One Sun, one Leaf, one afternoon.

Fig.1, Save the Snails, Arum Lily, Introduced invasive species

A lecture at the Plymouth College of Arts 15th October 2009

by Rosemary Horn

"Any thoughtful person involved in the arts must balance his poetic concerns against the weight of Real World need." (Spaid, 2002, p.i)

INTRODUCTION

Imagine a photographic world where you don't need heavy metals and litres of water to make photographs.
Imagine a photographic world where you can discard of your unwanted images, used and expired materials in your own backyard or compost bin.
Imagine a photographic world where your garden is your photographic supplies store.
Imagine no more.

As an environmentally concerned person I consider the implications of the society we live in and how my own actions can make a negative contribution.

"Take only photographs leave only footprints". This is a well intended notion which aims to make people realise the direct impact they can have upon the conservation of natural environments. This statement does not go past the idea of preserving an isolated slice of the environment from direct quanitifiable actions. What about the indirect impact we have on the environment, through pollution, resource and habitat depletion that comes from our wastefulness, the constant need for newer, faster, bigger and shinier, and from our self centered society, the lack of consideration for where these materials come from and the impact on the lives of the living as they are transformed into products for senselss consumption? I am much more partial to the statement "Think globally act locally". There is an emphasis to consider the big picture, the environmental consequences of our collective lifestyles, then alter how one interacts within ones own locality and life to make a positive contribution.

So as a photographer what can I do?
I can work in conjunction with environmental groups.
I can photograph environmental issues I am personally interested in for exhibitions or publishing to raise awareness.

It is all very well focussing on other people who are not doing enough, pointing the finger so to speak. Am I doing enough?
How does photography contribute to environmental issues?
Does the means out weigh the ends?

Does the energy used to make the work equal the outcome of the work, how well it reaches and educates the people seeing it.
By addressing the idea of affirmative action within photography can I provide an alternative cleaner process?

With the advent of digital photography images are a dime a dozen, we are almost wasteful about making them. I feel images have been cheapened and lack the reverence they once held. We seem so physically removed from the creation of the photograph, the images are administered through a digital source from start to end. For me Photography was becoming to mechanical, to disassociated from something real, something tactile. It is already a medium of two dimensions, a seamless replication of what we see. There is so much monotony in sitting in front of a computer to do everything, I can shop, research, pay bills, book flights, find recipes, make images, get a weather forecast, ring people, meet people, play games, print images, find jobs and of course we do our jobs on them. There is not much we don't do on a computer these days. Creating images with leaves brings back an element of preciousness, each individual image becomes something special. No two leaves are the same, they react differently depending on the weather conditions. You have to search for your materials, select appropriate plants and plan your image making around the weather. There is direct involvement with your surrounding environment and the materials you use, they are not static, they are changing and growing and dying. The fragility of the materials is also reflected in the presentation of the images to an audience. For me using leaves brings back some of the magic of making reality reappear in two dimensions.

BACKGROUND

This work was first begun when I was at University so I had to follow recognised research methods and processes. Part of this research was looking at what other people had contributed to this area. It is important to consider the ideas of people outside of your specific area. Academic institutions can become very inward looking and self referential, so you must look outwards from your area of focus and open yourself up to influences and possibilities from other subjects and processes.

When I came across the images on grass by Heather Ackroyd and Dan Harvey I was

stimulated by the possibility of using alternative “cleaner” technologies to produce works that are recognisably of photographic origin with the cleaner technology enhancing the concept and communication of the work. Artists who have employed photosynthesis as a medium for their work have used it mainly for its inherent transformative qualities. These artists primary concern is not always ecologically motivated, whereas artists whose direct concern is expressing ecological fragility employ a range of traditional and contemporary art practices. It seems that many Photographers take their medium for granted they barely consider the materials, process or output of their images and they don't question their own use of materials, instead they are focused on the images they are going to make. I felt that Photography was too isolated and to caught up in its own purity, its own ideas of the things required to make a successful photograph. It seemed to me that the photograph on its own held more importance than the message. Whilst the irony of the processes photographers employ is not always lost on them it does not necessarily alter their choice of medium or process. This contrasts sharply with collaborative projects outside of mainstream art where ecological concerns and site dictate the material and form of the work.

ARTISTS USING NATURAL PROCESSES

HEATHER ACKROYD & DAN HARVEY

Fig.2, Mother and Child

The work of Dan Harvey and Heather Ackroyd is significant to this project as it opened my mind to other possibilities of photosensitive materials.
For Harvey and Ackroyd the images on grass provide a passing moment with another life and express the idea of life as a cycle of growth and transformation.

Grass held the potential for conceptual communication because of its transformational qualities. The “seduction of time” (Barnes 2001, p.71) echoes through the material, their approach and the use of the figure. The artist’s photographic imagery is acknowledged for

the lost moments it depicts. Martin Barnes (2001, p.71) states that Ackroyd and Harvey claim these moments are granted another life within the live grass however this extension of the lost moment will also fade as the grass is exposed to a uniform light. Ackroyd and Harvey's work embodies their ideas both visually and materially. Use of an everyday and unconventional material combined with a recognised artistic medium creates new experiences for the viewer and alters ones perception of what were known entities. The temporal nature of the grass compounds the idea of life being in a constant cycle of growth and transformation.

The use of grass was purely intuitive and not initiated by any stated ecological concerns, although they are known to be involved in the ecological arts movement.

BINH DAHN

When I first began this work Binh Dahn was the only artist I could find also using leaves as the material for the print. The quality of the image he was achieving on leaves raised expectations for my own work and the possibilities for the application of plant materials within a photographic practice.

Fig.3, Drifting Souls

Danh doesn't use the leaves for their possible associations to ecological concerns but rather as an expression of the "interconnectedness of the natural world" (Levine 2003). Using the leaves encapsulates Danh's interest in science, history and photography. The leaves are an accessible medium on which to present the "hidden stories embedded in the landscape" (hainesgallery.com). Using found imagery of soldiers in *Drifting Souls* (2001) (Fig. 3), Ketzel Levine (2003) states that Danh (born in Vietnam) emphasises the fragility of life for both man and nature, linking them together through notions of vulnerability, serenity and the relationship of the hunter/hunted. The final images are cast in blocks of resin "like biological specimens for scientific studies" (svam.org) enhancing the idea of fragility with the protection and preservation of the resin giving the work an air of importance. Danh is another example of an artist using the

concept of the work in determining the physical material of the work as much as the imagery. Together these elements construct the meaning.

LLOYD GODMAN

Fig.4,Photosynthetic Image (Alchemical Sign)

Lloyd Godman combines photosynthesis and photogram techniques to inscribe markings on live plants. Godman uses tape to mask symbols on the leaves (Fig. 4), Leoni Schmidt (1999, p. 64-5) explains that after removal they gradually fade away as the chlorophyll re-establishes itself removing any trace of mans interference.

Godman also uses conventional photograms to reveal, states Schimdt (1999, p. 63), the unseen damage of technology on the earth in his work *Evidence from the religion of technology* (1994) (Fig.5). Informed by ecological concerns he makes clear his position on human impact on the environment. Godman does visually represent what cannot be visually seen, giving form to the consequences of our actions. Godman seeks to achieve a oneness with nature whilst his work explores human modes of inscription upon nature. Linda Tyler (Schmidt, 1999, p. 62) claims Godman's work is a paradox of desire to inscribe nature while suggesting superiority of the natural world. Godman's work demonstrates mans desire to make his mark, and his natural desire for adapting nature to his will whilst also trying to find a way of living alongside nature. The photograms and photosynthesis are just a couple of the varied ways Godman has tried to express the conflict of being environmentally concerned and inclined to create, make and use materials to satisfy the creative compulsion.

Fig.5, Evidence from the Religion of Technology (detail)

SUSAN DERGES

Susan Derges uses the direct process of photograms placed in water to capture “fleeting and elusive“ (Derges, 1999 p.24) moments to create the *River Taw* (Fig.6) series. Martin Kemp (Derges, 1999, p.24) explains the process of creating the imagery is physically in contact with the processes of the natural environment, resulting in work that more directly attempts to present rather than represent reality. Derges work is a link between the approaches of Science and Art through her explorations of nature. Kemp (1999, p.8) identifies the tendency of both scientists and artists to intuitively seek to explain or depict the world. Derges does not reveal new scientific knowledge rather it is the process of presenting it that creates a new visual perception of a known action, exposing the “patterning-forming propensities” (Derges, 1999, p. 24) of nature. Photographic technology is exploited for its function to visually capture a short moment in time combined with advantages of a direct process that focuses on the physicality of the subject matter to a greater extent. The use of natural processes to produce photographic imagery takes the work beyond physical presentation, the actions in the production is as much a part of the work as the final image.

Fig.6, River 2

TRADITIONAL ART PRACTICE

JOHN PFHAL

My decision to pursue the use of natural materials to make photographs has been stimulated by the production of photos of ecological issues that makes beautiful images of the very subjects they seek to criticize, for example John Pfhal’s Power Places. I question what this approach achieves, people tend to be struck by the beauty and beauty is associated with positive feelings. Morally we should not find these images beautiful yet we cannot deny that we do. The Photographer shouldn’t have to deny themselves or their audience aesthetic beauty. Yet such ambiguous images may not be the best option if you seek to question the ethics of the subject matter.

Fig. 7, Rancho Seco Nuclear Power Plant, Sacramento County, California

John Pfahl's series *Power Places* (Fig. 7) shows the powerphenalia of the power generating industry in location and emotively lit by nature herself. Pfahl (1990, p. 24) states that he set out to show the incongruity of these power generating machines in contrast to their picturesque settings. By romantically photographing the power plants Pfahl (1990, p.24) voices his concern at them being considered integrated into the landscape. Whilst Pfahl feels satisfied the "work has been received in the same spirit as it was intended" (Pfahl, 1990, p. 24), Bright considers his approach to such significant social concern "merely perpetuates or dissolves them into barren irony". (Bright 1989. p.135). The approaches Pfahl has employed to create "ambiguity [that] provokes thought" (Pfahl, 1990, p.24) have been used against him by Bright. Pfahl's *Rancho Seco Nuclear Power Plant, Sacramento County, California* (1983) (Fig.7) illustrates Bright's (1989, p. 135) concern of confirming the industry's propaganda that energy is natural. The beautification of the power plants in the landscape and the lack of any text to direct the viewer to his intention create too much ambiguity and not enough conviction. Even the power companys have bought his images to use for their annual calendars.

EDWARD BURTANSKY

The same could be said of the work of Edward Burtynsky, once again the artist beautifies mans devastating physical impact on the environment. By aestheticising man's erring on the earth Burtynsky makes the atrocities able to be examined but there is more emphasis on the revelation of beauty, the viewer can appreciate the "visual poetry" (Miller 2004) in a pile of trash (Fig. 8). Does this ask the viewer to question their ecologically detrimental contribution or does it free us from feeling guilty because of the inherent beauty of industrial decay?

Fig.8, Ferrous Blushing #7, Hamilton, Ontario

Landscape altered by man has become quite a popular art topic, we are surrounded by altered landscape for the majority of our lives. Seldom do we experience a landscape that has been untouched by human endeavours so it is no wonder that landscape artists have turned their attention to altered landscapes. The landscape genre has a long history of beautifying the landscape but to create a body of work on a “manufactured landscape” addressing ecological degradation using the same visual concepts seems hopelessly optimistic. The claims that these types of work evaluate and trigger ecological concern ignore the lack of controversy being communicated visually or through text. The idea that “decrepit docks in Bangladesh seep sensuously to our sense of social awareness” (Miller 2004, p.1) is rather naieve. There is a lot of focus on ambiguity, observation and rich detail and not enough opinions being communicated, it is all very well not wanting to visually overstate but these issues are of too much importance to be lost in translation. An accurate transcription of a beautiful landscape is too common place to raise such questioning but it does make for inoffensive and widely appealing saleable work, with the motives of the artist remaining questionable.

EMMET GOWIN

In contrast Emmet Gowin photographs with a self awareness that he is a contributor to the devastation. His desire to articulate this responsibility enhances the ideas embedded in the visual work.

Whilst the aerial photographs of nuclear test sites by Emmet Gowin contain ample sensual appeal there is a difference in the communication. Gowin’s photographs like Pfahl’s and Burtynsky’s are elegant, detailed, and tonally lush yet the treatment at printing differentiates Gowin’s work. Jock Reynolds (2002, p. 144) describes Gowin’s discovery that 500,000 gallons of radioactive waste leaked into the soil led him to tone his prints. At this stage Gowin embeds a point of view.

Fig.9, Test Site

The removal of a natural colour scheme alters the focus and interpretation of the landscapes whilst the toning creates a dark and sickening visual sensation (Fig. 9). Using an unusual viewpoint creates a visual jolt as it presents the viewer with an unexpected reality that enhances the understanding of the extent to which the natural landscape has been profoundly altered by man. As another example, the first photographic images of the earth from outer space taken in 1966 by NASA showed the earth in its entirety. Jonathan Chapman (2005, p.1) describes how the scale of our atmosphere was given perspective, the vulnerability of mankinds situation could finally be comprehended. In regard to Gowin's work the distance from the surface of the earth places the lands alteration in context rather than an eye level view from the ground that tends to isolate the understanding of the damage to a smaller fixed point. Emmet Gowin eloquently expresses the impact of the aerial perspective on himself during the project "We tremble at the feelings we experience as our sense of wholeness is reorganised by what we see" (Reynolds, 2002, p.133). The aerial perspective affords a greater understanding of the extent of the modification of the landscape while the toning adds an ominous feel to the images.

There is a self awareness to Gowin as he does not judge the effects on the landscape as the sole responsibility of governments and industries he recognizes his own role in the destruction. Gowin considers these entities as representatives of the individual, therefore their actions are his actions. He acknowledges the contribution photographic chemicals have had due to a lack of understanding of the "accruing effects of water and land pollution (Reynolds, 2002, p.145). Gowin's photographs in combination with his technological honesty highlight how little awareness individuals have of there "transformative consequence upon the earth's surface" (Reynolds, 2002, p.146). These are still beautiful photographs but they don't stop there, we are not left wondering where the photographer stands although Gowin's work may beg the question, does the means out weigh the ends?

SUMMARY

"An attitude that expresses continued enjoyment in an explicitly acknowledged destructive situation indicates a lack of harmony between the perception of beauty and the greater value of life itself" (Brady, 2002, p.116). Deborah Bright (1992, p. 68) argues that the trend of environmentally concerned photographic art has tended to rely on the traditional ideas

of beauty for its impact. Concerns that they “glorify what they depict are countered by the argument that the photographs are art, not propaganda or corporate publicity” (Bright, 1992, p.69). It is not enough just to make photographs of bad situations, if the artist is committed to actually improving ecological issues they need to take responsibilty for how their work is received.

SITE SPECIFIC ART PRACTICE

Looking outside of the mainstream photographic art practice offers more approaches of broader art practices to ecological concerns. Artists concerned with reaching a wide audience, having a direct impact on local communities through art projects to initiate ecological awareness and proactive action have been functioning since the 1960’s. They incorporate the artist in a pro-active role where they not only identify an ecological problem they propose a solution that improves a site, educates and involves communities.

MEL CHIN

Fig.10, Revival Field

Artists concerned and committed with envisioning ecological issues have initiated art projects incorporating ecological interventions, coined “ecoventions”. Many of the artists involved in these projects have established art practices yet the ecoventions are rarely considered to be apart of them. This highlights the different character of these works. *Revival Field* (Fig. 11) was a proposal to use plants for the “return of life to a devastated landscape” (Spaid, 2002, p.5) a process the Artist Mel Chin likened to a sculptural tool. It could be considered that the plants absorption or extraction of the toxic chemicals reforms the land in the same way a sculptor extracts material to create a new form. Spaid (2002, p.6) explains that the toxic-laden weeds are incinerated for there ore, which pays for the process, with new growth returning to the soil revealing the aesthetic of the work. Charles Desmarais (Spaid, 2002, p.i) considers ecoventions an “art tactic”

based on the practical and political success of the works, praising the artist for a proactive approach over the role of passive commentator. This type of work presents problems with defining what art is, why do these projects have to be considered art, they should be undertaken because they are a positive contribution and common sense. But Art seems to be measured in a different way from science. Scientific experiments carried out in the context of the art world, are able to withstand a higher level of risk than typical scientific experiments. Such experiments usually cost less as works of art and garner broad support as community-building public projects, a feature that gives ecoventions a distinct advantage over pure science. Furthermore, their success isn't judged by the artist's ultimate ability to publish the results or pay back sponsors like the National Science Foundation, as would be the case for scientists. Mel Chin's Revival Field began as an incredibly inexpensive experiment that a United States Department of Agriculture (USDA) scientist couldn't get funded. When it comes to art, sponsors don't weigh practical priorities or expect to make a profit, the way funders of scientific research do. Art is viewed as a positive contribution that makes a long-term restoration project immediately attractive to a wider audience.

ALAN SONFIST

Fig.11, Time Landscape

Alan Sonfist was reacting to the earthwork artists who bulldozed tons of earth and rock to create monumental earthworks. Sonfist pledged not to destroy a natural environment in order to create a work of art. He created *Time Landscapes* in Manhattan where unused landmasses were replanted with plant species that existed in the area previous to colonisation, in the process he added plant species to the city's approved plant list that had not previously been identified as local as well as improving air quality in the area. This pre-Colonial wilderness created a link to a past that had been obliterated by development. Spaid (2002, p.7) states that Sonfist wanted to go beyond reparation of the landscape and address the reparation of the psyche due to the severing of our connection to biological and ecological roots. Sonfist makes a link between the state of people's mental wellbeing and a direct experience and connection to an environment outside of the

built, planned, constructed and controlled places we are living within. It is significant that the artist becomes the problem solver instead of the commentator.

SUMMARY OF WORKS SURVEYED

As you can see there are many approaches to making work. In the end for me I still had to graduate with a degree in Photography so I had to have a photographic outcome.
I think it is very good to have limitations on your outcomes rather than having no limitations, as this can be paralysing. When you have limitations you have be creative and inventive, you are forced to consider and alter methods and processes rather than skipping around them.

MY WORK

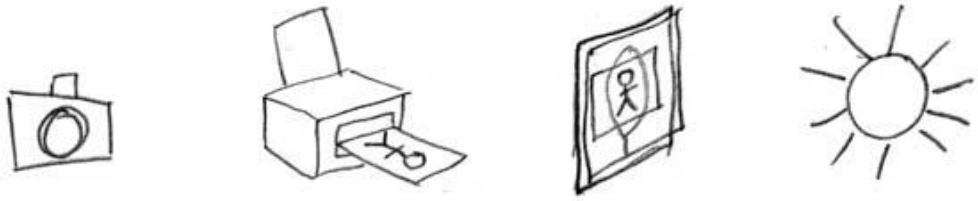
Fig.12, Recycling Bin, Cyclamen, Introduced species

When embarking on creating work that embodied my concern for the environment I knew I wanted the print to be on leaves, or made using a photosensitive emulsion made from plants. But what about the rest of the process. The actual capture of the image to be printed. I looked at the analogue and digital processes and decided to go with digital. I felt the volume of water used in developing processes was to much and also the chemicals and metals used in the film and printing processes was not to be encouraged. The decision to use digital technologies is also fraught with negative environmental impacts. Manufacturers design these products to be out of date within short times, the materials used in the components are highly toxic and the obsolete products are not always broken down in safe environments they are instead left in land fills.

My approach to this problem was to avoid my electronic devices from ending up in landfills. I felt it was important to take on the responsibility for the items in my possession when I no longer personally required them. So when I moved over to the UK I donated my computer to an organisation for the Education of Refugees, my printer was given to another family

member who didn't have one and I still have my first digital camera. These are gestures and not solutions, they do not stop these devices from one day ending up unwanted and discarded but this approach does prolong their usefulness.

I had to achieve an image that could be recognisable as a photograph. It was very process directed, I needed to think about the types of materials and processes that would work.
I began experimenting with how I could produce an image on a leaf.



The basic process is using the sun to make an image using a contact printing process, so the negative is laid directly on the photosensitive medium.

My intention was to use digital capture and then create negatives (actually positives as I discovered) for the images I intended to use. The exposure on the leaf was to be done by sandwiching the leaf and the positive in glass then leaving the sun to do the rest. Fundamentally my process hasn't changed.

Fig.13, First attempt

Fig.14, Fourth attempt

Fig.15, Half-tone print

My first attempts were very unsuccessful. I used transparencies to print the positive on. These first transparency positives were to light so there was little tonal range or detail. I tried using dots to make the images, known as half-tone, this is a method used when they first started printing images in newspapers. I thought this approach would work as it didn't require the plant to be able to make tonal ranges. Instead the size and density of the dots creates the tone. I printed these on transparency. My initial attempt at this approach was

also not successful. I then tried a strip of film, this seemed to work quite well, I was surprised by the tones that could be achieved by the leaf.

Fig.16, 35mm film, Nasturtium leaf

Fig.17, 4x5inch film, Spinach leaf

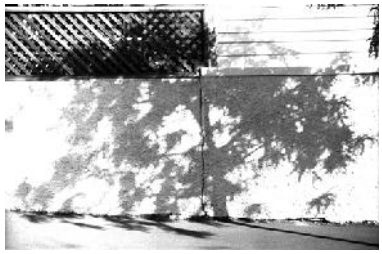


Fig.18, Original image

As this was the only real photographic success I had, I decided to have a go at using 4x5 inch negatives, but I had to turn my black and white negatives into black and white positives, that meant using a copy camera to re-photograph images. It was to many steps for me, it slowed me down and as the printing process was so slow anyway felt I needed to pursue a faster method of producing the positives allowing more time to experiment with the printing process. Having limited time effected the processes I was willing to use, so whilst using the 4x5 inch negatives is a good solution it was not economical in time. What I learnt from experimenting with film was that I needed more density to achieve a successful photographic print on a leaf. While I was experimenting with the positive I was also sampling different plants, most plant material works to some extent, what I found is that it is the quality of the positive that determines a lot of your success.

The leaves do not achieve as much clarity or tonal range as a traditional or digital photographic print so I also had to consider the types of images I was going to make. The main limitation with leaves is with the extremes of tones. If there is to much area of darkness or lightness then the details in these areas are lost. Days that were very sunny were not so good for photographing, as the darks and lights were to dominant, instead cloudy days when the light is soft and the tones more even were the best days to photograph. I looked for simple images, with strong features such as shapes, shadows, man-made materials, imprinted objects and reflections, as the subtleties of fine details were often lost. And then you had the uncertainty of the weather during the days when making the print on the leaf. At the early stages of this project it was feeling rather impossible to achieve a body of photographic work.

I decided to go with printing on transparency, but this time using two layers, so the image was printed twice and sandwiched together. I also went back to some basic imagery and had some instant success with a Broccoli leaf.

Fig.19, Tiles, Broccoli, Introduced species

Here we have a tiled wall with shadows of a gate and leaves. I wanted to have the man made material quite obvious with the shadow disconnected from the objects making it. I felt shadows represented the idea of absence, they lack texture and detail so are an empty copy of their owners.

Fig.20, Cabbage Trees, Weed, Introduced species

The initial concept for the imagery was to show the absence of nature within our society. I looked for simple man-made materials with shadows of nature on them with the attention focussed on the man-made material. I used photographs of shadows of trees on man-made materials. The tree appearing to be made of the man-made materials was to represent the idea that we manufacture so much of our environment, even though all these materials come from nature, the manufactured materials seem to be outside of the natural realm.

Fig.21, Held back, Spinach, Introduced species

As an extension of this idea of manufactured nature I wanted to show the ways in which we confine and constrict natural elements so that it is neater and tidier and more convenient than it might otherwise be. A fence holds back plants that might otherwise fall across the footpath and inhibit our freedom of movement.

Limbs are loped off Trees …. for safety? Trees are supposed to have visible trunks? Probably it makes it easier to mow the lawns. I wanted my images to indicate the way we interact thoughtlessly with our environment and I also wanted the physical material to speak about my ideas as equally as the imagery.

Fig. 22, Limbs, Nasturtium, Introduced invasive species

Fig. 23, Platform 5, Spinach, Introduced species

There seems to be a division between nature and culture in western civilisation, as Chris Drury explains "Nature is an idea created by culture, and nature is an idea embedded in language. It's very term presupposes that we are outside of it and therefore is anthropocentric". I wanted to show the absurdness of how we treat the environment.

A reflection of a tree in a window symbolises the way we control and mediate, as well separate ourselves from the natural environment around us.

Fig. 24, Through the window, Arum Lily, Introduced Invasive species

Manufactured materials create a stark contrast to the curved shapes and patterns of the leaves. The inherent form of both materials becomes magnified as they contrast with one another in a single entity that is an image.

Fig. 25, 3 textures, Weeds, Introduced species

I started looking at positive action addressing ecological issues that are happening within culture. By including these actions within my imagery I felt this would help to clarify the direction I was coming from. TI wanted to show an intention and philosophy, which is to preserve, respect, be careful as well as proactive about ecological issues. The concept of this work is about suggesting that there are other options, and this method of printing could be one of them.

Fig. 26, Fences protect, Arum Lily, Introduced invasive species

The leaves I have used are a mixture of native leaves and introduced species. Introduced species of flora and fauna to New Zealand has been extremely detrimental to the health of the eco system. The impact of this in New Zealand is quite pronounced because they have been islands for so long isolated from outside influences for Millions of years. The Flora and Fauna adapted to very specific conditions, 80% of the native trees are only found in New Zealand. Human intervention in the eco system has been particularly damaging for the bird population, our only native mammal is a bat, there were no predators

so many birds lost the ability to fly or nest on the ground. With the influx of human life to New Zealand many new animals and plants were introduced, some purposely and many accidentaly, but almost all thoughtlessly. Stoats and ferrets have reeked havoc on the native birds whilst plants have been suffocated and eaten by gorse, pine, rabbits and possums.

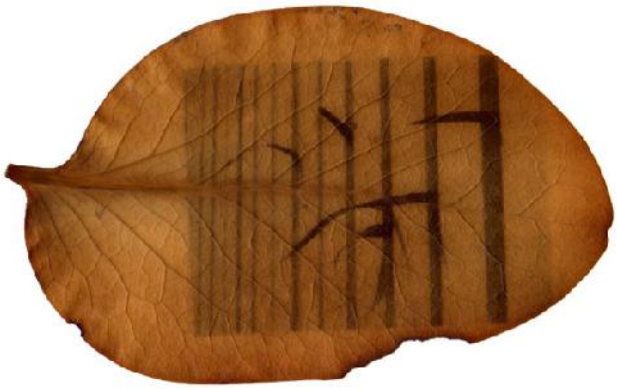


Fig. 27, Through the fence, Broadleaf, Native species

Many of the leaves I have used are introduced, and are on the invasive species list. Peoples awareness of the plants on this list is not high, and you will find many of these plants being cultivated in peoples gardens.
I found that is was mostly the introduced plants that worked better for producing images.
Many of the native trees have hard, thick or waxy leaves, or have a different leaf structure not a nice flat area, whereas the introduced trees plants have softer more delicate leaves with more moisture in them.

Fig. 28, 2 textures, Agapanthas, Introduced invasive species

Fig. 29, Rangiora, Native species

Fig, 30. Potted, Plane tree, Introduced species

Fig. 31, Moa Point, Broccoli, Introduced species

Fig. 32, Water Supplied, Weed, Introduced species

Fig. 33, Drains to streams, Weed, Introduced species

Fig. 34, Structured, Pak Choy, Introduced species

Fig. 35, Bridge detail, Hosta, Introduced species

Fig. 36, Trellis, Rengarenga Lily, Native species

CHLOROPHYLL PRINTS (ANTHOTYPES)

I also use the chlorophyll or pigment extracted from plants to make an emulsion.

At the time I started doing this I thought I had come up with something new but is actually a process that is quite old. The photosensitive qualities of plants has been known of for centuries, but in 1918 Henri August Vogel of Paris created tinctures from flower petals, he had hoped to develop a colour printing process for photography from plant materials, yet he abandoned the idea because of the length of time involved in making images and the inability to fix the images.

Firstly I tried experimenting with seaweed, spirulina it comes in a powder is very dark green and seemed like the ideal substance: this works somewhat but without much fine detail, it has little tonal range and is very hard to paint on smoothly. I then learnt how to extract chlorophyll from leaves. Usually in science when they extract Chlorophyll for analysis they use some form of alcohol in the extraction. I tried this method but I then also tried doing it without as I was wanting to reduce the need for man-made chemicals and found that this made little difference to the quality of image I could make.

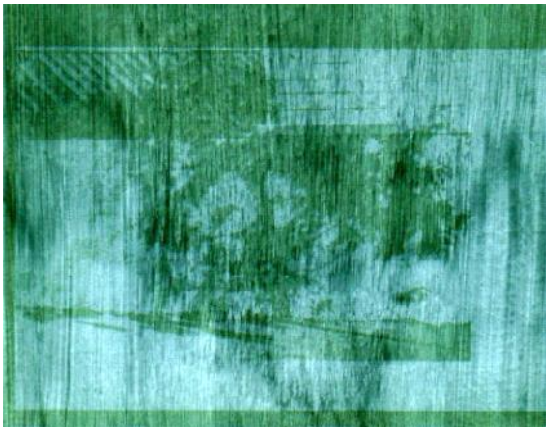


Fig. 37, Spirulina Anthotype

The process for printing is the same as for the leaves, the advantage with prints on paper is that if the weather is not good for a week your printing matter does not die, it just takes longer to create the image.

I found that Silverbeet, Swiss chard, worked very well because of the dark green of the leaves. The lighter the colour of the leaves often the lighter the colour of your emulsion so you are then limited by the tonal range that is possible.

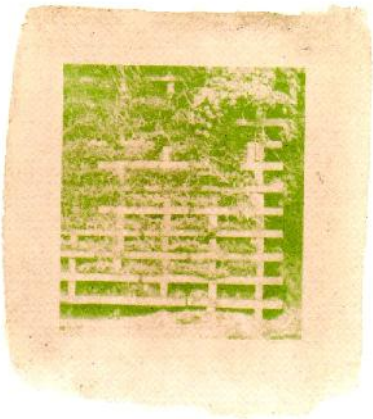


Fig. 38, Retained, Silverbeet Anthotype

I was interested in showing the interaction between nature and culture, manufactured materials are placed in a position of control so that nature should not impede our progress or we can have more parking space.

I liked the idea of trying to find a way of making images that could still be recognisably photographic in there own right without the overt symbols of leaves linking it to nature.

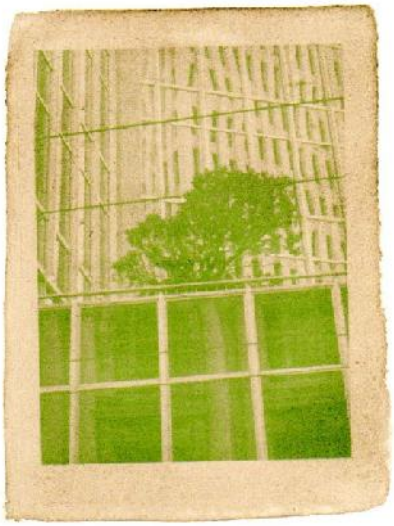


Fig. 39, Perched, Silverbeet Anthotype

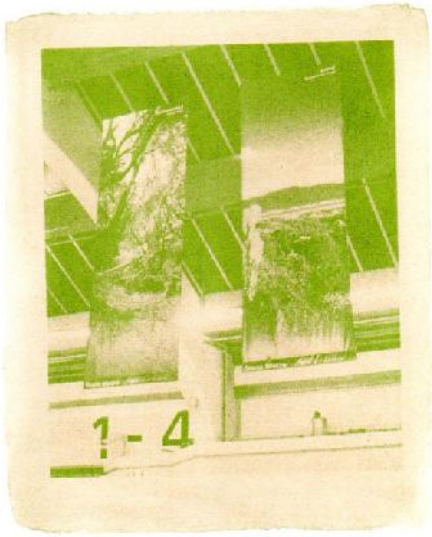


Fig. 40, Banners, Silverbeet Anthotype

Fig. 41, Cabbage Trees, Silverbeet Anthotype

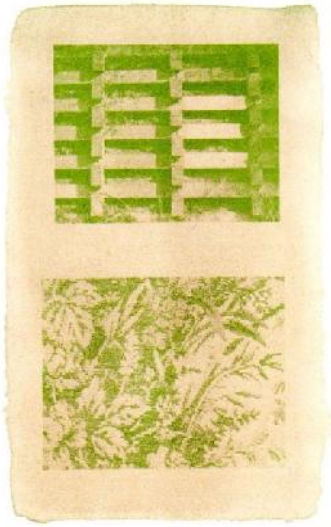


Fig. 42, Man-made, Silverbeet Anthotype

Fig. 43, Bridge, Silverbeet Anthotype

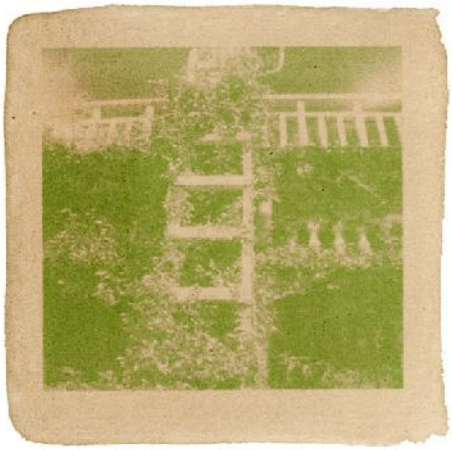


Fig. 44, Ladder, Silverbeet Anthotype

Fig. 45, Photogram 1, Silverbeet Anthotype

In winter in Germany I tried beetroot and red cabbage and found that it worked very well although it took a lot longer to expose an image. In Germany I did a workshop and we had problems getting spinach and silverbeet. So we used parsley, basil and also beetroot, this time is was summer and the beetroot colour was much lighter, perhaps due to the storage of the vegetable or the growing conditions of the the different seasons. By making these images in different countries you find that what is common place in your own country is rare, unused, expensive or known by another name and has a form that has adapted to the different climate.

Fig. 46, Chairs, Beetroot Anthotype

Fig.47, Horse, Rider & Housing Estate, Red Cabbage Anthotype

I started exposing these images in January this year, in winter, the North of Germany has even less sunshine than Scotland so there was hardly any development for 3 months. When travelling back to Scotland in April we cycle toured, I seized the opportunity for maximum sun exposure and strapped my printing frame to my bike trailer. Luckily we had three weeks of solid sunshine and I finally had images on our arrival in Edinburgh.

Fig. 48, Elbe Canal, North Germany with Anthotypes

EXHIBITING

Exhibiting the work is challenging due to the images not being fixed. They will fade with lengthy exposure to light so you have present them in a way that they are protected yet also able to be viewed. I still want to be able to present a body of work on a wall, but in a way that entices the viewer to come a look further.
The difficulty with images on walls in galleries is the well entrenched habit of no touching, so there is a challenge to get people to actually interact with the work to discover what has been shielded. People have also become used to seeing modern art, so when they are confronted with boxes on a wall they can easily assume that this is the actual extent of the work.


Fig. 49, Exhibition, New Zealand


Fig. 50, Detail, Exhibition, New Zealand

Binh Dahn mounted his images in blocks of resin, to increase resiliency to degradation from light. I wanted to avoid the use of such substances. I tried using UV protection glass but still after a week the images faded. So the most simple form of protection is a physical screen between image and the sun. Light has provided the tools to create these images yet it is this same element that will destroy them. Light dictates life. The level of protection required to exhibit the work is also serves as a reminder to the audience of the fragility of the environment we live in.


Fig. 51, Detail, Exhibition, Germany


Fig. 52, Exhibition, Germany

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