christian monasteries furthered garden expertise with raised, enclosed beds of herbs for medicinal purposes and food. These Christian monks became expert fruit growers.

Early Renaissance gardens in Italy used intricate knot patterns similar to Persian carpets, enclosed by castle walls or manor houses.

During the Italian Renaissance, extensive grounds were landscaped in the Roman tradition with borders of tall, dark cypresses, geometric flower beds, and stone balustrades.

While in England, the Tutor period – 1400's - followed the French style up to Elizabethan England where elaborate knot gardens and mazes were in fashion.

In the Netherlands, bulbs were widely introduced and speculation became so great a financial concern to the Dutch government in the 1600's that trade in tulips was banned.

In France, during the 17th century the great French chateaus of the Loire Valley replaced Italy as the prime inspiration with vast building programs of Louis XIV which included miles of gardens.

These immense gardens in the Classic French style of Versailles, for example, had many imitations throughout Europe during the period. They were symmetrically arranged, designed to give an impression of limitless grandeur and embellished with fountains, pavilions, and statuary.

Question we might ask: WHO WERE THE PEOPLE WHO HAD GARDEN FROM ANCIENT TIMES UP TO THE 18TH CENTURY?

a. People of great wealth, power, kings, rulers;
b. Landholders, the educated, religious leaders

Three Gardens Tour (Version Two)

English Garden History

As a result of Henry VIII's dissolution of the monasteries, great parcels of land were made available to favorites and the well-connected.

It made possible the great country estates which led to rapid introduction of new plant material from all over the world as exploration flourished.

In the mid-1600, great concern arose that for many centuries before, the cutting down of the English woodland had left parts of the county almost treeless; in response, planting came to be regarded as a patriotic duty.

In London, the center of all commercial life for all of England, the nursery/seed men trade thrived and this led to the distribution of new and exciting plants and especially fruit trees of every variety were ordered by the owners of these great estates.

In the 18th century there arose The Landscape Movement which came about from the need for country life to be more comfortable and profitable for the landowners and which made the reputations of England's great landscape designers such as Capability Brown.

Deer parks, associated with these estates, provided venison, the meat of the elite but were also, status symbols; of wealth, success and power. These parks, bounded by palings or stone, also provided a view – the landowner was then, "lord of all he surveyed".

The Landscape Movement, which arose out of the deer park, exemplified a way of creating a great swatch of land around the residence, but it also insulated the owners from the growing problem of the poor.

The beginnings of a revolt – from the formal to natural – as urged by Alexander Pope with "amiable simplicity of unadorned nature" was followed during the 18th century to the Romantic Age.

This period brought into fashion the English cottage garden with their romantic aura and finally elevated the ordinary citizen in society with practical and aesthetically pleasing gardens

The English Romantic style, which emphasized sweeping lawns and curving paths spread to France where Thomas Jefferson, there on a government mission, saw then copied this new style at his Virginia estate, Monticello.

In America, during the 1900's, the rise of the steel, coal, and automobile barons brought the rise of great estates similar to those in England, such as the Du Pont's, Longwood Gardens and Vanderbilt's Biltmore in NC.

So too, during this period, our country began to see our great landscape as important to preserve for all-time great national parks such as Yosemite in California.

Three Gardens Tour (Version Two)

Young cities in America, following the beginnings of free public parks in the Victorian Age England, created parks that spanned several styles: one notable example of the Romantic Style is Central Park, designed by Frederick Law Olmstead; know as the Father of Landscape Design.

With a great mixture of varied plant material, open spaces, annuals and perennials- often associated with conservatories-the border garden became popular. They reflected the designs of Gertrude Jekyll.

Border Gardens often had narrow plantings along some division or boundary such as a walkway, road or lawn and could be a mix from trees, shrubs to seasonal plants.

Americans, obsessed with their lawns, are saying many things about themselves too: they both define our property and connect us to our neighbor.

A question we might ask: HOW, WHY. WHAT FOR:

a. Because of the invention of the lawn mower
b. We are saying we're landowners too, and rich enough to spend time and money on a non-producing embellishment to our home
c. To compete with our neighbors and thus "do better"
d. To have a useable surface for work and play

Conservatory Tour: Cauliflory Conundrums

Rebecca Conant (2016)

Entrance/Intro

- Hello. I'm Rebecca. Welcome to our 10 minute tour of the Palm Room. We'll start and end here. Drinking fountains are in the lobby, right outside the bathrooms.
- Our mission at the Lincoln Park Conservancy is to provide programming that enhances the historical and cultural assets of Lincoln Park, so today we're talking about the Cauliflory Conundrum, or trees with junk on the trunk.

  hand out all papers
- By the time we part ways today, you will all know what Cauliflory means, be able to identify cauliflorous trees, and talk about three theories that attempt to explain why plants exhibit this rare, but not uncommon, trait.
- Follow me and we'll go identify some cauliflorous trees!

Cacao Tree/Flower/Fruit

- Our first stop is the cacao tree. We're going to call it the cacao tree, because it's where chocolate comes from.
- Take a minute to observe the tree and identify flowers, fruits and leaves.
- Our tree isn't flowering very much so some of you have pictures of flowering cacao trees, as well as close-ups of the flowers themselves.
- Using this tree as an example, and if I tell you that cauli means trunk or stem, and flori means flower, what do you think cauliflory means?
- A little bit more about cauliflorous trees: there are only about 100 of them, and most of them are in the topics, specifically in the rainforest. Most of them are also understory trees, growing near to the ground.

Cacao Tree

- We've identified cauliflory, but why do we call it a conundrum?
- We assume cauliflory – flowering on their trunks – helps them survive. But why would trees do this, rather than put flowers on the tips of the branches?
- Today we're going to focus on three possible theories. 1) Sex (Pollination), 2) Children (seed distribution), 3) Survival (access to light)
  1. Theory One is Pollination (sex): By putting flowers on the trunk, trees makes the flowers very obvious and accessible to pollinators (insects and birds and bats) and allows for greater cross pollination.
     - In the rain-forests wind is rare, plants depend on animals to distribute pollen
  2. Theory Two is Seed Distribution (offspring): Putting the fruit on the trunk, attracts animals that can't reach the higher branches. The animals eat the fruit and spread the seeds around in the process
     - Large animals that can't fly or climb (and thus would have a hard time reaching higher branches) have access to the fruit.
  3. Theory Three is Access to Light (self survival). Flowers and fruits on the trunk allow plants to devote their upper branches to leaves that make food for the tree.
     - Remember, these are mostly understory trees, so there isn't much light, and

a lot of completion for the light that plants can access. So plants have to develop strategies to get as much light as possible.

- Now that we talked about a couple of the theories, what do you think? Which one or ones make the most sense to you?
- Can you think of any other theories that might explain why trees exhibit cauliflory?

Walkway

- We've spent a lot of time talking about the cacao tree. There are a couple other cauliflourous trees I want to show you. (ambulatory as necessary)

Optional Stop: Jaboticaba tree (May or may not be in flower. Can add as a stop or let them discover it)

- I like this tree a lot, because it's such a surprise when it's flowering or fruiting. It is native to the coastal forests and hilly regions of southern Brazil and adjacent countries
- What do the fruit look like? Grape-like fruit are dark maroon-purple when ripe about 20 to 25 days from flower to full maturity
- The berry contains a whitish, gelatinous pulp which people either love or hate. The fruit is eaten fresh or made into jams and jellies, or used to make wine.

Optional Stop: Candle Tree (May or may not be in flower. Can add as a stop or let them discover it)

- This is another fun tree – it reminds me of the floating candles in Harry Potter. The fruits are long, waxy and greenish-yellow, resembling tapered candles.
- It's a relative of a couple of trees at the entrance to the Conservatory: the Sausage tree and the Calabash. And is native to Central America.
- It's typically grown as an ornamental, but the seeds can also be eaten

Soursop tree

- We're going to stop here at the soursop tree. I've also seen it called guanabana. It's native to Central American and grown in the tropics around the world.
- Has anyone ever had soursop fruit? The flavor is a combination of strawberry and pineapple, with hints of sour citrus and the creaminess of coconut or bananas.

Soursop fruit and flower

- If you look closely at the soursop tree, you'll notice that it is also cauliflorous.
- Can you see any flowers? Fruits?

Walkway/Exit

- Here we are back where we started.

Calabash tree

- Here's one more tree we want to look at
- This is the calabash tree, not related to the calabash (aka bottle) gourd. It's native to Central American and Mexico. People don't eat the calabash tree fruit, but do use the plant for utensils and decoration.

Conservatory Tour: Cauliflory Conundrums

- If someone asked you to identify it as cauliflourous or not, what would you say? How could you prove it?

  Flowers and fruits on the trunk

Pool/Conclusion

- I've had a lot of fun today talking with you about cauliflory, the rare, but not uncommon, trait of flowering on the trunk, and how it may help some trees survive.
- While there are lots of reasons why plants may have developed cauliflory, we decided that__theory made the most sense to us today
- I have one more tree I want to mention. Just so you don't think this only happens in the tropics, we have a native version here in the US. Does anyone know or want to guess what it is?

  Show red bud photo.
- The red bud. It's a beautiful tree and you can see it in the Lily Pool and on the streets.
- Please feel free to continue exploring on your own, there are several other cailflorous trees in the Palm House, see which ones you can find!
- I'll be here if you have any questions, or feel free to ask another docent or the conservatory staff.
- Thank you for your participation in this program. It’s been a real pleasure talking with you today.

Conservatory Tour: Bringing a World of Plants to Chicago

Lucy Y (2017)

Exoticism, discovery and global connections

Summary: This tour evokes a time past – when American society was obsessed with the exotic. We use this as a jumping off point to explain how a glass house came to be, in the early 19th century, which enabled a world of plants to exist in Chicago – a climate where they might not naturally occur. We will think about the motivation and inspiration to create the conservatory in the first place, and then go on to explore the world of botany that exists under its roofs, taking a global journey from Africa, to South America and elsewhere. We will think about how climate affects what can grow and how different cultures use and engage with plants around the world.

Introduction – stood by the sausage tree

- Start with a question: what is the most global place in Chicago?
    - When you think about it, this place where we're standing is one of the most global places in Chicago. It contains over XX species from XX countries
    - We also get over XX visitors from XX countries every year
- To me, this is neat thing about this place. For 122 years, people have brought a world of plants under one roof to the people of Chicago. This institution also connects to a global scientific community

So today we're going to take a global journey through the glass house.

Palm room part 1

- Here you'll see vegetation found in rainforests. These plants are economically important: they provide shelter, tools, food, fuel, fiber and medicine
- We start at the sausage tree – from Africa. In-keeping with the theme of **distance**, as the tree has a long-distance relationship with a free from elsewhere. This plant must be fertilized by a tree in Milwaukee
- Point out: Banana, coffee (comes from Ethiopia)
- Ginger plant: feel the soft underside

STOP BY THE PULLEY SYSTEM: Where it all began, a fascination with the exotic: The Lincoln Park Commission constructed the Lincoln Park Conservatory in phases between 1890 and 1895, replacing a small greenhouse that dated from the 1870s. Nationally renowned architect Joseph Lyman Silsbee designed the Conservatory in collaboration with architect M.E. Bell. The park includes a second example of the work of each architect. Silsbee designed the Carlson Cottage, a ladies comfort station southeast of Café Brauer, and Bell designed the Rustic Shelter, located west of the North Pond, near Stockton Drive. During the early nineteenth century developments in iron and glass building technology led to the construction of conservatories in cities throughout Europe and the United States. Later in the century, as people were increasingly concerned about the ill effects of industrialization,

they became fascinated with nature and interested in collecting and classifying plants. Large conservatories with display and exhibit rooms gained popularity, and Lincoln Park's small greenhouse no longer seemed sufficient. Architects Silsbee and Bell were commissioned to design a much more substantial building. Rendered in an exotic style, the new structure included palm, fernery, orchid, and show houses.

Fern room

We've left the rainforest, we're now in the fern room. Thinking about our global journey: we are now in the fern room, where in the world does this look like???

- Perhaps a better question is **when** does this look like, not where
    - What do you see that might give us a clue as to when ferns first habited the earth? (dinosaurs)
- So rather than ferns belonging to a particular place in the world, what can say that the thing that characterizes them most is the fact that they are **ancient** (a fern fossil in the Field Museum is 300m years old). They are important colonizers, and lay the ground/habitat for other species to grow. They clean the earth of toxicity so that other plants can grow
    - Preceded flowering plants
    - 12,000 species of ferns
    - 400 in continental US
    - Spore bearing, lack flowers
    - Finely divided leaves
- Back to my original question though, Ferns grow in tropical and subtropical climates with high rainfall. In New Zealand for example, ferns are a conspicuous part of the landscape. In fact, did you know that Chicago once looked like this
- As we walk through, point out:
    - Spanish moss: not Spanish, not moss. Grows in the air. A bromeliad
    - Spore casings on the undersides of the ferns: highlight how they are located on the edges of leaves – for easy pollination
    - Monkey tails: the way that fern fronds grow and unfurl
    - Rabbit's foot fern: originates in Fiji
    - Maidenhair fern: originates in S America
    - Staghorn Fern: clings to trees using round/shield shaped fronds: originates in SE Asia
    - Sago Palm "living fossil", not a palm, dioecious (globe/cone reproductive structure based on gender), coexisted with dinosaurs, so valuable they were stolen in the aftermath of Florida Hurricanes, and are now tagged

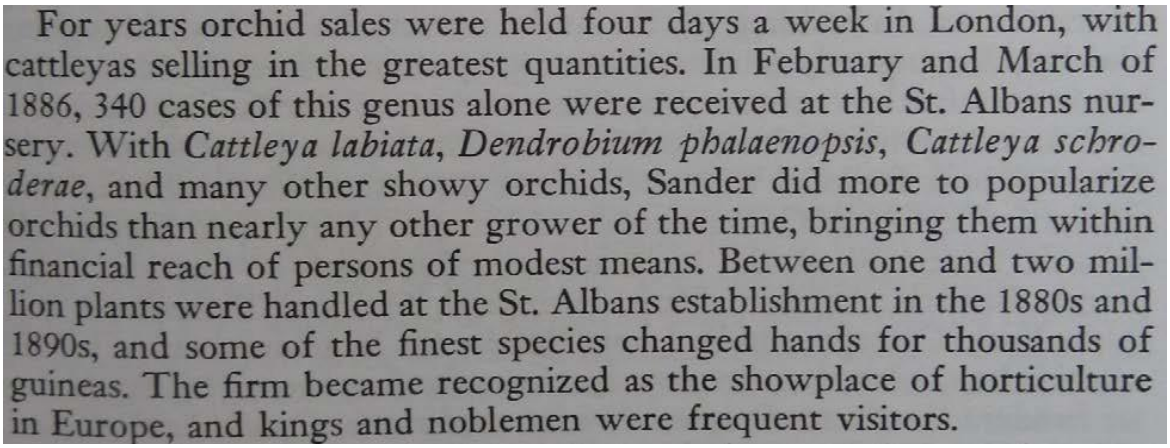
Props to have to hand: picture of different kinds of fronds. I may draw this out.

Orchid room

Back to our global journey, what region does this remind you of?
After discussion: Today, Orchids exist on all continents except Antarctica. Though originally they came from China and Japan.

Conservatory Tour: Bringing a World of Plants to Chicago

Orchids have an interesting history of how they became prevalent around the globe. In 18th century Europe, Frederick Sander was a master of high-class horticulture in Europe and collected/ imported thousands of Orchids from Malaysia, S/Central America. They became synonymous with the exotic and became a status symbol.



For years orchid sales were held four days a week in London, with cattleyas selling in the greatest quantities. In February and March of 1886, 340 cases of this genus alone were received at the St. Albans nursery. With *Cattleya labiata*, *Dendrobium phalaenopsis*, *Cattleya schroderae*, and many other showy orchids, Sander did more to popularize orchids than nearly any other grower of the time, bringing them within financial reach of persons of modest means. Between one and two million plants were handled at the St. Albans establishment in the 1880s and 1890s, and some of the finest species changed hands for thousands of guineas. The firm became recognized as the showplace of horticulture in Europe, and kings and noblemen were frequent visitors.

It wasn't until people found ways to grow orchids artificially that they became available and cheaper.

- Orchids are classified by how they live and survive. General rule of the orchid is that they have 3 sepals, 2 petals and the lip to attract the pollinator
- Point out
    - **Vanilla** – vine with flowers that bloom only once a day. Fruit is a pod, not a bean. Pollination by hand or bee
    - **Dove Orchid –** national flower of Panama
    - **Ladyslipper orchid –** pouch for lip to aid in pollination
    - **Venus flytrap**
    - **Ant plant**

STOP BY WARDIAN CASE: This is how it all began, the Wardian case - Dr. Nathaniel Bagshaw Ward (1791–1868), of London, in about 1829 after an accidental discovery inspired him. Some time around 1829 when, pursuing his interest in entomology, Ward saved the pupa of a moth in a 'Natural environment' in a sealed jar. After some time he noticed that a fern and some grass had started to develop in the soil at the base of the jar. His curiosity for how long the ferns could survive in this sheltered environment led to one of the most important botanic/economic discoveries of the Victorian age, the Wardian Case. Ward's observation that a tightly sealed environment, kept independent from surrounding atmospheric conditions, was the breakthrough that changed forever the art and science of plant exploration. One of his first correspondences describing the results of his study, was to William Jackson Hooker, who's son, Joseph Dalton Hooker, would be among the first plant explorers to use this new device when he shipped plants back to England from his Antarctic expedition.

Props to have to hand: picture of Dr Nathaniel Ward. Frederick Sander's new orchids' catalogue from 1895

Conservatory Tour: Bringing a World of Plants to Chicago

Show house

Allow people to walk through at their own pace.

Back to the Palm room

Point out:

- Curare – poison used for darts to relax pray and make easier to kill – South America Amazon
- Calabash (central/South America), pollinated by bats. Acts as a remedy for asthma/cough.

End by noting the Calabash (South America) belongs to the family of Bignoniaceae (Bignonia family), as does the sausage tree from Africa. Think about how the world was once a Pangaea, and how plant families are connected. This brings us full circle on our global journey.

Conservatory Tour: Eat Your Way Through the Conservatory

Sukiat C. (2017)

Theme - While you can't bring in outside food to the Conservatory, there are plenty of edible plants here already.

Introduction

- Name: Sukiat
- What is going to happend: Taking a tour of the conservatory
- Where you are going: The palm room, the fern room, and the orchid room
- Where will you end up: The entrance
- How long it is going to take: 30-45 minutes
- What will be required of the visitors: Asking the question, walking, touching and smelling the plant
- Theme statement: above

Palm room –

The Palm room is the largest in the Conservatory. It consists of over twelve different types of plants. Unknown to many, several of these plants are eaten or used for medicine in cultures around the world. Some of the most recognized edible palms include the pygmy date palm and the coconut palm, but this room also includes non-palm fruits, including the breadfruit, bananas, grapefruit, oranges, papaya, coffee, sugarcane, soursop, and cacao.

Walk with me over to the orange jasmine. Sniff the flower and notice the fragrance; moreover, some plants in this room have an interesting feel. Rub the underside of this ginger plant's leaf and notice that it feels like velvet. Now, let's go over to the sensitive plant. go ahead and lightly touch the leaves. Notice they close as soon as you touch them.

Fern room –

Fern are the most ancient of all plant, ruling the earth before any other plant and animal existed. Despite being so old, fern never develop an ability to bloom. Most ferns are poisonous; However, some of them are edible and make a good medicine. For example, the bracken fern fiddleheads are eaten in New Zealand, many countries in Asia, and in California. Maidenhair fern is used for bronchitis, coughs, whooping cough, and heavy menstruation with cramps. it is also used to loosen chest congestion.

Orchid room –

Orchids are a famous type of air plant, which means that they don't need dirt to grow. Orchids pull moisture out of the air, which is why they grow best in hot and humid climates. I grew up in Thailand, which is one of the hottest and most humid countries on earth, and growing orchids in your yard was a common sight. My parents had over a hundred differences orchid plants in an area that was 15 feet wide by 40 feet long.

In the Conservatory, the only edible orchid is the vanilla plant. What we call a vanilla bean is actually a pod of seeds. The vanilla flower is blooming only at nighttime, and that is the only

time you can pollinate the plant, so it will start to grow the pods. The pods need 9-10 months to mature before you can harvest them. This makes the bean so expensive.

Conclusion:
We are now at the end of our tour. I hope you enjoyed seeing the edible plants of the palm room, fern room, and orchid room. Bear in mind that while you saw so many plants in conservatory, not all similar looking plants in the wild are safe to eat. Always be careful!]