Arborsculpture

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An Emerging Art Form and Solutions to our Environment

University of California, Davis
Department of Environmental Sciences
Landscape Architecture Program
Senior Project June 2008
Tracey Link

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An Emerging Art Form and Solutions to our Environment

A Senior Project
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Landscape Architecture Program at the University of
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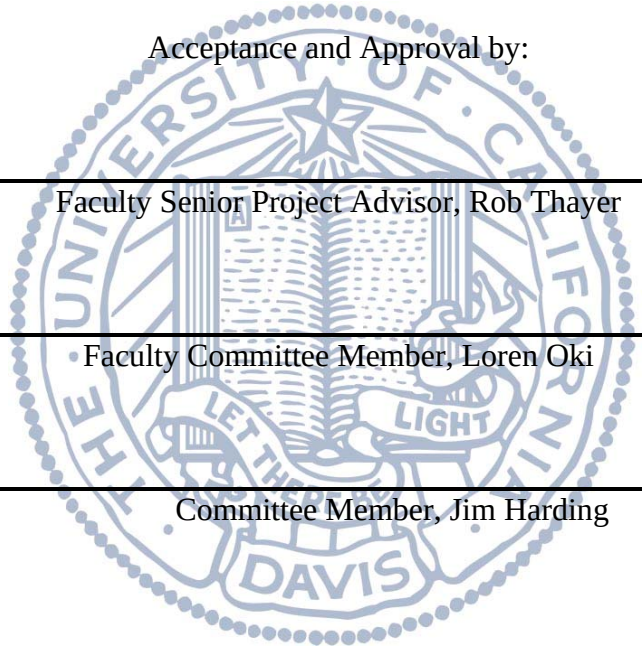
for the degree of Bachelors of Science
of Landscape Architecture

Presented by
Tracey Link
At
University of California, Davis
The Thirteenth of June, 2008

Acceptance and Approval by:



Faculty Senior Project Advisor, Rob Thayer

Faculty Committee Member, Loren Oki

Committee Member, Jim Harding

The purpose of this project is to share my research of a horticultural form of art called arborsculpture. It will demonstrate a “how to” in creating arborsculpture including grafting techniques, essential tools, types of trees used and issues of time, location and dedication. The study will also focus on the benefits of creating arborsculpture. The benefits of arborsculpture will explore the potential for humans to interact with a unique life form as well as major ecological benefits. I will explore the idea of creating living architecture and planting trees rather than cutting them down.

The objective is to discover new ways to bring horticulture and art together to contribute to place design. Arborsculpture balances the concept of nature and art through creativity and plant propagation. The trees, through unique designs can be amazing representations of nature, while at the same time they are different than what we would see in the wild and can be categorized as artistic interpretation.

Tracey Link, a graduating senior in Landscape Architecture at the University of California Davis was born and raised in Gilroy California. She attended school K-12 in Gilroy where she was involved in sports and in the community. She worked for the city of Gilroy as a gymnastics coach and enjoyed being a social butterfly. Tracey is very close with her family and was greatly encouraged to attend a highly accredited college. After graduating high school she began her new life in the quaint town of Davis California. Tracey had always been intrigued by art and design and also had a passion for nature and being outdoors. While trying to decide what to major in she put her two passions together and discovered Landscape Architecture.

During her years at Davis she gained many new friendships and relationships with teachers and professors. She flurried with knowledge landscape architecture and was introduced to the world of horticulture. It wasn't until then that a tree was no longer a tree but something that had light, textured bark, dark-green leaves in an oblique shape and had pink flowers with four stamens. It was also when her backyard became a "sense of place" and not just a place for the dog to run around. It was official; she was well on her way to a future in landscape architecture.

In the spring of 2007 she began an internship with a landscape architect firm in Roseville California called WRG Design. She worked through the summer of 2007 and got a taste of the "real world." As school started back up in the fall she put all her focus into finishing up her last year and left WRG. Tracey plans to graduate and soon build a professional career in the field of landscape architecture.

To my family whom have always supported me and given me the strength I needed to succeed
Mom, Dad, Chad and Heather

To my friends that made getting through college possible and helped me grow

To Erin for showing me the ropes in Davis and being there through my first year away from home.

To my professors that taught me what landscape architecture really is

And
To Casey for being my partner in crime and my best buddy in life and in the major.

Introduction

This project was born upon my passion for nature and art and the fact that I grew up near some of the most famous pieces of arborsculpture that exist today. I chose landscape architecture as my major for the same reason I chose arborsculpture as a topic for this project. Landscape architecture, like arborsculpture balances the two elements that I am most passionate about, nature and art. Everyone experiences nature and interprets it in their own way, while it is also unbelievably beautiful. Art is one of the greatest forms of expression. Through art each individual person can leave their mark of who they are and what they perceive. When combining the two, we have a chance to interact with nature and use it as a medium to express how we perceive it.

As the earth begins to feel the effects that humans have caused unto it, it is time to come up with alternatives for the way we live and preserve what we have left. I believe arborsculpture can help people remember that we are a part of nature, not against it. I wanted to share this form of art with as many people as possible, being that it is somewhat undiscovered. In fact, this subject was very new to me when I began thinking about my senior project. I chose arborsculpture as my topic also because Axel Erlandson's masterpieces remain in a park in my hometown of Gilroy, California. Axel is the first in known history to have created these masterpieces to the extent that he did. He set the bar, so to speak, for all other arborsculptors and the future of this art. As my research took-way I unlocked the potential that this art has for human beings and for this planet.

Defining Arborsculpture

Arborsculpture is a naturally growing art form that is created by growing and shaping tree trunks and other woody plants into shapes as new layers of wood form. It is made for function, it is made as a creative outlet and it is made to explore plants as living organisms.

Arborsculpture is a form of plant propagation that takes dedication, practice, experience, and knowledge of plant growth and structure. It is done using a technique called grafting which requires specific tools, and accessories. The trunks of the trees are grafted, bent, pruned and braced into shapes that are either ornamental or useful.

2.1. Revolving Door. A Piece by Axel Erlandson at Bonfante Gardens in Gilroy, California.

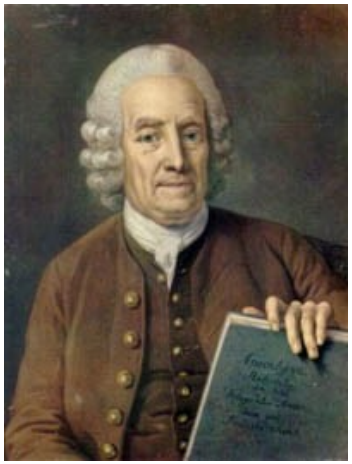
History of Arborsculpture

The phrase arborsculpture was first coined in a book called *How to Grow a Chair - The Art of Tree Trunk Topiary* by Richard Reames and Barbara Delbol in 1995. Reames coined the word in an attempt to give a unifying name to the practice of shaping the growth of tree trunks into sculptural shapes. The word has since been used in media around the world.

The first known evidence of arborsculpture, however, was seen in a painting done by Johannes Perreal dating back to 1516 titled, *Nature Objects to the Alchemist's Errors* (Reames, Delbol, 1995). Perreal was a French Painter and alchemist who traveled throughout Europe and was credited for inventing pastels in 1499. The painting is a miniature 7.1 in. x 5.2 in. in size. It was an illustration to accompany the text of Roman de la Rose, considered one of the great literary works of the 13th century, which discusses nature's ability to speak. The painting is of an angel that sits in a shaped grafted tree. The Angel's arms are folded and she chastises the alchemist who does not look pleased (Reames, Delbol, 1995).

3.1. Nature Objects to the Alchemist's Errors

Later in history, from about 1688 to 1772 a Swedish scientist and philosopher, Emanuel Swedenborg wrote about living sanctuaries in some of his most controversial writings. In one of his books, *Earths in the Universe*, the Swedish mystic wrote about visiting another planet whose inhabitants dwelled in living trees. He talked about how they would shape these trees from a very young stage and guide their growth into sanctuaries (Reames, 2007).

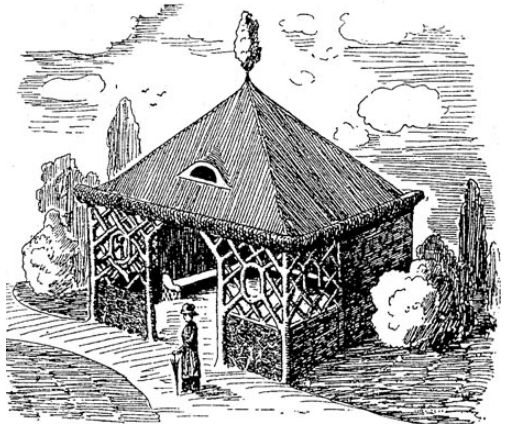


3.2. Emanuel Swedenborg

The earliest existing example of an actual piece was a chair planted by John Krubsack of Embarrass, Wisconsin in 1903. Krubsack was a prominent banker in the small town of Embarrass, Wisconsin at the turn of the last century. He grew an extraordinary chair out of a box elder and twelve years after it was planted he debuted his “Chair That Grew” at the 1915 World’s Fair in San Francisco. The chair was complete with an ornamental backrest, armrests, and a six-branch seat. It was seen in numerous newspaper articles and aired multiple times on “Ripley’s Believe It or Not.” The modern age of arborsculpture was born (Nestor, 2007).

3.3. John Krubsack “Chair that Grew.”

In 1926, Arthur Wiechula, a German agricultural engineer, published a radical book called *Developing Houses from Living Trees*. Wiechula never successfully grew a living house, but he did grow a 394-foot-long wall structure using Canadian poplars to keep snowdrifts off a section of train tracks.



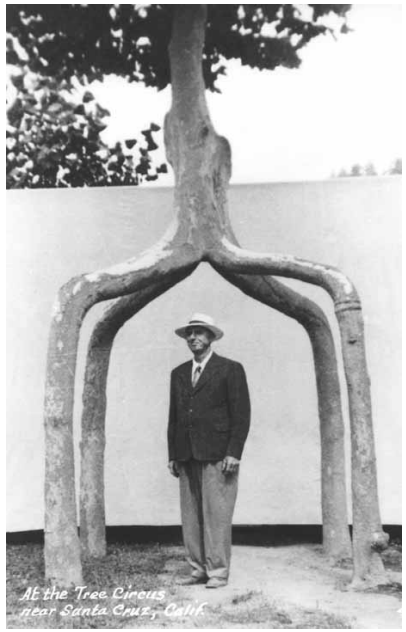
3.4. Arthur Wiechula’s drawing of a growing home.

Throughout history, no other figure went so far in demonstrating the tree's potential as Axel Erlandson and his “Circus Trees” (Reames, 2007).

The Tree Circus

It began when Axel Erlandson turned 17 at the turn of the century and his family had just made a large move from Minnesota to the Hilmar Colony, a farming area in the San Joaquin Valley near Turlock, California. The Hilmar colony had been exaggerated as an agricultural opportunity where irrigation canals had recently become available (Wilma Erlandson, 2001).

Axel was a self-taught land surveyor and a master at laying out lots, however not licensed. He also became handy in all sorts of tasks being a jack-of-all-trades. Among these tasks he was intrigued with experimenting with tree grafting and started his first project, the 4-Legged Giant, made of 4 Sycamore trees.

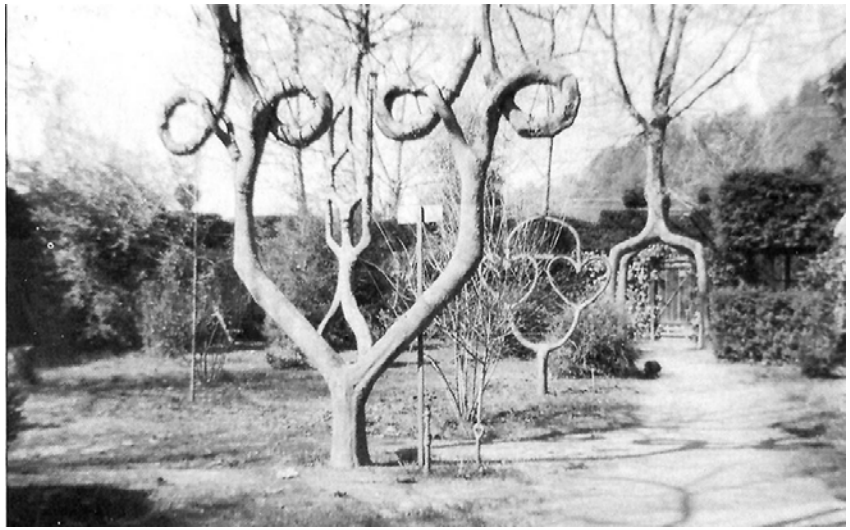


3.5. Axel and his 4-Legged Giant.


3.6. Wilma Erlandson with the Double Helix.

In the summer of 1945, Axel's wife and daughter vacationed in Santa Cruz California where they visited the Mystery Spot and other roadside attractions. After their return they suggested that Axel should have his trees in the Santa Cruz area. This idea stuck with Axel and he purchased a ¾ acre lot in Scotts Valley. The next winter he dug up his trees and transplanted them in the new location, which at the time was a major task. And in April 1946 the planting was complete (Erlandson, 2001).

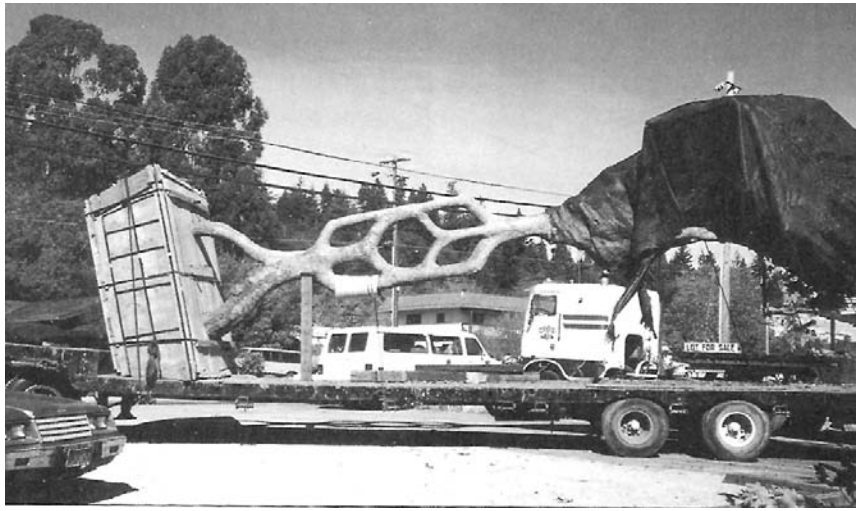
The trees survived, much to their doubt and Axel began designing and training tons of new trees. Nearly 70 trees were growing in fascinating patterns such as spirals, rings, loops, zigzag, ladder, chairs, diamond, knots and many more. The display attracted a great deal of attention.



3.7. Axel's Tree Circus in Scotts Valley California.

The living sculptures were open to the public for a small entry fee with signs reading "See World's Strangest Trees Here."

They got a remarkable amount of publicity and the exhibit was called the "Tree Circus." After Erlandson's death in 1963 the trees had no one to take care of them. Several of the trees



3.8. Michael Bonfante boxes up Axel's trees and moves them to Gilroy.

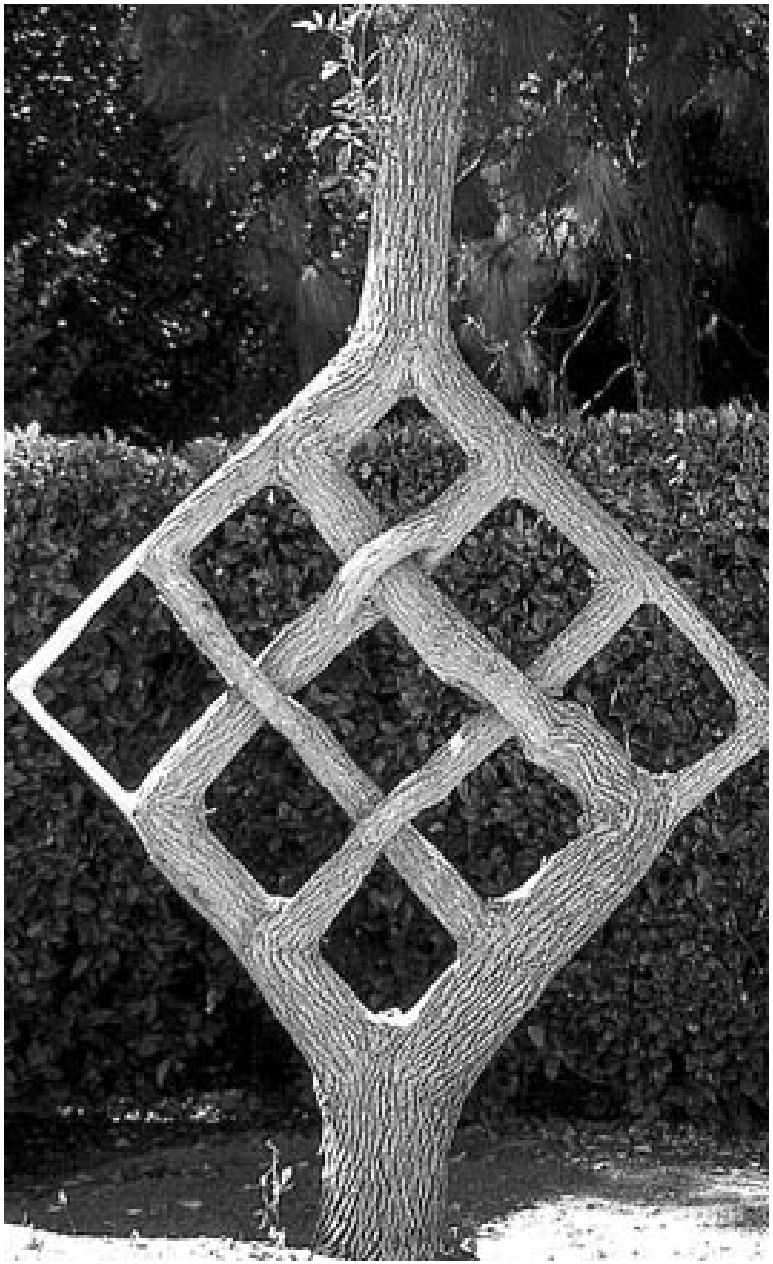
died. It wasn't until 1983 when Michael Bonfante, a businessman from Gilroy California and horticultural enthusiast became aware of the fate of the trees. In an interview with Michael he said, "I had read an article about the trees in the Mercury news in 1972, understanding that there was a chance they would be lost, and almost 10 years later the trees still hadn't been bought. So, I negotiated with the landowner and we began to box them up" (Bonfante, 2008).

3.9. Michael Bonfante moves Axel's trees from Scotts Valley to Gilroy, California in 1985.

The remaining trees were transplanted from Scotts Valley to Gilroy, where Mr. Bonfante was designing a theme park called, at the time, Bonfante Gardens, now called Gilroy Gardens. "About 63 of the trees passed away and I have the remaining 24. Some of those are too weak, so only 19 of them can be seen in the park," said Michael. But it was because of Axel that his work continues to fascinate and spark new ideas for designing with a living species.

3.10. Erlandson's Basket Tree at Bonfante Gardens.

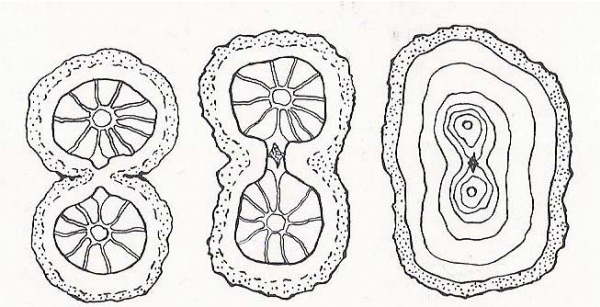
3.11. Emblem Tree at Bonfante Gardens.



3.12. Needle and Thread Tree at Bonfante Gardens.

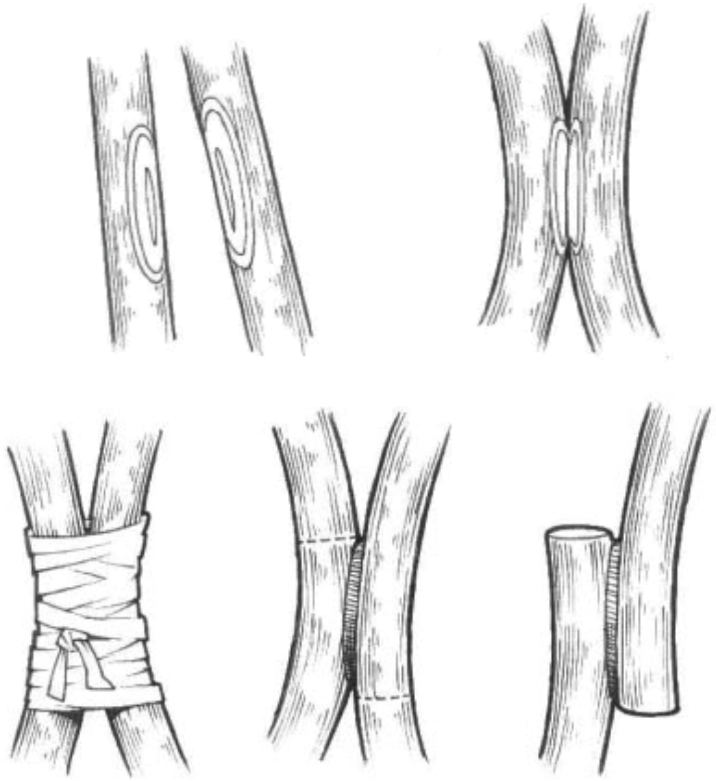
Grafting

Grafting is defined as the art of joining two pieces of living plant tissue together in such a manner that they subsequently grow and develop as one composite plant (Hartman and Kester 2001).



4.1. The natural grafting process between two young stems.

Grafting is a phenomenon that trees perform naturally, quite often. Roots that are growing immobile, underground will often cross and perform their own graft. It is also pretty common to find one tree grafted to another or back onto itself. The term for this is called “inosculation,” or the joining of vascular systems. (R.J. Garner, 1997). This is the phenomenon that inspired Axel Erlandson to begin shaping his own trees. Trees that have smooth or and/or thin bark tend to self-graft more readily than trees with thick bark.



4.2. Approach graft. When a cut is made the branches are joined together securely and eventually become one.

There are many different types of grafts. In fact, there are hundreds. The approach graft may be the easiest to perform successfully because no parts of the tree are completely severed and all roots and tops are left intact. Splice approach grafting can be performed at any time of the year. The approach graft is done by creating a wound in the branch such as a matching cut, a

tongued splice, inlayed joint, or any that create joinery by bringing those parts of the tree together (Reames, 2007). The cambium layers must come in contact and should be tied together using stretch tape and sealed properly. Tying the parts together is important to keep the fresh cuts from drying out. Those wounds will begin to seal as they start to create callus material and the new layers join together to become one. Annual rings will be added until all evidence of the wound is gone (Garner, 2007).

Another way to create a graft without harming the tree is to simply wrap parts of the tree together tightly. This method takes longer than a wound-joined graft and may create included bark, which can make a joint weak (Reames, 2007). The key to a successful graft is to keep all joined parts immobile relative to one another until the tree builds up enough layers to secure the join. A ridge of bark can be an indication that the parts have joined.

4.3. A ridge of bark indicating parts have joined.

How To

Types of Trees Used

Box elder- *Acer negundo*

Elm- *Ulmus sp.*

Cork oak- *Quercus suber*

Alder- *Alnus sp.*

Ash- *Fraxinus sp.*

Sycamore- *Platanus racemosa*

White birch- *Betula pendula*

Poplar- *Populus sp.*

Japanese maple- *Acer palmatum*

Cherry- *Prunus avium*

Apple- *Pyrus malus*

Pear- *Pyrus communis*

Locust- *Robinia pseudoacacia*

Redwood- *Sequoia sempervirens*

Eucalyptus- *Eucalyptus sp.*

Weeping Willow- *Salix babylonica*

Oak- *Quercus sp.*

Ponderosa pine- *Pinus ponderos*

5.1. *Betula pendula*

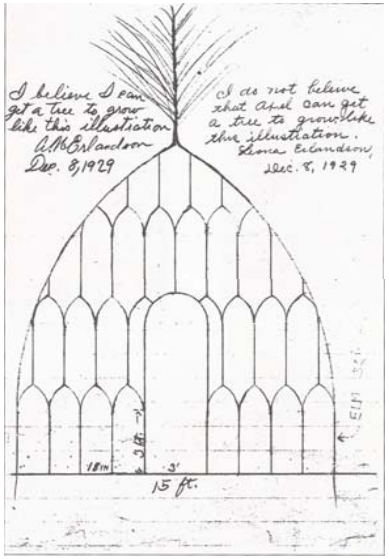
5.2. *Quercus suber*

5.3. *Acer negundo*

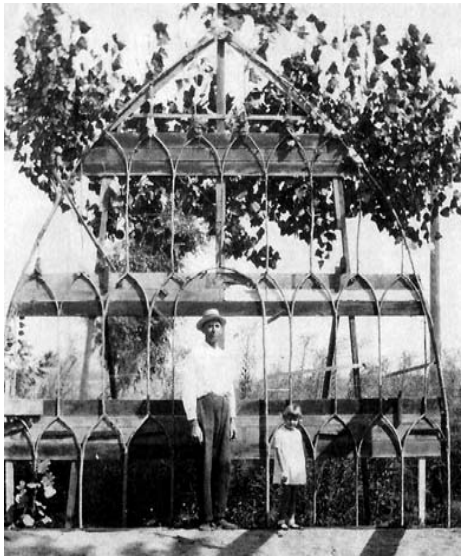
5.4. *Acer palmatum*

Make a Plan

Start out by making a plan. Successful arbosculptors always made a drawing and a plan for what they wanted their design to look like. The drawing can include height, measurements, angles and positions. A drawing is useful so you can refer back to it as time goes by. It also becomes easier to visualize how you want to create your design and how long it might take.



5.5 Axel's plan for his Poplar Archway.



5.6. The Archway in progress.

Materials

You will then need to gather the needed materials. You will need several un-branched saplings, depending on what you want to shape. (6 ft. to 8 ft. tall) It is always a good idea to have extra trees that are about the same age in the case that one fails.

<u>Tools:</u>

Pruning shears, grafting knife, tie wire, stakes, cables, stretch tape

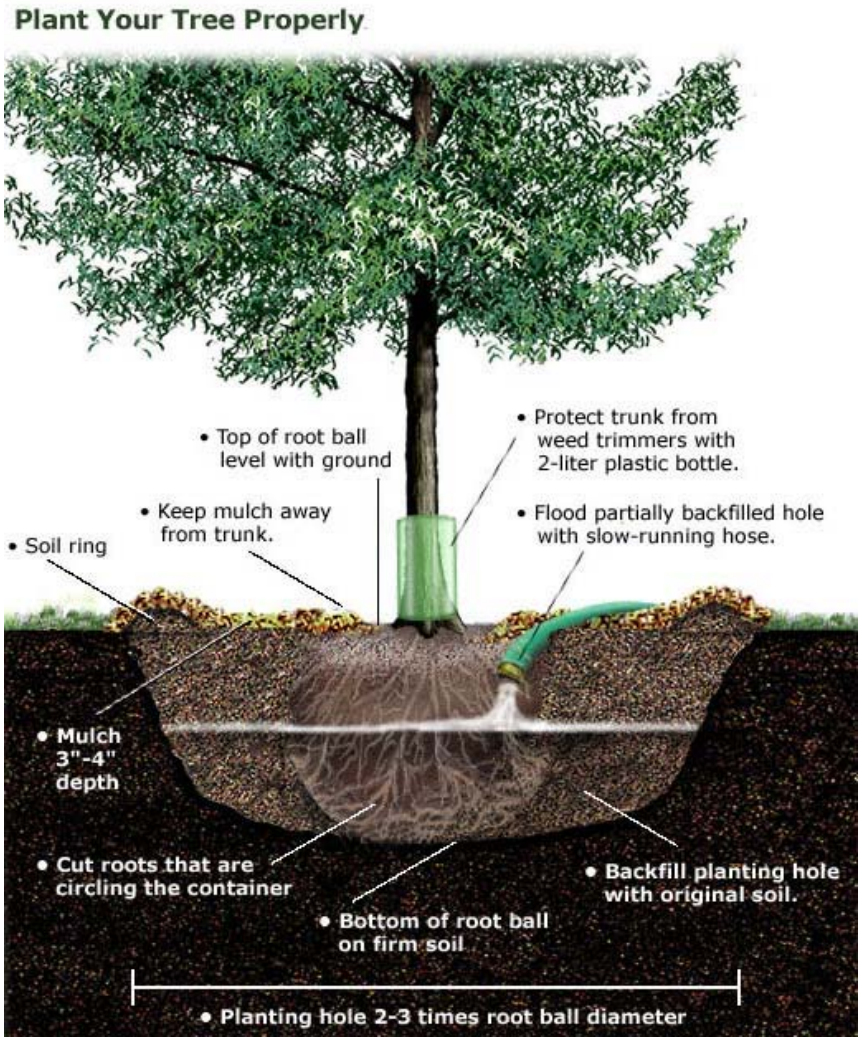
Location

Select a place that you enjoy being. The tree type depends on the location and the soil. This varies from place to place, so do some research on the soil type in your area and what types of trees grow best there. The location also depends on the mature tree size, in case there are overhead wires or underground pipes, as well as the distance from structures and shade or sun exposure.

Planting the Saplings

If you are using multiple trees for your design plant the trees in the desired distance apart but leave enough room for them to grow (about 3-4 ft).

Dig the hole. The width of the hole should be at least 3 times the diameter of the root ball or container. At this time you will also want to pound in any stakes or bars that you will need for supports for the saplings. Once the trees have been planted backfill with dirt and mulch and water thoroughly. Newly planted trees need a lot of water.



5.7. Planting a Tree.

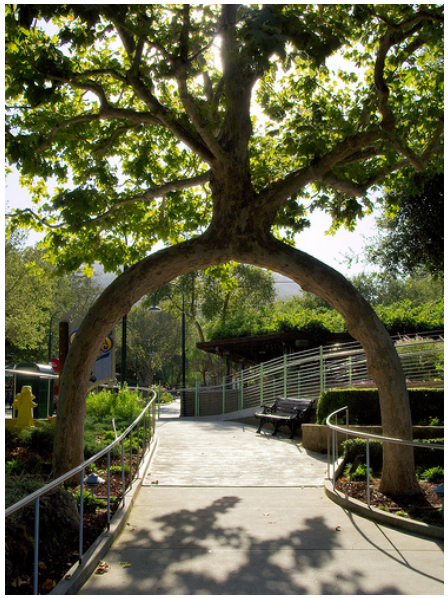
Shaping and Sculpting

5.8. Erlandson's Zig-Zag tree.

This is the fun part but it takes the most skill and dedication. Your dedication and time will depend on the design that you have chosen as some will be harder to than others. This is when you will use the Approach graft. Once you know exactly where you want to begin, cut the tree passed the bark or past the cambium layer and then bind the wounded parts together so there is good contact. Secure and the wounded tree parts and they will grow together.

5.9. A cross section showing the different layers of wood.

Begin to bend the tree in the desired position and tie those bends down using the stretch tape and ties. Use the stakes to hold anything in place that you want. These stems and branches will need to be braced for a year or more depending on the amount of resistance overcome. During that time, additional layers of wood will grow. These new layers of wood act like a natural cast, keeping the stem and branches in the new desired shape. The temporary bracing can be removed after the shape holds itself.



5.10. Erlandson's Arch Tree.

Upkeep

Make sure that you do not neglect your tree when you are finished planting. Arborsculpture takes a lot of time and care. As the tree grows and begins to take shape there are essential things you must do to care for your design.

Water

The tree needs lots of water when first planted. It will also need more in the summer when there isn't enough moisture and less in the winter months.

Prune

Pruning can really affect the way your tree is balanced and the direction it grows. Pruning may be required to remove unwanted branches and direct the growth into the desired shape. Pruning may also redirect stem growth. A pruning cut above a Leaf or Node can steer the plant. If a leaf points to the right, then a cut above that leaf will produce new growth that grows to the right side. Likewise, a cut above a leaf pointing to the left produces new growth that grows to the left.

Guard against winds and storms

High winds can break limbs and be devastating to the tree and the design. Make sure that the tree is in a good location and that if there is a storm you can get to it easily to help keep all braces secure. With a little extra cabling and staking the tree will have a better chance at keeping its form.

Time and dedication

The time required to grow and construct an arborsculpture project varies, depending on the size of the tree, the species rate of growth, cultivation conditions and the height of the design. It is possible to perform initial grafting and bending on a project in an hour, removing tape or material that holds the grafting or shape in can be as little as 1 year and following up with minimal pruning thereafter (Arborsmith.com).

Larger projects such as a home or tall archway may take 10 years or more to grow tall enough to accomplish the grafting. If you are growing a piece that is intended to stay alive the piece may never be finished until it dies, in which case you may have to pass your piece on to the next generation. You will start to see the

trees shape after a couple of years but the longer it grows the larger and stronger it gets.

Arborsculpture takes a long time and a lot of patience but that is all part of the art and the fun, as it is a lifelong project. The project may take several years to be functional or more attractive but time goes by so quickly. Start now and you will be amazed at how your tree has grown. Your tree can symbolize how our lives rely so much on the concept of time.

"I think the tree is an element of regeneration, which in itself is a concept of time. The oak is especially because it is a slow growing tree with a kind of really solid heartwood. It has always been a form of sculpture, a symbol for this planet." Joseph Beuys

Arborsculpture as an Art Form and Human Interaction

Art is for others to enjoy and observe but it is also for the process, the creator and the meaning. Most people, when asked, “Why create art?” say because it is a passion. It is something to be engaged in and is an expressive outlet for their thoughts, views or feelings. The end result is something for others to interpret but it is the artist’s feelings and motivations for creating the art. Arborsculpture is an art form that takes time and dedication and most importantly motivation. Practicing this art creates a living relationship between the tree and the human trainer. The tree can be the one that teaches us about nurture and patience and peace.

6.1. Natural grafting of two trees.

Natural Grafting and Formations

Branches can become naturally grafted together from being pressed together for a long period of time. In commercial orchards, limbs of fruit trees are braced together and allowed to naturally graft to form a stronger scaffold system in order to hold the weight of the fruit. Some species are particularly prone to natural grafting such as beech trees, elms, ash, maple and poplars.

6.2. A natural twisting distortion of a tree.

The natural distortion of trees is part of their wonder. They can move, distort and grow into shapes all by natural forces. Trees have the ability to be manipulated and humans can use their natural growth habits to create living art.

Other Art forms

Arborsculpture is an emerging art form but the art of shaping and manipulating trees is not. This can be seen through other art forms such as bonsai, topiary, espalier and pleaching.

Topiary

6.3. Topiary in Longwood Gardens outside Philadelphia, PA.

The word “topiary” is derived from the Greek word “topia” meaning ornamental gardening. It began in Roman times when Cneius Matius Calvena introduced the first topiary to Roman gardens. From its European revival in the 16th century, topiary has historically been associated with both the parterres and terraces in gardens of the European elite and in cottage gardens. Today it is more specifically described as the shaping of foliage on evergreens. In a way this type of tree shaping is the opposite of arborsculpture where topiary shapes the outer part of the tree, the foliage, while arborsculpture shapes the internal parts, the trunks.

Espalier

6.4. Espalier, a two dimensional gardening technique.

Espalier is the horticultural technique of training trees through pruning and/or grafting to make formal "two-

dimensional" or single plane patterns with branches of trees or shrubs. It was popular in the Middle Ages to produce fruit without taking up much space, as well as to decorate solid walls. The term espalier originally referred to the trellis that the trees were shaped on, but over time has come to describe the technique.

Arborsculpture projects are not limited to a flat single plane, or a pattern. Either technique may use species of trees that produce fruit, but espalier-trained trees are not shaped into benches, tables, gates and such.

Pleaching

6.5 Above is an avenue of pleached limes (*Tilia x euchlora*) at Arley Hall, Northwich, Cheshire in Northern England.

The word pleaching is used by some as a substitute for arborsculpture but pleaching is the technique of weaving branches together into a flat plane while trunks are limbed up to create a sort of hedge on stilts. In late medieval gardens through to the early eighteenth century, shaded walks and Pleached “allees” were a familiar feature in European gardens. “Because of the time needed in caring for pleached allees, Donald Wyman noted, (Wyman, 1971) they are but infrequently seen in American gardens, but are frequently observed in Europe.”

Bonsai

To create bonsai, dwarf trees are collected and trained to stay small. In Asia, deep appreciation developed centuries ago for the dwarf trees that were found growing in high elevations in the cracks of rocks. The trees were transplanted to containers and displayed in the home or garden. The art of bonsai is growing trees in pots and containers, using

pruning techniques to keep the trees at a miniature size. A bonsai project is intended to appear as if a human had not shaped it; like representation of a miniature tree, as one would be found in the wild.

Benefits of Arborsculpture

Arborsculpture can be architecturally interesting, naturally and aesthetically pleasing, and a form of art but it can also be used to raise ecological consciousness. Through some very unique designs and a lot of time and thought, arborsculpture is being used for more than just an art piece. It is being made to replace structures such as bridges, parks, homes and fences that are normally made by cutting down trees and then building them up. It gives people a natural alternative and contributes to urban reforestation that is functional, and enjoyable.

Homes

People all over the world have caught on to the benefits of arborsculpture and have begun to create large structures, in which they plan on using for either dwellings or gathering places. A term that may be used more frequently in the future for living structures is arbortecture.

Fab Tree Hab

One example of an arbortecture home is the "Fab tree Hab." It is in the process of being designed by a team of MIT researchers who have a vision of a truly "green home." It will literally be alive; with a frame of growing tree trunks grafted together, insulation made of clay and straw, and vines instead of vinyl siding. "The structure is a statement against cutting down timber," said Mitchell Joachim, the architect who designed the house (Rich, 2005).

7.1. The growth process of the proposed "Fab Tree Hab."

7.2. Final design for the “Fab Tree Hab.”

Konstantin Kirsch has a park that people can take tours through which holds tons of structures, all grafted together. The structures have separate rooms that are all connected, much like your everyday, built home.

Konstantin Kirsch

7.3. Konstantin Kirsch with his growing homes.

Konstantin Kirsch, from Germany was inspired to grow houses from living trees by the published manuscripts of Arthur Wiechula. He planted his first house in 1990 with willow trees using grafting techniques. Now,

Ficus Hut

Another is the Ficus hut located in Bio Park on Okinawa Island.

7.4. Ficus Hut.

This living tree house demonstrates the potential of training tree trunks into fun and functional garden elements. It is constructed using the basket weave technique out of Ficus trees.

Cathedral Grove

7.5. Cathedral Grove in Trento, Italy.

Cathedral grove is an attempt to create a “Cathedral of Nature,” designed for an international art exhibit in the Sella Valley of the northern Italian Province of Trento. The work by Giuliano Mauri is meant to evoke the idea of “Arte Natura” or the symbiosis between art and nature. It is the size of a real Gothic cathedral and is composed of three naves, each formed by 80 columns of intertwined branches.

Arena Salix

This is a structure in Schlepzig, a town in the district of Dahme-Spreewald in Brandenburg, Germany called Arena Salix. The structure is meant to be a gathering place.

Herman Block

Herman Block grows summerhouses in Germany by grafting tree branches together.

Parks

The Village

"The Village" was a park grown for the 2005 World Exposition in Aichi, Japan. The park is full of wonderfully shaped trees, growing furniture and climbing structures. It was created to give people a chance to enjoy nature through play and to learn the involvement of human creativity.

Plantware

7.6 A park design using live trees by the company *Plantware.*

One company called *Plantware* is using arborsculpture to design and sell natural products such as benches, streetlights, entryways and even small things such as fruit bowls, penholders and towel racks. *Plantware* also specializes in growing parks, which seems to be the future of their company.

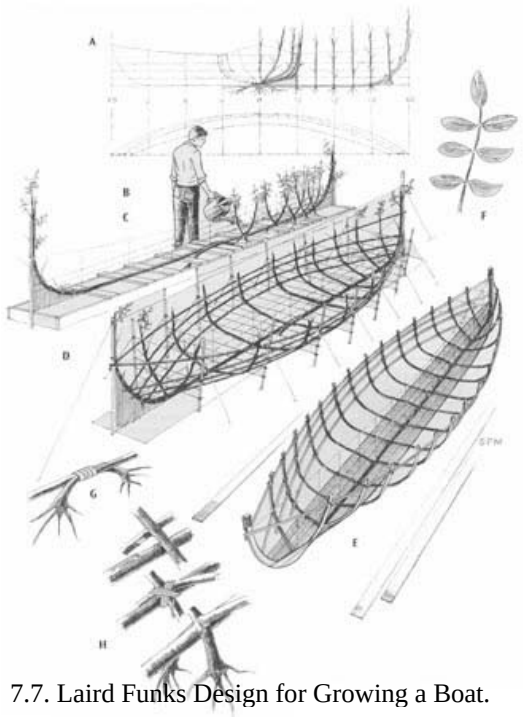
Towel Rack by *Plantware*

Fruit Bowl by *Plantware*

Entry Gate by *Plantware*

Furniture

These sculptors are experimenting and creating amazing pieces of arborsculpture such as furniture, figures and tools.



7.7. Laird Funks Design for Growing a Boat.

Laird Funk from Williams, Oregon has been growing a boat for about 7 years now. This boat enthusiast decided, one cold winter day, that he was not going to make a boat, he was going to grow a boat. In that moment the child hood song came to mind, “Grow, grow, grow your boat, out there on the lawn! When it’s done you cut it down and put the planking on.” He began by growing a frame using 16 ft. Oregon Ash (*Fraxinus latifolia*) (Reames, 2007). Once sufficient growth had taken place, all parts of the saplings were fused together. He has a full design planned out and continues to work diligently to complete his boat; it will be a full functioning boat that he intends on using.

7.8. Laird Funk’s Boat in progress.

Richard Reames, author of “How to Grow a Chair” and coiner of the term “arborsculpture” grows a number of designs. He has made chairs, a peace sign and tool handles. He also wrote “Arborsculpture Solutions For a Small Planet” and creator of Arborsmith.com

7.9. Richard Reames' Bench.

7.10. Richard Reames experiments with growing a faucet through a tree.

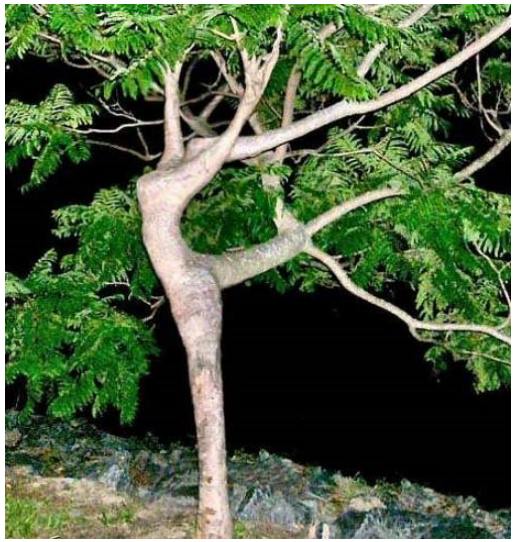
7.11. Richard Reames grows a peace sign in a cherry tree.

7.12. Reames grows tool handles from tree limbs.

7.13. Richard and his friends enjoy his growing table and chairs.

Peter Cook, also known as “Pook” and Becky Northey of Queensland, Australia are growing and shaping the world’s most detailed and balanced arborsculptures. They call their trees “Pooktres.” It began when Peter decided to grow a chair in 1987. A long drought followed his plan and the tree died. After a lot of trial and error and many discussions with Becky about trees, the long time friends came up with their first piece in 1996, a coffee table made of 8 shoots of wild plum tree. That is when their creative partnership, “Pooktre” was born. Now they continue to grow many interesting designs.

7.14. A table grown by “Pooktre.”



7.15. A Dancer made by “Pooktre.”

The pioneer Axel Erlandson experimented with grafting and grew a chair. He began growing the chair somewhere around 1925.

7.16. Axel Erlandson sits in his growing chair.

Contributing to Place Design

Changes in our environment such as global warming and over usage of resources encourages our society to be more conscious about how and what we design, what we consume and how we are polluting the planet. Ecodesign is an approach and possible solution to cut down on some of the ecological damages to help preserve the environment for the future. As our society begins to shift to more eco-friendly planning, I believe arborsculpture could be part of the new trend in urban design. This extremely low impact art is a way for people to get involved in the landscape as well as add funky and environmentally friendly flare to a space.

Trends in landscape design are common and have occurred throughout history. During Roman times and the Renaissance, topiary was part of a huge design movement in which very straight and sculpted gardens could be seen at Versailles and in gardens of the European elite. Topiary, like arborsculpture is a unique design technique using plant manipulations to create art. Arborsculpture could be part of a similar movement in landscape design.

This form of art creates new ideas for landscape designers and anyone looking for a something unique. Casey Gates, a friend in my major, proposed using arborsculpture in an urban design project for a class that focused on the Art district on Broadway Street in Sacramento California, after hearing about arborsculpture from my research. This is unique and original art that is alive, ever changing and eco-friendly.

Conclusions

Trees are beautiful and natural pieces of art. Through this research we learn that they give us an opportunity to use them in ways that benefit humans as well as the planet. The act of grafting and manipulating tree growth is not a new technique but the art of it may be the new and upcoming trend in design.

Throughout history, writers, botanists, and plant enthusiasts played around with the idea of creating things out of living trees, but arborsculpture never really took off in the design world. A reason for this might be that it is not an instant gratification. The art of tree trunk manipulation takes years to complete and may only be complete when the tree dies. However, the main point to be understood is that we can design for the future. Axel Erlandson began growing his trees in the 1920's. He has now passed on but because of his work and his dedication, here I am, almost 90 years later, sharing his ideas. And almost 90 years later his trees are still one the biggest attractions at the theme park where they exist.

People all over the world have caught on to the benefits and beauty of this form of art. So, if even some are inspired to grow their own piece then I have done my job. And if even some are inspired to go and do a little of their own research on the subject then arborsculpture can flourish. Because this topic is a fairly undiscovered idea, there are little resources on the actual art and design of arborsculpture. Like any other new thing, it must be experienced through trial and error. The more it is experienced the more resources we will have. Through experience we can create a future and a place for arborsculpture in this world.

"Trees grow in three stages. The first year they sleep, the second year, they creep, and the third year, they leap."- Richard Reames

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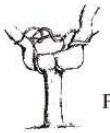
Michael Bonfante
March 24th 2008 1:30 PM.

Some names are historical, some descriptive but the final names depend on what you see when you enter the Home of the Circus Trees!

Notice us as you enter!

Squat Curvy Scallops
3 European Ash (*Fraxinus exelsior*)
Original location: Scotts Valley, CA
Park location: 1st on North side of entrance



Spring Vine
European Ash (*Fraxinus exelsior*)
Original location: Scotts Valley, CA
Park location: 2nd on North side of entrance

Double Hearts
(*Acer sp.*)
Original location: Scotts Valley, CA
Park location: 3rd on North side of entrance

Sideway Rope Rectangle
European Ash (*Fraxinus exelsior*)
Original location: Scotts Valley, CA
Park location: 4th on North side of entrance

Picture Frame
Cork Oak (*Quercus suber*)
Original location: Scotts Valley, CA
Park location: 5th on North side of entrance

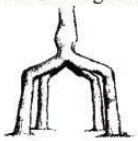
Look for us where a banana splits or you smell a fantastic BBQ!

Spiral Staircase #2
2 European Ash (*Fraxinus exelsior*)
Original location: Scotts Valley, CA
Park location: Near Illions Supreme Carousel
Fun Fact: Erlandson was successful in repeating this similar design.

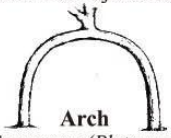
Zig-Zag
American Sycamore (*Platanus occidentalis*)
Original location: Hilmar, CA
Park location: Uncle John's BBQ
Fun Fact: This tree is also referred to as the Lightning Bolt Tree.

The Main Attractions...

Basket Tree
6 American Sycamores (*Platanus occidentalis*)
Location: (Orig.) Scotts Valley, CA; (Park) Main Plaza
Fun Fact: The most intricate of the Circus Trees.
Can you tell where one tree begins and the other ends?



Four Legged Giant
4 American Sycamores (*Platanus occidentalis*)
Location: (Orig.) Hilmar, CA; (Park) Mission Plaza
Fun Fact: Started around 1925,
this was the first major Circus Tree.



Arch
2 American Sycamores (*Platanus occidentalis*)
Location: (Orig.) Scotts Valley, CA; (Park) Claudia's Garden
Fun Fact: The center of the arch is 9'7" tall.

Emblem
3 American Sycamores (*Platanus occidentalis*)
Location: (Orig.) Hilmar, CA; (Park) Pinnacles Rock Maze
Fun Fact: This tree has been planted at
Pinnacles Rock Maze since July 1997.

Almost Circle Cage
10 American Sycamores (*Platanus occidentalis*)
Location: (Orig.) Scotts Valley, CA; (Park) Near Pinnacles Rock Maze
Fun Fact: A similar shaped tree (Telephone Booth) was donated to the American Visionary Art Museum in Baltimore, Maryland.

Quick, look at us near the entrance too!

Revolving Door
(*Acer sp.*)
Original location: Scotts Valley, CA
Park location: 1st on South side of entrance

Short Table
2 Box Elders (*Acer negundo*)
Original location: Scotts Valley, CA
Park location: 2nd on South side of entrance

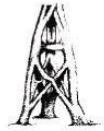
Compound Eight
Box Elder (*Acer negundo*)
Original location: Scotts Valley, CA
Park location: 3rd on South side of entrance

Spiral Staircase # 1
2 Box Elders (*Acer negundo*)
Original location: Scotts Valley, CA
Park location: 4th on South side of entrance

Figure Y
Cork Oak (*Quercus suber*)
Original location: Scotts Valley, CA
Park location: 5th on South side of entrance

To find us, take the train or splash in the water with a frog.

Oil Well
3 Box Elders (*Acer negundo*)
Original location: Scotts Valley, CA
Park location: South County Backroads
Fun Fact: This tree looks different from each of its three sides.



Chain Link
American Sycamore (*Platanus occidentalis*)
Original location: Scotts Valley, CA
Park location: Pitch 'n' Win!
Fun Fact: Also known as the 3, 2, 1 tree.

"Of all the people who have seen these trees, no one has ever been heard to say they saw anything like it elsewhere." *from the original Circus Tree Brochure*