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Natural Synthesis

Karrie Swanson

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A Thesis Submitted to the Faculty of

The College of Imaging Arts and Sciences

In Candidacy for the Degree of

MASTER OF FINE ARTS

NATURAL SYNTHESIS

By

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THESIS STATEMENT

The intention of this thesis is to chronicle my journey within the ever expanding and fascinating realm of non-toxic printmaking.

This document will showcase the 'Howard Four Color Inversion Intaglio-Type Printmaking Technique' and at the same time bring the reader's attention the plight of one of humankind's oldest and arguably most vulnerable companions trees.

“Always in the big woods, when you leave familiar ground and step off into a place, there will be, along with the feelings of curiosity and excitement, a little nagging of dread. It is the ancient fear of the unknown, and it is your first bond with the wilderness you are going into. You are undertaking the first experience, not of the place, but of yourself in that place. It is an experience of our essential loneliness, for nobody can discover the world for anybody else. It is only after we have discovered it for ourselves that it becomes a common ground and a common bond, and we cease to be alone.” (‘The Unforseen Wilderness’, Berry)

Berry's words not only describe the mystery and magic of “big woods,” they also vividly describe my own trek within the magical world of non-toxic printmaking.

From my first studio “feelings of curiosity and excitement,” to the exhilaration of being involved with pushing the limits of accepted printmaking procedures into new and unchartered waters, my journey quickly became “common ground and a common bond,” as Berry so eloquently states.
'Websters' dictionary defines 'nature' as:

“The sum total of all things in time and space; the entire physical universe...
natural scenery, including the plants and animals that are a part of it.”

Nature presents her beauty to us in profound and dramatic ways, even including the compelling imagery of dead and decaying trees. In my travels I have seen climatic changes and diseases that are affecting our trees in ominous ways. Within this thesis I hope to effectively illustrate man's responsibility to these silent, embattled warriors, who are an integral part of the complex process of worldwide ecosystem sustainability.

My 'Four-Color Inversion Intaglio-Type' prints will provide an abstracted view of diseased trees and show how mankind has impacted their environment. Truly, the quality of our future depends greatly upon the ability of humankind and trees to live in harmony with each other.

Artists who have provided direction and inspiration for this work include Arthur Dove, Ansel Adams, Georgia O'Keeffe, Carl Chiarenza, and Arnold Gassan. These artists are also naturalists and raise a united voice of concern for our environment.

“Trees conduct the eye from the ground up to the heavens, link the detailed temporariness of life with the bulging blue abstraction overhead...they alone seem to unite the earth and sky...the known, evadable world with everything that is beyond our grasp and our power.” (Trees 23, Ansel Adams)

Trees are age-old messengers within our natural environment. They speak of history, blights, weather conditions and unfortunately, human mismanagement. When I see sunlight filtering down through giant tree branches, my artist's eye begs me to pull it down further yet and onto a white and willing sheet of seductive cotton fiber, a print in the making.
GOALS AND OBJECTIVES OF THIS THESIS

Ironically, beauty may even be discovered in disease. In this case... the disease, destruction and decay, as suffered by this blue planets' prolific forest friends, trees.

The goal of this thesis is to a) chronicle my journey within the field of 'Non-Toxic Printmaking' and b) make the reader aware of the precarious future of our trees.

Within these pages you will see diseased trees in my Sugar Maple print, a fungus in my Aspen tree print and an Imperial Moth infestation in my White Pine print. Massive destruction is apparent in the print showing the effects of a hurricane on Norway Spruce trees and in the print of a forest fire affecting Texas Live Oaks. Finally, decay is illustrated by the Piñon and Wormwood prints.

I will identify and illustrate particular trees that I have encountered and explain how each tree has suffered damage. I will also discuss the evolution of my enhanced art skills... skills in the fascinating field of printmaking that I gained during my research and studio experiments.

It is my goal to become an ambassador for the process of 'Non-Toxic Printmaking', to teach these techniques at schools and workshops and also to become an influential voice in the support of trees everywhere.
As a sophomore at Rochester Institute of Technology, I was given the opportunity to study printmaking and right from the start of my studies in this medium, I was captivated. Master printmaker/professor Keith Howard's contagious passion and enthusiasm for his processes, swept me inexorably into a new role as an emerging print artist.

In my junior year, printmaking began to consume my studio life. During that first year, the 'Master Printmaking Program' was initiated, and because of my growing interest in the medium, I wanted to see what it would be like to work with a master printmaker. I soon found that his classes brought the students together as a team, to create amazing and unique prints.

In my senior year, I started a body of 'Four-Color Intaglio-Type' prints using images from a trip to the American west the previous summer. I had taken photos of rock lichens and cropped those photos to abstract them in ways that would provide options of interpretation to viewers. My senior year show was held at “Gallery r,” in downtown Rochester, New York. I was able to exhibit five 4-color works of lichen on rocks. Two of my images are shown at the end of this biography.

As an undergraduate, my work has led me to where I am now...the study and rendering of the natural beauty that surrounds us. Ending my senior year at RIT, the next stage of learning was graduate school, and the most appropriate place was Rochester Institute of Technology Graduate School.

I applied for and received the 'Windgate Fellowship', which opened new doors for me, beginning with workshops at the Institute of American Indian Arts in Santa Fe, New Mexico. Keith Howard, Susan Rostow, and Hugh Bryden held these workshops where I was able to create art in yet another new way. I began to explore a more colorful balance between the
abstract and the natural world.

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ARTIST’S AUTOBIOGRAPHY continued...

During my year as a graduate student, there were many responsibilities and projects to be explored. Also within the Windgate Fellowship, the University of Miami and the Armory Art Center of Miami, Florida, sponsored me in various workshops. Summer of 2008 found me beginning the next stage of my career which was going to change my style dramatically.

I had been exploring various options my first year as a graduate student, including mono-printing in Santa Fe, and woodcuts with Nebraska professor Karen Kunc. This woodcut training was exactly what I needed to further expand my thesis ideas. I created colored prints unlike all my previous work and I found myself making abstracts of what I felt trees really looked like. Printing from wood surfaces and using natural Mulberry paper, I explored ideas to take back to RIT for future works.

Thanks to my Windgate stipend I was also able to purchase an SLR Canon digital camera, with which I later photographed my travels throughout Europe and the American west. I studied trees everywhere I went, looking at the bark, the condition, location and coloration of each one. Environments had become very important to my process.
Figure 1: 2007, *Desert Varnish*
Figure 2: 2007, *Living Puzzle Pieces*

32” X 23” Four-Color Inversion Intaglio-Type
My Environmental Concerns

Trees and mankind have always had a symbiotic relationship. It was said:

“They have provided us with a multitude of nutritious fruits, leaves, flowers and roots for food and medicine. They have given us wood from which to make tools, weapons and toys, not to mention timber for houses, fences, boats and bridges.” (Hageneder

“Native north Americans call trees 'our standing brothers and sisters'. Humans and trees share the upright, vertical orientation. We move and change, they remain the quiet center of being.” (Hageneder 6)

Trees cover almost a third of the earth's dry land and are comprised of more than 80,000 species, ranging from small willows to the lofty Redwoods. Trees are the most complex and successful plants on earth. They are among the oldest living organisms on earth.

“They have been around for 370 million years.” (Hageneder 8)

They are essential to all life. It was stated:

“They reduce pollution by absorbing vast amounts of carbon dioxide from the atmosphere while at the same time replacing it with clean oxygen. Each day one acre of trees will produce enough oxygen to keep 18 people alive. Forests of trees help to regulate water flow and can reduce the effects of flooding and soil erosion. They even influence weather patterns by increasing humidity and generating rainfall.” (Russell, Tony, Culter, and Walters 8)

This thesis is a celebration of trees in all their forms. I want the reader to understand my environmental concerns for our trees. I would also like to make mention that every image in this thesis is taken from my own photography during my travels around this besieged globe, this wondrous blue planet we call.... 'earth.'.

“More than ten percent of the world's tree species are threatened with extinction; some are down to their last one or two specimens. Across the world, we are losing at least one hundred acres of trees a minute.” (Russell, Culter and Walters)
Evolution of this Thesis

During the fall quarter of my second year of graduate school, I decided to create my own 'forest' path using woodcuts printed on my own handmade paper. I had a novel idea of hanging prints from the ceiling to see the effect of light pass through the paper. I was having difficulty abstracting my tree images and making translucent handmade paper was becoming an enormous challenge. Ultimately, I returned to 'Four-Color Inverse Intaglio-type' prints, the process that I was most comfortable with.

Using woodcuts was still in my mind and I intended to create environmental statements which were to be the same size as my images, but partially into the process I decided that the messages would be too distracting exhibited next to my digital prints. I still wanted to keep the emphasis on trees, so I returned to my travel photographs and decided to dedicate my thesis to an environmental concern for trees.

The other challenge that I faced was deciding whether to include my black and white images of trees as in my thesis exhibition. My committee believed that the black and white images next to the strong, four-color images would be diminished by comparison. This left me with eight four-color prints for my body of work. In the process section of this thesis paper, I will explain how I created the four-color prints, the printing process I incorporated, and the paper I selected as the print substrate.

After multiple meetings, sketches, and much deliberation, the result is a thesis body of work entitled 'Natural Synthesis'. I wanted to focus on environmental issues that include the climatic changes and diseases that are affecting trees today. In the past, mankind's major need was arable land and man did not have to think about animate things. However, today's adverse forest effects,

"...through conditions of over-population and the development of various chemical elements released into the atmosphere, have led to irregular rainfall and global warming." (Elson)
Evolution of this Thesis continued...

“This global warming has brought climatic changes which are damaging once healthy trees, thereby adversely affecting not only human beings but also other living species.” (Elson)

I am happiest when creating my art. I have a singular vision, which makes me who I am. This personal goal of accurately putting on paper the image I see in my mind, is what drives to perfect my prints.

I wanted to create a visual voice that could address what is happening to our landscape and perhaps create a fertile environment for constructive dialogue among those who view my work.
Great artists provide other artists with inspiration, whether through brush strokes on a canvas, images captured by the lens of a camera, or even when color selection purposely creates moods that enlighten subject matter. Throughout my artistic career development there have been many influential artists that have inspired me to create. During my thesis investigation I found myself drawn to these artists which include Arthur Dove, Ansel Adams, Georgia O'Keeffe, Carl Chiarenza and Arnold Gassan.

According to the 'New Oxford Dictionary',

“Art is the process or product of deliberately arranging elements in a way that appeals to the senses or emotions. It encompasses a diverse range of human activities, creations, and modes of expression, including music and literature.”

(Oxford University Press)

Art to me is something I feel passionate about; an opportunity to produce a print that I can control and know that the print has importance for me.

Those artists that inspired me all have a common vision from which I find inspiration; their insight defines nature through art. Each of these artists' works reveals nature in a different way. For example, the representation of nature is prevalent in the abstract pieces painted by Arthur Dove, the realistic landscape photographs by Ansel Adams, the painterly landscapes Georgia O'Keeffe invented, and the manipulated photographic images Carl Chiarenza and Arnold Gassan produced.
Arthur Dove was an early 'American Modernist' artist, and by 1913, one of America's first abstract painters.

His selected shapes symbolized different forces, organic growth and inner reality.

“In this way, Dove believed he could “arrive at essences that would transmit his sense of the spiritual in nature, the deep concern of his art.” (Hughes 23)

I too wanted to use this process to obtain abstraction in my thesis prints. The vivid colors and expression that he shows within his work are similar to my own.

The thesis print that I feel most relates to Dove’s work is 'Maple Leaves of Ellicottville, NY-Bacterial Blight' because we share a similar color palette in our compositions.

My travels and studies are very similar to Dove's approach for gathering content. Dove completely immersed himself in nature.

“Dove took experiences of camping, boating and traveling for months at a time and then created art narratives from the exposure to nature.”(Hughes)
Figure 3 : 1931, Arthur Dove, *Pine Tree*
Ansel Adams (1902 – 1984)

Ansel Adams said:

“I hope that my work will encourage self expression in others and stimulate the search for beauty and creative excitement in the great world around us.” (Lyons 32)

This legendary artist was a keen photographer of trees and forest woodlands, distilling their essence in striking black and white images. Adams had a remarkable career and was recognized as America's foremost landscape photographer and as a renowned environmentalist.

In a letter he once wrote, he states:

“The whole world to me is very much alive.... all the little growing things, even the rocks. I can't look at a small bit of grass and earth, for instance, without feeling the essential life...the things going on...within them.” “The same goes for a mountain, or a bit of the ocean, or a magnificent piece of old wood.”

(Ansel Adams: Trees 30.)

This passion, along with his technical mastery, was the stuff of legend. More than any other creative photographer, before or since, he reveled in the theory and the practice of his medium.

It was also noted:

“Adams was an unremitting activist for the cause of the wilderness and the environment.” (Stillman 11-12). “He attended innumerable meetings and wrote thousands of letters in support of his conservation philosophy. However, his greatest influence came through his photography.” “His images became the symbols...the veritable icons of wild America.”

(The Ansel Adams Gallery)

Ansel Adams has had a huge influence on my artwork and my thinking. Whenever I look at his photographs, I find myself lost in the beauty of his work. At Maroon Bells, Colorado, under the direct influence of Adams work, I took photos of stark white aspen trees with their straight trunks outlined against the Colorado Mountains. His inspirational works have impacted my composition, subject matter and appreciation of trees in all of my prints.
Ansel Adams continued...

I concur with Adams' thinking when he states:

“I believe the approach of the artist and the approach of the environmentalist are fairly close, in that both are, to a rather impressive degree, concerned with the affirmation of life...this response to natural beauty is one of the foundations of the environmental movement.” (Ansel Adams: Trees (80)

During their lifetimes, Ansel Adams and Georgia O'Keeffe, two of America's most celebrated icons, were known to work together. This collaboration enhanced the significance of their art and photographs, capturing the reality and essence of the world around them, and it clarified various parallels between their distinctive visions of the natural world.

It was stated:

“Adams and O'Keeffe shared a profound appreciation of the natural world.”
“In 1937 they traveled together with friends to explore sites in the Southwest U.S.A.” (Benke 31).

Alfred Stieglitz, Georgia O'Keeffe's husband, a famous photographer and modern art promoter said:

“The skies and land are so enormous, and the detail so precise and exquisite, that wherever you are, you are isolated in a glowing world between the macro and the micro...where everything is sideways under you and over you, and the clocks stopped long ago.” (Lynes 22).
Figure 4: 1902-1958, Ansel Adams, *Aspens, New Mexico*
Georgia O'Keeffe (1887 – 1984)

Among the great American artists of the twentieth century, Georgia O'Keeffe is to my mind unquestionably one of the most compelling.

It was said:

“For nearly a century, O'Keeffe's artistic representation of the American landscape was a brave counterpoint to the chaotic images then embraced by the art world. Her cityscapes and still lifes filled the canvas with a wild energy that gained her a following among the critics as well as among the public.” (Benke 73-75)

More than almost any of her other works, the early New Mexico landscapes and still lifes have come to represent her unique artistic gifts. For over ten years, Georgia O'Keeffe has been my greatest inspiration. Not only because she is a female icon and artist but also because of the techniques she employed in all of her art. Her love of nature was always apparent.

On a visit to the Georgia O'Keeffe Museum in Santa Fe, I saw both her work and the work of photographer Michael A. Vaccaro. I also visited O'Keeffe's 'Ghost Ranch' in Abiquiu, New Mexico, where I was able to walk the same paths she had made. The surrounding mountains and mesas very obviously guided the purity of color in her paintings.

O'Keeffe was an amazing artist, woman, and forerunner of modernist art. Her subjects, especially her magnified flowers and her southwestern landscapes, reflected her intimate bond with nature.
Figure 5: 1945, Georgia O’Keeffe, *Dead Tree with Pink Hill*
Another artist who has greatly influenced my work is Carl Chiarenza, a recognized photographer from Rochester, New York.

“Chiarenza studied at Rochester Institute of Technology and received his Bachelor of Fine Arts Degree before launching his extraordinary career as a photographer, writer and teacher.” (Schlatter 2)

Chiarenza's works are described in the following words:

“They are challenging and abstract, studies of blacks and whites in the ancient and honorable tradition of chiaroscuro. His intention is to push the photograph beyond the boundaries of the real, to investigate the realms of imagination where space and surface intertwined and where the real is transformed into a wholly visual event.” (Schlatter)

“He wants the viewer to move, moment-to-moment, from the accessible and familiar, to the realm of the unknown.” (Schlatter 125)

I found his vintage photographs to be increasingly abstracted, personal narrative statements. It is said:

“They chart his nuanced transformation from documenting details of observable life on a small scale to interpreting suggestive sensations from the visible world, with growing confidence and mastery.” (Schlatter 2).

Photographs created by Carl Chiarenza were an important discovery in my research. His intentions parallel my own ideas for prints.

Before I started doing research for this thesis, I was not familiar with Carl Chiarenza or his artwork. Finding his work in a photography book at the George Eastman House, I was immediately drawn to his compositions and the abstract representation of objects. His close-up work reminded me of my “Aspen-Fungus Marssonina” print.
Carl Chiarenza continued...

Chiarenza's photos contain complex dark shapes that capture a sense of luminosity. I could envision his techniques incorporated within my own prints. Chiarenza can literally capture a frozen moment in time with his photography. I too, hope to do the same. The realm of the abstract world that he shares with the viewer creates a magnetic attraction to his photos.
Figure 6: 1969, Carl Chiarenza, *Honeye Falls*
Arnold Gassan (1930 – 2001)

Arnold Gassan, a photographer and experimental photographic printmaker, has also influenced my work. Gassan was an inventor and an avid nature lover. He passed away many years ago with cancer, but the legacy of his experimental photographic techniques is still highly regarded.

Gassan wrote many books on photography, including 'Handbook for Contemporary Photography' described as:

“This handbook presents new ways of creating photographs in an almost printmaking-like fashion.” (Illuminated Man)

The process I used to create my four-color intaglio-type prints is similar to an early process that Gassan used in his own work.

Gassan's most inspiring work is 'The Grottoes' series. These images can be seen at George Eastman House. The series is of a water-cut formation found near Aspen, Colorado. The grottoes are small ground coverings that cover a little more than an acre in size. They are described as:

“The area and volume enclosed is reflected in his photogravure prints created by Gassan. The four-fold images were planned before negatives were made and the edition is limited to twenty-five signed copies.” (Illuminated Man).

I was amazed when I first encountered Gassan's prints. I could see everything I had already been doing, brilliantly represented in his prints, but with a different approach. He was able to create such a masterful fold technique and representation of a tree that it inspired me in a unique and unexpected way. His technique is not widely used, just as mine is not commonly used. His work introduced many new ideas to me, new inspiration for future prints.
Figure 7: 1969, Arnold Gassan, *Untitled*
The Process of Creating My Own Work

Studio procedures for 'Four Color Inversion Intaglio-type Printmaking'

Artist/Instructor/Inventor Keith Howard's process involves the use of digital halftones* made on an inkjet printer. Each image that I have created thus far has come from a photograph that I have personally captured. Using my own images brings me inspiration within the art I create and adds my own personal touch. Mastering this process has taken me years and likely will never cease as there are always new ideas being invented.

After choosing the image and printing it off with the inkjet printer, the next stage is to take the image from computer to paper. A transparent PETG** plate serves as a matrix for the ImagOn film, and is registered by its placement on the press bed. Hence the term, 'Inversion Intaglio Printmaking'.

Exposing the plates and then developing them in soda ash can take from 30 minutes to hours, depending on the artist's level of skill. The plates are then washed thoroughly, fixed with vinegar and dried. The transparent plates allow for the sequential alignment of a multi-plate project in full color.

While creating my art for this thesis, the images went through a process of ink variations using Akua intaglio ink. I needed to decide which tones of ink worked best for each image. Combining different inks and transparent bases with the inks created the color combinations needed to balance the color in each finished print. I then “dry” printed all of my plates onto Arches 88 paper. This was a new printing innovation called 'Inversion Intaglio-Type' that allowed me to print CMYK ImagOn plates upside-down registering each plate to the previously printed plate. Once all four CMYK*** plates were printed the image was completed.

I use an assistant's help in removing, registering and holding onto the huge 23”x 32” plates. The images I create are very large. I work at a fast pace, especially when it comes down to a time deadline or a show that needs to be hung.
Manipulating and enhancing my photography is something that I do minimally. I take pleasure in watching what the developing print has to offer, rather than what the computer can do. I may put a photo in the computer to create transparencies, but that is not necessarily what the final product is going to look like. Lifting the final plate and seeing the end result of your hard work is always a rewarding and unique experience.

Instructor Keith Howard's 'Four Color Inversion Intaglio-Type Printmaking' process has enabled me to achieve something extremely unique. I am able to create wonderful pieces of art with a method that requires both machines and human hands working together, complementing each other, both indispensable.

Being able to visualize a great piece of art, capture it on film and then manipulate its image with my own hands on a blank sheet of paper is most certainly an exhilarating and rewarding experience, one that this artist truly enjoys.

Definitions of studio procedures...
*digital halftones...* Halftone images contain a series of dots in a specific pattern that simulate the look of a continuous tone image. You must convert these images to halftones. Color halftones consist of a series of dots in CMYK (cyan, magenta, yellow, and black). When using images from a digital camera, you can produce the digital halftone directly from the software to the printer. The resolution of the output device (printer) is controlled by the computer program, which then makes the images.

**PETG plates...** Polyethylene Terephthalate Glycol is the term for plastic printmaking plates. PETG plates are used mainly in Intaglio-Type printmaking processes.

***CMYK...cyan, magenta, yellow and black.
Figure 8: 2009, *Pinon-Twisted Tree Snag Ghost Ranch, NM*

23” X 32” Four-Color Inversion Intaglio-Type
The Piñon tree became a familiar icon as subject matter for paintings created by artist Georgia O’Keeffe. The Piñon is described as a:

“small, bushy tree with a short, often twisted trunk, that inhabits hot, dry, rocky slopes, particularly within the mountain ranges of central and southern Arizona, Utah, New Mexico and Colorado.” (Russell, Culter, Walters, 125)

This tree is best known for its edible seeds that are sold as piñon nuts.

An epidemic of piñon engraver beetles is the cause of most piñon mortality.

“The beetles are small, dark-colored, about the size of an uncooked rice grain. They are native to our forests, and frequently attack damaged or stressed trees.” (Colorado State University Extension).

A drought is putting stress on these trees and is considered the reason for the increase in engraver beetle populations.

“They kill the piñons by mass-attacking a tree, tunneling beneath the bark.” (Colorado State University Extension) As the larvae feed, “they girdle the tree while spreading fungi. This then disrupts the tree’s natural defenses. Following a successful attack, the needles of the infested tree quickly fade from green to straw-colored, later turning red and eventually brown.” (Colorado State University Extension)

At this point, a new generation of beetles is already maturing beneath the bark and will emerge to fly off to infest new trees.

“Usually, three generations of engraver beetles are produced annually. From late fall through mid-spring, their activity is confined to the under-bark area.” (Colorado State University Extension)

The image of the Piñon shown here was taken on a trip to Ghost Ranch, New Mexico, the site of Georgia O’Keeffe's studio. This print could have been lighter with more detail, however it does have painterly qualities.
Figure 9: 2009, White Pine-Imperial Moth Cook Forest State Park, PA

23” X 32” Four-Color Inversion Intaglio- Type
Eastern White Pine

This is the largest conifer and the only five-needled pine to grow east of the Rocky Mountains.

“It was, for many years, one of the United States’ main timber-producing trees, reliably producing long, straight stems, which were originally used to make ships’ masts. It is prone to be attacked by a fungus that causes the fatal disease known as white pine blister rust.” (Russell, Culter, Walters, 316)

WPBR (White Pine Blister Rust) uses healthy trees as an alternate host. European Black Currant, the favored host, may be banned from certain areas. It is recommended that:

“To save these trees, people must keep them healthy and prune out the infected branches.” (Russell, Culter, Walters)

It has also been stated that:

“White Pine decline is part of the slow decline of trees planted in dry, clay soils low in organic matter. Plants with this disorder have only a small cluster of needles at the ends of the branches.” (Russell, Culter, Walters 125)

Bark Beetles bore into trunks making small holes scattered up and down the trunk. Also damaging the trees:

“Sawfly larvae caterpillars, variously colored, generally feed in groups on the needles.” (Cook Forest Online)

The White Pine image was taken at Cook Forest National Park, Penn. I knew right there, as I stood beneath these virgin, stately timbers, that their image would definitely be in my thesis.

They truly are the patriarchs of the forest.

“These pines have competed with each other for centuries to survive. Some of the trees in the Cook Forest range from 350 to 400 years old.” (Cook Forest Online)
Figure 10: 2009, Norway Spruce- Hurricane Gudrun Falkenberg, Sweden

23” X 32” Four- Color Inversion Intaglio-Type
Norway Spruce

The Norway Spruce has a regular, symmetrical form, with horizontal branches at lower levels, gradually becoming upswept towards the top of the tree.

“It grows naturally in northern Europe. In America, it has been cultivated for its timber, especially in the northeastern United States, the Pacific Coast area, the Rocky Mountain states and in southeastern Canada.” (Russell, Culter, Walters)

The wood is also used to make the bellies of violins and other stringed instruments.

Norway Spruce is one of the most widely planted species of trees, found in many parks and gardens.

“It is used in forestry for timber and paper production and as an ornamental tree in parks and gardens.” (Russel, Culter Walters 131)

The storm evident in my image is hurricane Gudrun, which hit Sweden in 2005, damaging buildings and roads. The area residents had many homes destroyed, but the trees took the hardest hit. The furniture industry is important in Sweden and a large source of income, but this industry suffered after the damaging storm.

“For individual forest owners, the economic effects of the storm were often disastrous.” (Effect of Hurricane Gudrun)

The delicate 'watercolor' feeling in this image, along with horizontal lines, almost imply a 'toothpick' effect. Inspired by Gassan.
Figure 11: 2009, *Ponderosa Pine- Woodworm, Santa Fe National Park, NM*

32” X 23” *Four- Color Inversion Intaglio-Type*
Ponderosa Pine

The natural range of this pine is vast, from the Pacific Coast to the Rocky Mountains of Colorado.

“It is planted as an ornamental species in large parks and gardens because of its attractive bark, fast growth and yellow leading shoots. Ponderosa pine, also called Western Yellow Pine, is one of the most widely distributed pines in western North America.” (Russel, Culter, Walters 110)

“A major source of timber, Ponderosa pine forests are also important as wildlife habitats, for recreational use and for esthetic value.” (Russel, Tony, Culter, Walters 111)

New Mexico has ongoing pine mortality from outbreaks of the Western Pine Beetle.

“Low tree vigor caused by several years of drought and excessively dense stands of trees have combined to allow bark beetle populations to reach outbreak levels.” (Russell, Culter, Walters)

These insects are native to the piñon juniper woodlands and ponderosa pine forests of the Southwest, normally attacking only diseased or weakened trees.

“They are, however, starting to aggressively attack and kill ponderosa and Coulter pine trees of all ages, including apparently healthy trees due to the drought in the Southwest.” (Collins)

At Santa Fe National Park in New Mexico, I stumbled upon ‘wormwood,' tiny artistic grooves carved into the wood under the bark, by beetles. The beauty of fallen, dead trees intrigued me, and their photos became the start of abstract views I would use later in my prints.

This image is abstract, colorful, and diagonally shaped, drawing the eye to the page bottom.
Figure 12: 2009, *Texas Live Oak-Fire Damage, San Antonio, TX*

23” X 32”  Four- Color Inversion Intaglio-Type
Texas Live Oak

This dense, round-topped tree, typically more broad than tall, is native to a coastal belt that runs from Virginia to southern Texas.

“It is extremely tolerant of salt spray and is quite often used to provide shelter from onshore winds in coastal areas. Live Oak was widely used in early American shipbuilding.” (Russel, Culter, and Walters)

Trees that grow where it is hot have another problem, more readily damaging than other pests or diseases. Threat of forest fires is a very serious concern in the landscape. This image of the live oak tree in San Antonio, Texas is a good example of forest fire effects. The long, hot summers and warm winters of this area cause harsh conditions for trees and unfortunately, good conditions for forest fires.

“Fires in forests that burn under natural circumstances become a problem when those forests are used for a particular purpose, such as settlement or timber production.” (Problems: Forest Fire)

“The immediate impact of forest fires can be devastating to human communities and forest ecosystems alike. Fires can alter the structure and composition of forests.” (Problems: Forest Fire)

The silhouette of this tree shows its true shape against the sky, and the 'greens' at the bottom of the image are almost of 'mono-print' quality.
Figure 13: 2009, *Maple Leaves - Bacterial Blight, Ellicottville, NY*

30” X 24” Four-Color Inversion Intaglio-Type
The Maple Tree

There are more than 100 species of maple trees. One of those is the Sugar Maple, which has striking scarlet-orange autumn leaf colors.

“It has a natural range from Quebec and Nova Scotia south to North Carolina and west to Missouri, but it is commonly cultivated throughout eastern and central North America.” (Russell, Culter, Walters 199)

“Tar Spot is the name commonly given to a foliage disturbance in Sugar Maple that starts with small black dots on the leaves, which eventually combine to form large, black, thickened areas. Most stem diseases such as tar spot exhibit cankers or galls.” (Walterscheidt)

Tar Spot disease exhibits cankers or galls, sunken portions of the trunks or branches that often have a callous-like build-up of bark around the edges.

“Galls are obvious outgrowths on the main trunk of a tree, usually within eight feet of the ground.” (Walterscheidt)

Fungi entering the stem through wounds in the trunk or branches can cause vascular diseases.

Maple trees familiar trees in the New York regions. Looking for an image that reflected my home area, the Maple was obvious.

The best location I found for these trees was in the Allegany Mountain area near Ellicottville, N.Y. I wandered the back roads and found maples in their prime fall colors...reds, yellows and oranges sang out to me as I drove, bringing to mind fond memories of “back home.”

For my print I chose to focus on just the leaves which proved extremely difficult to register and if just slightly off would negatively affect the image. The leaf veins have great definition with wonderful autumnal colors.
Figure 14: 2009, *Quaking Aspens- Ciborinia/ Ink Spot* Maroon Bells, CO

32” X 23”  Four- Color Inversion Intaglio-Type
Quaking Aspen

Likely the most widely distributed tree in North America, the Quaking Aspen has leaves that appear to be in perpetual motion. It is stated:

“They flutter or quake in the breeze, and the sound is audible. This motion is caused by slender leaf stalks, which are inappropriate for the size of the leaves and cause them to flap together.” (Russell, Culter, Walters)

“The leaves are one of the easiest ways to identify this species. It (Quaking Aspen) is also distinguished by the pale, yellowish bark, which is found only on the American species.” (Russell, Culter, Walters 56, 68)

The fungus 'Ciborinia' causes a leaf disease in aspens known as 'ink spot'.

“The first symptoms of ink spot appear in late spring to early summer as tan to brown areas on the upper leaf surfaces. Concentric, discolored ring patterns may become visible as the fungus advances through the leaf.” (Colorado State University)

“Raised black bodies begin to appear on affected brown leaves. These are the ink spots that give the disease its common name. This disease is especially prevalent in dense Aspen areas.” (Colorado University Extension)

Maroon Bells, near Aspen, Colorado, is one of the most photographed national parks in North America, and where I found great studies for this thesis. For the first time I could feel the sense of Mother Nature surrounding just me. The serenity that I could wrap myself in was awe-inspiring.

This plate was overdeveloped, so only three plates were used...the black plate unused. Keeping the blue plate as the last plate to be registered made the print colorful and successful. Very contemporary and abstract. Inspired by Carl Chiarenza
Figure 15: 2009, *Aspen- Fungus Marssonina Santa Fe, NM*

23” X 32”  Four- Color Inversion Intaglio-Type
Aspen can be found from Alaska through the western United States and into northern Mexico.

“Over much of the western range, aspens are a small to medium size tree, fast growing and generally short lived. Due to the reproductive suckers, aspens are able to survive avalanches, fires, and high winds. Aspens reproduce quickly and through the ground, one of the few trees like this found here in the states.” (Russell, Culter, Walters)

“Long appreciated for its esthetics, shade tree value and importance to wildlife, the Aspen is also capable of excellent growth and high yields and thus is an important commercial timber species. However, the aspen has one major drawback; its soft bark is easily wounded by animals and insects.” (Russell, Culter, Walters 374)

The photo was taken while I was in Santa Fe, New Mexico where I was fascinated by the aspens located there. It is a strong tree and can withstand the torture of disease; therefore, I wanted the fungus of this species to be the focus of my print.

The Aspen is a tenacious tree and can withstand the torture of disease. I feel that this image shows not only my concern for the tree’s health, but also what the tree itself is saying about its own survival.

This is almost a 'one of a kind' image. The blue plate did not develop at the bottom. This illustrates the unique effect of this 'Non-Toxic Printmaking' process. Inspired by Ansel Adams.
Installation of Show at Rochester Institute of Technology

Figure 16

Figure 17

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Conclusion

As a result of my work, travel and investigations for this MFA thesis, I have most certainly broadened my knowledge about the various ways in which trees can become diseased and damaged, and additionally I learned over and over, the importance of nature's cyclical processes. I trust this thesis and all my experiences leading up to it will help me in my goal to pursue a fulfilling career in concerns related to environmental art.

I hope to use my knowledge and passion for printmaking and trees to collaborate with national parks, voicing and illustrating personal environmental concepts and issues. I see myself inventing new processes and discovering new mediums for 'Non-Toxic Printmaking', possibly incorporating natural fibers into my works. Another option may be to publish a book that showcases the beauty and the fragility of our trees. As well, the 'Four-Color Intaglio Printing Technique' that I have mastered will allow me to exhibit my art.

It is my hope that this thesis will reflect my fortitude, resilience and ability to share my own visual gifts. In my thesis and in life, I wish to follow Emerson's advice, when he said:

"Do not go where the path leads, go instead where there is no path, and leave a trail." (Emerson)

respectfully,

KARRIE SWANSON

in the year, 2010
Illustrations

Figure 1: 2007, Desert Varnish 32” X 23” Four-Color Inversion Intaglio- Type

Figure 2: 2007, Living Puzzle Pieces 32” X 33” Four-Color Inversion Intaglio-Type

Figure 3: 1931, Arthur Dove, Pine Tree

Figure 4: 1902-1958, Ansel Adams, Aspens, New Mexico

Figure 5: 1945, Georgia O’Keeffe, Dead Tree with Pink Hill

Figure 6: 1969, Carl Chiarenza, Honeye Falls

Figure 7: 1969, Arnold Gassan, Untitled

Figure 8: 2009, Pinon-Twisted Tree Snag Ghost Ranch, NM

Four-Color Inversion Intaglio-Type

Figure 9: 2009, White Pine- Imperial Moth Cook Forest State Park, PA

Four-Color Inversion Intaglio-Type

Figure 10: 2009, Norway Spruce-Hurricane Gudrun, Falkenberg, Sweden

Four-Color Inversion Intaglio-Type

Figure 11: 2009, Ponderosa Pine-Woodworm, Santa Fe National Park, NM

Four-Color Inversion Intaglio-Type

Figure 12: 2009, Texas Live Oak-Fire Damage, San Antonio, TX

Four-Color Inversion Intaglio-Type

Figure 13: 2009, Maple Leaves-Bacterial Blight, Ellicottville, NY

Four-Color Inversion Intaglio-Type
Figure 14: 2009, *Quaking Aspens-Ciborinia/ Ink Spot, Maroon Bells, CO*

Four-Color Inversion Intaglio-Type

Figure 15: 2009, *Aspen-Fungus Marssonina, Santa Fe, NM*

Four-Color Inversion Intaglio-Type

Figure 16: Installation of thesis

Figure 17: Installation of thesis
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