



OVER  
100 PLANTS  
TESTED AND  
RATED

# ANTHOTYPES

Explore the darkroom in your garden  
and make photographs using plants

Malin Fabbri



# Anthotypes

**Explore the darkroom in your garden  
and make photographs using plants**

**Malin Fabbri**



First published 2012.

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***To Maximilian  
and Ruben  
- for a safer world***



This sort of book is not possible to write on your own. It will just not be as good without the contribution from others. I have many people to thank during the years I wrote it, and amongst those, especially the photographers and artists that shared their own anothotyping experiences and made it so much better. So, thank you Nancy Breslin, Hans de Bruijn, Beverly Conway, Dan Estabrook, Carol Golemboski, Silvino Gonzàlez, Katherine M. Hill, Rosemary Horn, Jake Groenhof, Katja Krajnc, Nicole Lawrence, Sarah Lycksten, Scott McMahon, Ko Oosterwijk, Fabio Pasquarella, Jalo Porkkala, Martin Reis, Francis Schanberger, Nicky Thompson, Sarah Van Keuren and Marydorsey Wanless for letting me use your images.

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# Introduction

Why a book on anthotypes? As a child my grandmother used to take me along to a ladies groups where they dyed yarn. The event was a big gathering in the middle of a field, with a stack of dried plants, yards of yarn - some home carded - and a huge cooking pot would be boiling in the centre. Yarn would be dipped in, colored and then hung on a line in the field to dry. I was fascinated. A colorless plant could produce a brilliant purple, or a dull grass would dye the yarn bright red.



*A blanket, completely handmade by my grandmother Margit Gustafsson. She bought the wool, hand carded the wool, spun it to make the yarn, dyed the yarn using birch leaves and bark, and then wove the blanket herself.*

With my grandmother's yarn dyeing in the back of my mind I started to explore the plant kingdom. I started out trying to dye cyanotypes - my first love in the alternative photographic processes - using beetroot juice to turn the cyanotype blue into pink. It worked. Years later, when I was pregnant, breast feeding, pregnant again and breast feeding another round and had to stay out of the toxic fumes of a darkroom, I started searching for a non-toxic way to produce photographs. That is when I seriously started researching anthotypes. My four "baby years" of research were the beginning of this book. I was absolutely thrilled when I came across the anthotype photographic process and realized that all this ancient dyeing knowledge could be used to produce photographs!

My grandmother passed away in 1991, before mobile phones were commonplace and any ordinary people had heard of the internet. She would never have imagined that one third of the world's population is estimated to own a digital camera (counting the ones available on mobile telephones). Of those people, only a few have ever heard of anthotypes. In fact, before writing this book I only knew of five people – including myself – who had worked with anthotypes. Now I am lucky to know a few more! Whilst I'm not expecting to change the world, I am hoping to convert a few of the photographers interested in alternative photographic processes and willing to experiment, to this wonderful, obscure, fun and environmentally friendly process. 

Malin Fabbri, Stockholm, 2012

## About the author

**M**alin Fabbri grew up in Sweden. In her early twenties she moved to London to study Design, English and Photography. In London she worked as a designer for video production companies, design studios and big media names like Time magazine and CNBC Europe.

She earned an MA in design studies at Central St. Martin's School of Design, London. Her thesis concentrated on 'alternative photography' and the research involved work with cyanotypes and other alternative photographic processes.

Finishing her degree and publishing her thesis felt more like a beginning than an end to Malin. She decided to combine her academic and practical experience and started Cyanotypes.com. A number of the artists who had helped her from the beginning were interested in publishing their photographs on the site and it has grown to include all alternative photographic processes in use by artists today.


The website later changed its name to AlternativePhotography.com and now represents almost 400 artists, and continues to grow. The website still maintains its origins as a source of information and research for alternative photographic processes.

Malin actively manages the expansion of the site as editor. She researches alternative



photographic processes, makes her own prints and runs workshops.

She is the co-author of *Blueprint to cyanotypes - Exploring a historical alternative photographic process* and *From pinhole to print - Inspiration, instructions and insights in less than an hour*, the editor of the alternative photography art book *Alternative Photography: Art and Artists, Edition I* representing 115 artists working in alternative photographic processes today, and the author of this book, *Anthotypes - Explore the darkroom in your garden and make photographs using plants*.

Malin lives and works in Stockholm with her two sons, Maximillian and Ruben. 

## Anthotype? A what?

**A**nthotype is a very delicate photographic process and an environmentally friendly way of making prints using nothing other than the photosensitive material of plants found in the garden, the flower market or in the wild. All you need to add is water, sunshine, inspiration and patience - a lot of patience!

The process is very basic and simple. Utilizing nature's own coloring pigments from flower petals, berries, plants, vegetables or even spices, images are produced using the action of light. The natural pigment is used to create a photographic image. The plants are crushed and mixed with alcohol or water to make a light sensitive emulsion. Ordinary watercolor paper is coated with the emulsion and an image can be created by exposing the paper under the sun for a few days or weeks. The plant juice undergoes a chemical or physical change when

it is exposed to light, changing its color. Some fade and some darken.

### Kind to the environment

You could be producing photographs making virtually zero impact on the environment. Picking flowers, grown without pesticides. Grinding the plants with a pestle and mortar, using no electricity. Printing on recycled paper, cutting down no trees. Exposing them in the natural sunlight. What could be better? Your impact on the natural environment is virtually non-existent, and you can carry out your art with a clear conscience. Anthotyping is the ultimate environmentally friendly photo process.



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*Anthotypes (below) are not to be confused with a stencilling technique using photosynthesis (right) used to make prints ON plants. In this example a stencil, or a negative, has been placed directly on the plant. Over time, the pattern will appear, leaving a mark on the plant in the shape of the negative. In the case of anthotypes prints are made WITH plants in this case a dandelion (*Taraxacum officinale*).*



## Color food color photos

**I**n the food industry, plants are still widely used as a natural colorant to foods. Specific colors are associated with specific flavors, for example, you would expect your strawberry ice cream to be red, or at least pink. Would green strawberry ice cream appeal to you? The color of the food can thus influence the assumed flavor. When food is processed it often loses its color and a colorant is added so the consumer perceives the product as more natural. Food is also often dyed so that it will remain the same color throughout its shelf life and not fade with time or through exposure of oxygen.

### Plus

#### The benefits of anthotyping

- Totally environmentally friendly
- Wonderful smells when picking petals - most of the time
- A fun way to experiment with photography
- A great way to get children involved without hazardous chemicals - though take extra care to avoid poisonous plants!

### Minus

#### Some things that may not be so perfect

- The image can be somewhat faint
- The exposure times are very long, it can take days, or even weeks
- The prints are monochrome and thus limited to one color



"Peter" by Nancy Breslin, 2009

Nancy used the flowers of begonia (*Begonia semper-florens*), crushed them using a mortar and pestle, no water added, and sponge brushed the emulsion onto Fabriano Artistico 300 lb. paper. The print was exposed for 24 days.

Some of the plants we use to make anthotypes are also used to color food or skin. Seeds of the annatto plant (*Bixa orellana*) are used for decoration by Native Americans, and by the industry for food coloring, flavoring and even cosmetics. When you are tucking in to your strawberry ice cream, you are very likely eating beetroot (*Beta vulgaris*). The betanin, obtained from the root, is commonly used to color food. Apart from ice cream it can be found in sweets, sauces, and jams.

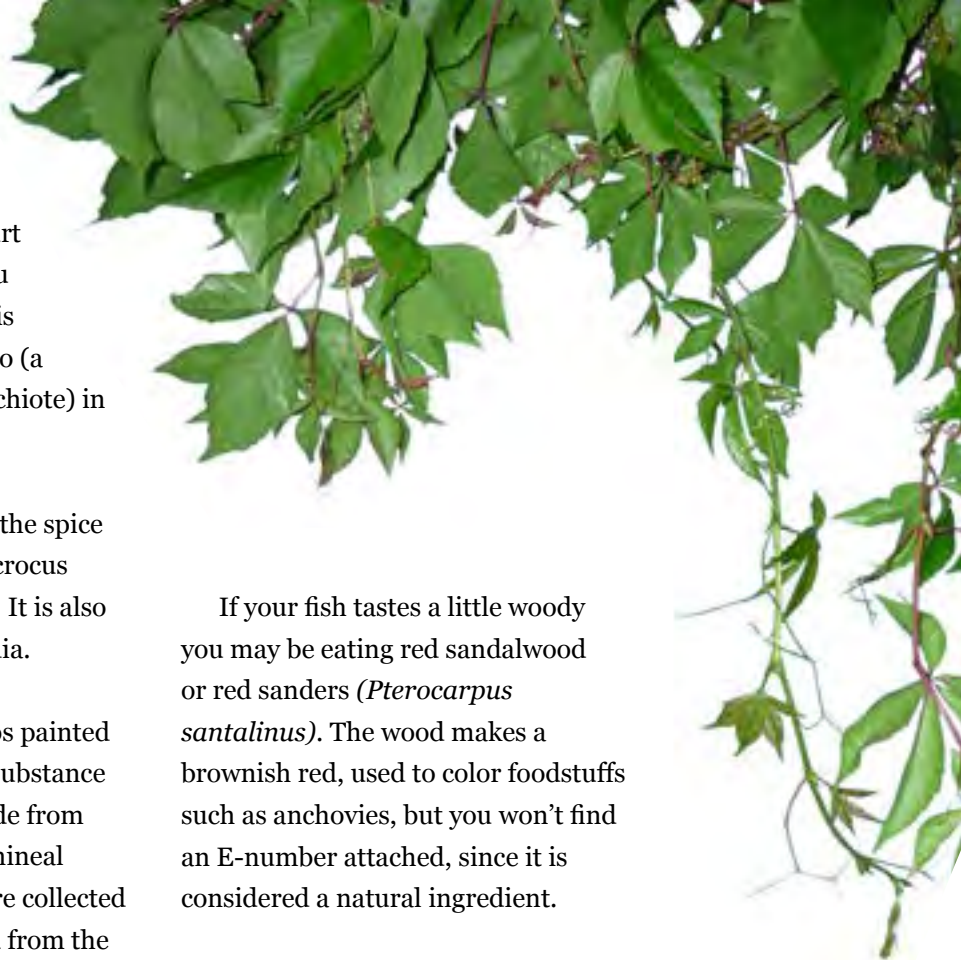
Turmeric (*Curcuma longa*) is another popular coloring agent and also used to protect food products from sunlight and - as in mustard - from fading. Next time you reach for the cookie jar, look for the code E100, which is the



name of turmeric when used as a food additive. It is also likely to be found in dairy products such as yogurt and sweets, cereals and sauces. If you find E160b on your food wrapper, it is turmeric in combination with annatto (a reddish dye made from the seed of achiote) in disguise.

You have probably eaten saffron, the spice made from the flower of the saffron crocus (*Crocus sativus*), many times in rice. It is also used as a fabric dye in China and India.


The next time you see a pair of lips painted bright red, consider this: a coloring substance called crimson or carmine dye is made from an South American insect called cochineal (*Dactylopius coccus*). The females are collected and dried. Carminic acid is extracted from the body and eggs to make the dye. The dye is then used in cosmetics. This does not inspire kissing! And, even more shockingly, it is also used in foodstuffs that are colored red. If you thought this was an old fashioned way of coloring foods that no longer applies, think again! Natural food dyes are growing in popularity, due to consumers concerns about using synthetic dyes. Take a look at your yogurt, ice cream or juice container, if you find E120, think twice if you are a vegetarian!



If your fish tastes a little woody you may be eating red sandalwood or red sanders (*Pterocarpus santalinus*). The wood makes a brownish red, used to color foodstuffs such as anchovies, but you won't find an E-number attached, since it is considered a natural ingredient.

Sometimes the actual plant can also be eaten. Daylily (*Hemerocallis*) can be found in Asian markets as gum jum or golden needles and is used to make daylily soup. So, there are several uses of the pigments in plants - other than making photographs.

Anthotype means – loosely translated - flower print. “Anthos” is Greek for flower and “type” stems from the Latin “typus” meaning figure, image or form, and from the Greek “typos” meaning dent, impression or mark. The anthotype process is just that; a flower making a print on a paper.

This process is probably the safest one there is - providing you use safe plants - and the most environmentally friendly process around, using no harmful chemicals. 



# The history of anothotypes

Today's photographers can raise their camera and within a few seconds produce a picture, import it into the computer and print it out. In these times, it is wonderful to take a few steps back and produce a print over a few days or weeks, with a lot of random events along the way. It is a great way to reflect over both the photographic process and the image you are about to produce.

The fascination with plant color existed long before the invention of anothotypes. From the beginning of mankind, plants have been used to make clothes and tools, and also to color these objects, decorate people's skin for ceremonies and festivities and give color to food.

The impact of plants and flowers throughout our history is immense. Evidence suggests the medicinal properties of plants were used over 60, 000 years ago by Neanderthals <sup>[1]</sup>. Burial grounds also show that flowers were part of their burial ceremony. Modern humans, evolving alongside the Neanderthals, also used flowers and plants in their cultural rituals.

In Egypt, living in the midst of a desert, with the Nile as the prime source of water for vegetation, plants were a crucial part of the ceremonies. Pharaohs were buried with wreaths of flowers, foliage and fruit to accompany them on the perilous and complicated journey to the afterlife. In

a country where droughts were devastating, the plants were a sign of wealth.

Japanese tattoo masters used safflower for reds, indigo for blues, green from minerals and yellows from arsenic, gardenia and gamboge. A geisha's face would be whitened by rice powder and her lips painted red with safflower pigment.

Plants have been used as medicine, but also as poison. There is the famous example of hemlock (*Conium maculatum*) used for poisoning the Greek philosopher Socrates.

The discovery and use of plants and flowers in photography is more carefully mapped. Many discoveries require a whole ensemble of people to get the final masterpiece in place. The discovery of anothotypes was no exception, though it can mainly be attributed to a handful of people:

**Henri August Vogel**, who in 1816 set the first note by discovering that plant juices are sensitive to light.

**Theodor Freiherr von Grothuss** discovered that the absorbed light rays are active in the production of chemical changes in 1817, also setting the note.

**Sir John Herschel** in the lead with his extensive research and publishing his discovery in 1842.

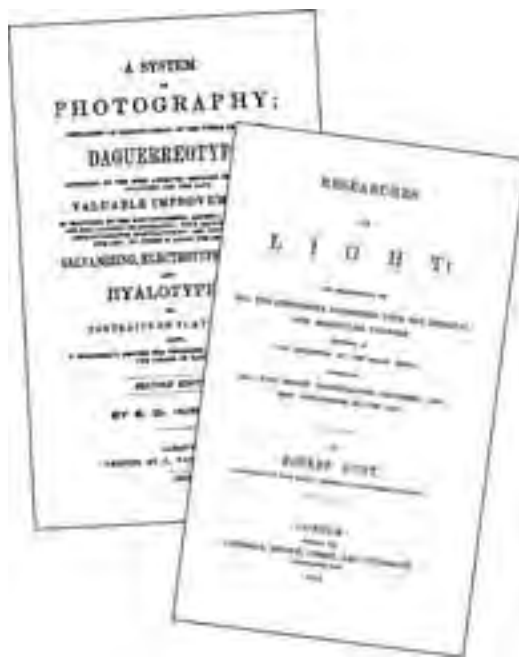
**Mrs. Mary Somerville**, who did extensive research on the action of rays on vegetable juices, but could not publish her findings



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[1] Note: Nature's Palette – The Science of Plant Colour, David Lee (2007) The University of Chicago Press

- because she was a woman!  
**Robert Hunt** and **Michel Eugene Chèvreul**, who extended the research on their own, were also important figures in the band. In 1844 Hunt published *Researches on Light* which includes a good chapter on anothypes.



**tincture showed the same differences. The petals of a corn poppy (*Papaver rhoeas*), mounted behind a blue glass, turned whitish after a few days; behind a red glass the color remained unchanged.”**

An important discovery indeed!

## **Mrs. Mary Somerville**

**(1780-1872)**

Mrs. Somerville’s father was Sir William George Fairfax and she was born in Jedburgh, in Scotland. She was interested in philosophy, astronomy and mathematics, which were quite unusual interests for women at that time. She was married to Captain Samuel Grieg and they had two children. When he died she married Dr. William Somerville by whom she had another four children. Despite looking after all the children, she still had time to do experiments on magnetism, and in 1831, as a popular science writer, she published a book called *The Mechanism of the Heavens*. In 1835 Somerville and Caroline Herschel became the first female honorary members of the Royal Astronomical Society.

Somerville was not able to publish papers herself - since she was a woman, but was published through a letter to Sir John Herschel. *On the Action of the Rays of the Spectrum on Vegetable Juices. Extract of a Letter from Mrs. M Somerville to Sir J.F.W. Herschel, Bart., dated Rome, September 20, 1845. Communicated by Sir J. Herschel. Received November 6, - Read November*

## **A few biographical notes on the key players and some important events**

### **Henri August Vogel**

(Whom I have been unable to find a year of birth and death for!)

Vogel was studying lard - of all things - and published *Dissertation on Lard and Some Medicinal Preparations Which Are Produced from It*. Lard, as well as Vogel’s interest in how phosphorous emits light, did not contribute to anothypes. More important were his experiments with plants.

In 1816 Vogel experimented with making emulsion from violets and poppies and found them to be photosensitive. The experiments are described in Schweigger’s *Journal* (1813, IX, 236) He writes:

**“An alcoholic tincture of red carnations turned white in a few days behind blue glass, while behind red glass it was still purple after about the same length of time. Cotton and paper colored with this**

27, 1845, published in the Philosophical Transactions of the Royal Society of London, 136 (1846), p.111-120. This very elaborate letter describes Somerville's important research on the "action of rays" using the spectrum of light to determine the effect it had on vegetable juices. Sometimes she added distilled water, sometimes sulphuric acid, sometimes hyposulphite of potash, muriate of ammonia, iodide of potassium or just common salt. Experimenting with chemical mixes, the different rays in the spectrum, sometimes combining the chemicals or rays with the element of heat by placing an iron at the back of the paper, she found that often the action was much increased by the addition of sulphuric acid. The juice of the same plant would react differently depending on whether the pigment was extracted in water or in alcohol; and they would react differently to different colored rays in the spectrum, that for example, the lavender rays had a different effect than the red rays on the bleaching or color changes in the juice.

Here is an example of her report:

***“On the juice of Plumbago auriculata the lavender and violet rays produced a pale brown image; the indigo rays had no effect, while all the rest of the image under the mean and least refrangible rays was blue and indigo.”***

Supermum Somerville managed to find time to experiment, raise children and allegedly even

putter about in the kitchen, making orange marmalade for the expedition of Sir William Edward Parry, the arctic explorer. Perhaps in return, he named an island in northern Canada, near the Alaskan border after her. It is still called Somerville Island.

## Theodor Freiherr von Grotthuss (1785- 1822)

Grotthuss was from Leipzig and only lived to 37 years of age. In his short lifespan, he

set a basic law of science called "Grotthuss law of photochemical absorption" in 1817, after discovering that "only the absorbed light rays are active in the production of chemical changes". He placed dyestuffs behind colored glass and discovered that they fade only by the action of those color light rays that they absorb, the complementary colors, but are preserved by the rays of their own color, which they reflect. A remarkable discovery.



Portrait of Mrs. Mary Somerville

## Robert Hunt (1807-1887)

Hunt was a librarian and keeper of mining records at the Museum of Practical Geology and professor of mechanical engineering at the Royal Schools of Mines, London, though he was originally from Plymouth, UK. Hunt was one of the founders of the London Photographic Society and a member of its first council. He experimented with organic and inorganic light sensitive substances. Hunt, like most



discoverers, also published his work in many instances. One of the most important, to the anothotype process, is *Researches on Light; an Examination of All the Phenomena Connected with the Chemical and Molecular Changes Produced by the Influence of the Solar Rays* (1844). He also invented the energiatype and the fluorotype - perhaps those processes will be dealt with in another book!

## Michel Eugène Chevreul (1786-1889)

Chevreul, a Frenchman who carried out several experiments in the art of dyeing, was a professor of chemistry at the Lycée Charlemagne, a member of the Académie des Sciences in Paris and of the Royal Society in London. In his long lifetime of over 100 years he studied the changes and permanence of dyes on fabric made by water, air, sun and heat. He also investigated how oxygen in the air and moisture affects decomposition of colors when they are exposed to light.

One of the documents where he published his findings on research on color contrast (in French in 1839<sup>[2]</sup> and in English in 1854) was called *The Principles of Harmony and Contrast of Colours*.

According to S.D. Humphrey in his book *A system of photography*, second edition, published in 1849 by Albany: C. Van

[2] Note: The original title was *De la loi du contraste simultané des couleurs*.

Benthuyssen, Hunt and Chevreul were indeed important players:

***“The influence of light upon the growth and germination of plants is very curious and interesting. The facts connected with this subject have been investigated by Mr. Chevreul, Mr. Hunt and Sir John Herschel. To the latter gentlemen we are indebted for the enquiries which have led to the publication of the Anothotype process.”***

That is a lot more than 15 minutes of fame!

## Sir John Frederick William Herschel (1792-1871)

Photographers today are deeply indebted to Sir John Herschel. He was the man who first managed to fix photographs, after his discovery that hyposulphite of soda could be used. It is basically the same “hypo” in use today.

He coined the terms photography, negative, positive and snap-shot.

He discovered, or was a key player in the discovery of, several photographic processes: the cyanotype, also called the blueprint process, the anothotype process, also called “Herschel’s flower-essence prints” and came up with the basis for the ambrotype and tintype processes. The chrysotype process was another of his contributions to photography.

Photography was just one of his many interests, as he was also a mathema-



*“Untitled Experiment #3” by Martin Reis, 2009. A photogram made from emulsion using snapdragon (*Linaria vulgaris*).*

tician, a chemist, a botanist, an astronomer, a philosopher, a skilled draughtsman, and as a musician he played the piano and the flute. Thank you Herschel!

Trying to understand how one man could come up with all these discoveries and inventions is mind boggling. The short biography that follows is just an attempt to highlight a few events that may be of importance.

Sir John Frederick William Herschel was born into the intellectual circles. He was the son of Sir Frederick William Herschel, a composer, astronomer and prominent scientist, famous for discovering Uranus and infrared radiation.

Herschel achieved the highest honors at Cambridge, in getting his BA in 1813, after influencing the approach to mathematics in Britain.

He was soon elected a Fellow at the Royal Society. In 1814 he moved to London to read for the bar. It was the wrong decision and he soon tired of legal studies and gave up. He later returned to Cambridge as a tutor, but finding the work unsatisfying he accepted his father's wish, and moved back home to take up his father's astronomy observations. In 1816 he originated the Julian day system in astronomy, named seven moons of Saturn and four of Uranus.

Being a man with many irons in the fire, he also continued his studies of chemistry, physics and especially optics and light, under the influence of William Hyde Wollaston, a scientist and inventor of the "camera lucida," a



*J.F.W. Herschel taken by Julia Margaret Cameron using the wet collodion process. Cameron made four portraits of Herschel, all from the same sitting which took place at his residence Collingwood, at Hawkhurst in Kent, UK 1867. Victoria and Albert Museum, London.*

very simple, but brilliant drawing instrument.

Herschel made plenty of use of the camera lucida in his field research and through his travels through Europe. His interest in geology took him as far as the crater of Vesuvius and the volcanic peak of Mount Etna. In Munich Herschel met Henry Talbot, and an important friendship developed.

On his return to England, Herschel became secretary of Royal Society and President of the Astronomical Society (later the Royal Astronomical Society). These tasks took too much time to administer and he resigned in



1827 and 1829. Herschel actively pursued his own interests, and by 1830 he had published over 60 scientific papers. One of the most influential early articles was “Light” for the *Encyclopedia Metropolitana*, recognizing the limitations and advantages of the wave theory.

Following two failed attempts of finding a wife, his third attempt was lucky. Margaret Brodie Stewart made a perfect partnership with Herschel in 1829. They shared several interests, and she was introduced to the camera lucida during their honeymoon. Already a skilled

watercolorist and sketcher, she took to it.

Still young, Herschel was knighted in 1831, “recognizing a full life of scientific contribution”.

Herschel also continued his father’s investigations of light. Using a tincture made of red rose leaves he explored the properties of infrared light. Later, at the birth of anthotypes, the properties of the red rose leaves themselves would be explored.



"Anthotype #4" by Sir John Herschel, made from red doubler stock. Photograph from 1839 entitled "The Royal Prisoner" © Harry Ransom Humanities Research Center, The University of Texas at Austin.

Herschel and his wife travelled to South Africa in 1834 to study astronomy and botany. Together they made botanical illustrations of the Cape's flora. During this time the competition to be the one inventing photography was fierce. Experiments had been going on for some time already. For example, in 1802 Thomas Wedgwood (1771-1805) and Sir Humphrey Davy (1778-1829) made photograms from silver changing color in the sun, but were not able to fix the images, so they could only be viewed by candlelight. As early as 1816, Joseph Nicéphore Niépce (1765-1833) attempted the first in-camera images using paper negatives coated with silver chloride. When Niépce died in 1833, Louis Jacques Mandé Daguerre (1787-1851) continued his work, developing the daguerreotype process. 1839 Daguerre presented photography to the world in Paris, and, following suit, in England, Henry Talbot presented the discovery of a similar process he called calotypes. Talbot used paper impregnated with silver chloride as support, and the daguerreotypes used metal plates. Working alongside Talbot, Herschel created an in-camera image and fixed it using hyposulphite. He also experimented with "re-reversal" of the image, making the negatives into positives, and also coined the words "negative" and "positive".

In 1839/1840 Herschel and his family moved to Hawkhurst in Kent, to a property they named Collingwood. It was large enough for the growing family and to house a study, laboratory and conservatory for growing bulbs. Herschel experimented with using glass plates, thin paper, or thick paper that had been waxed as negatives.

On August 7, 1840 Herschel wrote in his diary: "**Aug. 7. 1840. Hawkhurst. Spectrum thrown on Paper deeply tinged with juice of Petals of dark Purple Dahlia.**"<sup>[3]</sup>

Using plant petals to try to introduce colors into the photograph gave birth to anthotypes. Herschel's interest in botany reached into the photography area, and he tried a number of vegetable juices.

Herschel mentioned anthotypes in his 1840 paper to the Philosophical Transactions of the Royal Society called *On the Chemical Action of the Rays of the Solar Spectrum on Preparations of Silver and other Substances, both metallic and non-metallic, and on some Photographic Processes*, vol. 131 (1840), pp. 1-59. He described trying to speed up the bleaching action of the vegetable juices by isolating specific rays of the spectrum. He isolated rays using a prism and found that the action differed with different colored rays. He wrote:

***"We all know that colours of vegetable origin are usually considered to be destroyed and whitened by the continued action of light. The process, however, is too slow to be made the subject of any satisfactory series of experiments; and, in consequence, this subject, so interesting to the painter, the dyer, and the general artist, has been allowed to remain uninvestigated."***

There is also a reference to an experiment

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[3] Note: *Out of the Shadows: Herschel, Talbot & the Invention of Photography*, Larry J. Schaaf, Yale University Press; New Haven & London, 1992.

on an earlier date, October 11, 1839, where he experimented with a water prism and a lens. This is perhaps the first mention of the anthotype process. He also communicated in this statement that he found "the action of light slow" and wrote in a personal letter to Talbot on 19 of May 1841:

***"The specimens of the effects of light on vegetable juices are very curious; it will be long ere Science will be able to account for all these anomalies."***<sup>[4]</sup>

In his quest to invent color photography Herschel experimented further with the juices of flowers, leaves in alcohol and chemicals. He noted that red light bleaches blue tints, that alkalis increases photographic sensitivity and found the colors stable.

Trying to advance to color photography, Herschel made hundreds of experiments with plants and the bleaching effects of sunlight on plant juices.

His goal was to find extracts that could produce a specific tint under a certain wavelength of light. An alcohol based extract of petals from gillyflower (*Matthiola annua*) produced a "rich and florid rose-red" tint on his papers. It had a minimum response to red and yellow rays, and could "***with patience yield extremely beautiful photographs***".

Being dependent on sunshine slowed down his research. But, after a good summer of sunshine in 1840, the anthotype got a proper

introduction in the 1842 paper *On the Action of the Rays of the Solar Spectrum on Vegetable Colours, and on some new Photographic Processes* also published in the Philosophical Transactions of the Royal Society, vol. 133 (1842), pp. 181-215. This paper disclosed the anthotype process and the effects the sun has on paper coated with flower and plant juices. The experiments continued with the juice from flowers, leaves of plants and dyeing substances and their reaction to light, heat and chemical agents. Herschel found that heat, as well as light, had an effect on the pigments:

***"The destruction by heat of the green or blue color superinduced on guaiacum by the more refrangible rays of light, was noticed by Wollaston, and it would seem, on a consideration of his experiments and of those described in the last article, that nothing further is requisite for operating the change from the green or blue to the yellow state, than the assumption of a certain temperature dependent on its state of dryness, and varying according to that state between the limits of 180 (degree) and 280 (degree)."***

He also found that moisture accelerated the process:

***"The discharge of color from blued guaiacum by mere heat, has been shown above (Art. 156.) to take place at a much lower temperature in the presence of moisture than when dry; and a similar destruction of color, under similar circumstances, takes place with many other vegetable preparations. Paper, for instance, coloured with the juice of the Viola tricolor (Art. 90.), is speedily***

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[4] Note: *Out of the Shadows: Herschel, Talbot & the Invention of Photography*, Larry J. Schaaf, Yale University Press; New Haven & London, 1992.

***whitened in the dark, while wet, by the heat of boiling water, though dry heat does not affect it.***

Working with the species he had access to, ordinary garden plants and those from the wild, he made hundreds of tests. A few interesting exceptions from the norm:

*Chorchorus japonica*, which he found to be very sensitive to light, continued changing color even in the dark, once the process had begun.

Paper coated with common ten-weeks stock, (*Matthiola annua*) in a tincture with alcohol was still usable after ten months. Paper coated with juice from *Papaver orientale* was placed in a window, where it did not get much sun in the rainy summer of 1841. Half the paper was covered, and when removed, the part exposed could barely be distinguished from the part covered. When acid was applied, the shaded part took on a vivid red color, and the exposed part remained unchanged.

The juice from *Bulbine bisulcata*, a plant from Hershel's travels to the Cape of Good Hope, darkened from yellow to brown instead of bleaching when exposed to sunshine, and so did the *Cheiranthus cheiri*, wall-flower.

The long exposures of the anotype process made the application impractical for in-camera work. Herschel exhibited a print called *Photograph made with the juice of the petals of Matthiola annua, double ten-weeks stock* at the Royal Society on June 16, 1842 - the print is now at the Humanities Research Centre, The University of Texas Austin, also proving that the anotype process can indeed be labelled


as a "permanent process." Others can be found at the Museum of the History of Science at the University of Oxford.

The anotype process never really gained in popularity. Because of its extremely long exposure times, it was thought to have no commercial value.

Herschel was a very active scientist until the very end. Sir John Herschel was buried next to Sir Isaac Newton in Westminster Abbey in 1871 – both considered among Britain's most prominent scientists. Quoting the obituary in the *Proceedings of the Royal Society of London* v.20, 1872, p.xvii:

***"British science has sustained a loss greater than any which it has suffered since the death of Newton, and one not likely to be soon replaced."***

## **Henry Hunt Snelling (1817-1897)**

A bonus player. Snelling has nothing to do with the invention of anotypes, but is still worth mentioning. Born in Plattsburg, Clinton County, New York, he devoted much time to photography and edited *The Photographic and Fine Art Journal* from New York. His writing is an insight to what was going on at that time. Finding the need to educate young Daguerrotypists in the "production of pictures through the agency of light", he published his research in 1849, in *History and Practice of the Art of Photography*. He described the state-of-the-art photography - including anotypes - at a time when photographs on a plate were slowly being taken over by photographs on paper. 

# Anthotype chemistry

**S**ir John Herschel describes what happens when an anthotype is made in his 1842 paper *On the Action of the Rays of the Solar Spectrum on Vegetable Colours, and on some new Photographic Processes*, in the *Philosophical Transactions of the Royal Society*, vol. 133 (1842), pp. 181-215. ***“The action is positive, that is to say, light destroys color; either totally, or leaving a residual tint, on which it has no further, or a very much slower action. And thus is effected a sort of chromatic analysis, in which two distinct elements of color are separated, by destroying the one and leaving the other outstanding. The older the paper, or the tincture with which it is stained, the greater is the amount of this residual tint.”***


Henry H. Snelling describes in *History and Practice of the Art of Photography* what takes place when the emulsion on the coated paper fades to a lighter color as the sunlight destroys the pigment of the exposed areas. He writes the following description of the anthotype process: ***“From an examination of the researches of Sir John Herschel on the coloring matter of plants, it will be seen that the action of the sun’s rays is to destroy the color, effecting a sort of chromatic analysis, in which two distinct elements of color are separated, by destroying the one and leaving the other outstanding. The action is confined within the visible spectrum, and thus a broad distinction is exhibited between the action of the sun’s rays on vegetable juices and on***

***argentine compounds, the latter being most sensibly affected by the invisible rays beyond the violet.”***

He also writes in chapter X, page 65: ***“Sir John Herschel attributes these changes to the escape of carbonic acid in some cases; to a chemical alteration, depending upon the absorption of oxygen, in others; and again in others, especially where the expressed juice coagulates on standing, to a loss of vitality, or disorganization of the molecules.”***

The process can also be described in a more philosophical and beautiful way, as done in 1843 in the book *Photogenic manipulation* by George Thomas Fisher, published by George Knight and Sons in London:

***“...the flowers which, imbued with the principle of vitality, whatever that may be, resist the influence of all exterior agents, bud, bloom and flourish in beauty and fragrance, become subject, when the vital energy is exhausted, to these very influences, especially to that of light; the color vanishes or is changed; in fact, a photogenic process has taken place.”***

The chemistry has, naturally, not changed since the invention of the anthotype. 



# Safety first - plants to watch

## Take precaution! Safety first!

The anothype is safe for the environment, but, do not assume it is safe for you. Just because plants grow naturally in your surroundings does not mean they are harmless.



**Angel's trumpet** (*Brugmansia*) can be fatal and poisoning by **autumn crocus** or **meadow saffron** (*Colchicum autumnale*) has been compared to arsenic poisoning with everything from fever to kidney failure.


Always use gloves when making emulsion, to protect yourself, and if nothing else, to protect your skin from staining. And remember, just because some plants are used for medicinal purposes does not mean they are safe to eat.

Take extra care when involving children in your project. Many household, cultivated and wild plants are quite poisonous, at least when consumed. **Azaleas** (*Rhododendron pentanthera*) can cause nausea, vomiting and even coma, and **daffodils** (*Amaryllidaceae narcissus*) can give you an upset stomach and blurred vision, not to mention **foxglove** (*Digitalis purpurea*), which have fatal leaves, seeds, and flowers, causing cardiac problems.

Furthermore, the seeds of **apple** (*Malus domestica*) and **cherry** (*Prunus cerasus*) are mildly poisonous. **Deadly nightshade** (*Atropa belladonna*) is one of the most toxic plants found in the Western hemisphere and can cause blurred vision, tachycardia, loss of balance, staggering, headache, rash, flushing, dry mouth and throat, slurred speech, urinary retention, constipation, confusion, hallucinations, delirium, and convulsions - yes, that is a long list of stuff you don't want to get.

Many know that **hemlock** or **poison hemlock** (*Conium maculatum*) should be avoided - it can paralyse the central nervous system - and **giant hogweed** (*Heracleum mantegazzianum*) is also a well known poisonous plant, causing severe skin inflammations with blisters and burns. **Christmas rose** (*Helleborus niger*), **lily of the valley** (*Convallaria majalis*), and **pokeweed** (*Phytolacca*) should also be avoided. **Dutchman's breeches** (*Dicentra cucullaria*), **bleeding heart** and **hyacinth** (*Hyacinthus orientalis*) are capable of causing damage to the nervous system and even death.

These are just a few examples. **Before you begin, make sure you do your research and read up on the plant you are intending to use.** There are thousands of harmless options – choose a safe plant to work with and avoid the dangerous plants.

If you or anyone else has ingested a harmful plant, call your emergency and ask for first aid. If possible, take the plant with you if you are taken to hospital. If you develop an acute rash, do the same. 



# The anthotype process



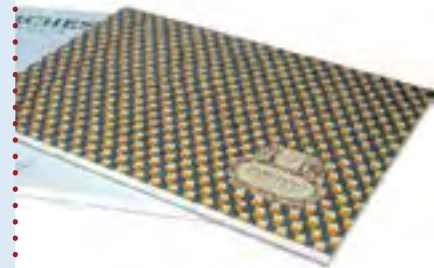
## What you need

You probably don't need to go shopping before making an anthotype. All the tools you need can most likely be found by rummaging around in your kitchen.

- Petals from a colorful flower, berries or other plant
- Mortar and pestle or electric food blender
- Glass container or ceramic bowl for mixing ingredients
- Water (distilled if possible) or alcohol
- Cheesecloth, coffee filter, cotton cloth or very fine masked strainer
- Brush
- Art paper
- Glass clip frame or a contact print frame
- A large size positive (not negative) or items to make photograms
- Sunshine

## Good to have

- Newspaper to cover work surface
- Scissors
- Rubber gloves
- Apron or an old shirt
- Cleaning cloth



# Step-by-step anthotyping

The anthotype process is made up of three steps. Making emulsion, preparing the canvas and printing. Before you start, cover your work surfaces. Put on your rubber gloves, an

apron or an old shirt, cover the work area with old newspapers and you're ready to go. Plant pigments can stain your work surface blue, red or green and turn your hands rainbow colored.

## The anthotype process at a glance

The anthotype process is simple. It can be done easily in a few steps:

### Making emulsion

An anthotype emulsion can be made from a large number of plants.

- Grind, mash or mix the plant.
- Strain the mix to get a clean emulsion.

### Preparing the canvas

- Paper, card, textiles or any other naturally absorbent material is coated with the emulsion and dried in the dark.

### Printing the anthotype

- Objects or positives are placed on the material to make a print. The anthotype is printed in the sun for a few days or several weeks.

### Processing

- No further processing is needed, the final print can be admired.



# Finding plants and pigments

Going down to the local flower market you will find countless possibilities for anthotyping. And, going just before closing time, you may find that the traders will sell the flowers half price, rather than packing them up and taking them back home again. A good example is the Colombia Road flower market in London. The flowers that have passed their sell-by-date for the table - but not for anthotyping - may also be virtually free. Freshly picked flowers are preferred, but market flowers are a good source for pigments. Apart from flower markets, there are also the woods, the fields, your garden, larder, fridge, window sill, spice cabinet and wine cellar to be explored.

Luckily my mother has a green thumb and likes raising flowers and plants in her garden and on her windowsills. I like to harvest them. (Or, “raid them” as she calls it, my counter argument is that they will be given eternal life in my anthotypes - which does not soothe her). To make enough emulsion for one print, often one or two flowers will do - hardly enough to make a fuss about!

## Don't judge a flower by its petals!

The color of the plant will not necessarily be the color of the emulsion or the final print. For example, the emulsion from the blue flower of a common lilac (*Syringa vulgaris*) will result in a golden brown print. Any two plants

with similar colored petals can produce two totally different colored emulsions. For example beauty bush from the honeysuckle family (*Kolkwitzia amabilis*) and Tatarian honeysuckle (*Lonicera tatarica*) both give you a dark brown emulsion, whereas bleeding heart - also called lyre flower, old-fashioned bleeding-heart, venus's car, lady in a bath and dutchman's trousers - (*Lamprocapnos spectabilis*), of the same color, will produce an emulsion of a light blue shade.



"Lantern shadow" by Malin Fabbri, 2011.  
The color of the petals is often different from the color of the final print. This golden brown print was made from emulsion from the blue flower of a Common lilac (*Syringa vulgaris*).

A lot of very colorful plants are a disappointment, resulting in brown and grey emulsions when a vibrant pink or blue was expected. Different shades of brown and greyish-green are not hard to come by, but finding the gems that will produce a spectacular color is a quest. The purple pansy

(*Viola wittrockiana*) is one of these, making a luminous blue print. Another gem is black currants (*Ribes negru*), making a strong pink print.

Using fruits as the base for emulsions sometimes comes with a few surprises. Though red currants (*Ribes rubrum*) behave properly,



black currants (*Ribes nigrum*) unexpectedly turn to slime when crushed, and even the strained emulsion is slimy. They still produce a very fine print. The evil cousin of ordinary cherries (*Prunus apetala*) is amarelle or sour cherries (*Prunus cerasus*) where the

emulsion has time to oxidize before it dries on the paper, turning brown like an apple does when cut in half and left in the open air. The resulting print is not worth the work.


Most plants you try will probably yield some kind of image, but some work much better than others. Flower petals, berries, plants, vegetables, wine, juices or even spices can be used. The gallery section is by no means a complete list of plants to use for your emulsion. The list is an indication of good plants to start with. Plants, flowers and fruit can be found in every color in the visible spectrum, but, bear in mind that the color of a petal is not often the color of the final print.

The plants to continue your work with is a matter of your own experimentation. Many plants have been tried and tested. One of the most odd examples is given in *The art of Photography* by Dr. G. C. Hermann Halleur, late director of the Royal Technical School at Bochum, published by John Weale in London, in 1854:

**“Saw-dust and shavings of mahogany, when boiled in water, yield to that fluid their coloring matter; paper imbibed with this decoction is highly sensitive to light, and gives very pretty pictures; but they are not more permanent than the preceding anthotypes.”**

The possibilities are countless.

For inspiration to start your anthotypes, take a look in the gallery that follows. Try a few tried and tested plants, but don't forget to experiment yourself. There are thousands of unexplored plants, flowers or vegetables not mentioned here. Most of them have never been tried. Please, also send us the result to [post@alternativephotography.com](mailto:post@alternativephotography.com).

We would love to see prints from your favorite emulsions. 



# Grow your own photographic emulsion

## Find your color

The basic anotype recipe has not changed since its invention. Start with finding colorful petals from a plant, a berry with a lot of pigments, or a plant with color. If this is the first time you try anotyping, start with poppy flowers, blueberries, raspberries, pansies, or peonies, since these usually give good results. For more ideas of plants to try, look in the gallery section of this book, where there are examples of a lot of different plants. Plants containing the word “*tinctoria*” in their Latin name are already known for their coloring properties, such as true indigo (*Indigofera tinctoria*) and woad (*Isatis tinctoria*), used for coloring blue, and humped fig (*Ficus tinctoria*) and Indian mulberry (*Morinda tinctoria*) used to dye red. Nature is not yet fully explored as a source for color substances and new plant colors are discovered in the same way as new medicinal plants are still discovered. Start with a couple of safe bets, but don't forget to experiment when you are getting deeper into the process.

## A plant's best bloom

At first glance, picking flowers does not seem to be brain surgery, but it does make a difference how and when you pick your petals. The season of the plant can also make a difference. Has the flower just started to bud, is it a mature flower in mid-bloom, or almost withered?

Herschel's 1842 paper *On the Action of the Rays of the Solar Spectrum on Vegetable Colours, and on some new Photographic Processes* in the *Philosophical Transactions of*

the Royal Society, vol. 133 (1842), pp. 181-215, recommends picking flowers at the peak time: ***“Generally speaking, so far as I have been able to observe, the earlier flowers of any given species reared in the open air (provided they are well ripened, i.e. the color fully developed) are more sensitive than those produced even from the same plant, at a late period in its flowering, and have their colours more completely discharged by light.”***

## Picking the petals

Using both the petals and the crown will result in a different color print than just using the petals by themselves. Quite often the result will be a murky colored emulsion, but there are of course exceptions, where throwing in the whole heads in the mix will benefit the result. When making an emulsion from poppies (*Papaver rhoeas*), petals are best on their own. Coltsfoot (*Tussilago farfara*) on the other hand will produce a better result using the whole head and also including the stem. It is a matter of experimenting to achieve the desired result.

## Picking the right time

If you are a green thumb gardener or a hiking enthusiast you will know when the flowers are ripe for picking. But, if most of your previous contact with blossom are bouquets from the florist shop and sprays from the market, then you will learn which season for picking flowers is right as time goes by. In northern Europe it is best to be on the lookout in the two months





*Note the variations in color depending on which part of the plant was chosen.*

*Above: The print on the left was made from coltsfoot (*Tussilago farfara*) using the whole head. The right print was made from the same plant using the head and the stem.*



*Below: "Patience" and "Favourite model" by Ko Oosterwijk, 2010. The two images are both made from dandelion (*Taraxacum officinalis*). The left one called "Patience" is using the petals to make the emulsion and the right one called "Favourite model" is using the leaves.*



*For best result, use only the petals when making print from poppies.*



*Above: The left print made from emulsion using just the petals from poppies and the right print made using the whole head. Different parts from the same plant can yield two quite different colors.*





prior to summer solstice. By August, most flowers have withered. Gardens continue to bloom for a few more weeks.

In British Columbia, Canada the blooming season is slightly longer, and can stretch from spring until late fall. In San Francisco some flowers - like the princess flower (*Tibouchina semidecandra*) - continue throughout the year.

Wherever you are based, the seasons are different. After the natural blooming season is gone and you do not feel like twiddling your thumbs, there are always the markets with imported flowers and kitchen cupboards to explore.

## Local flower picking laws

When hunting for plants in the wild, many flowers may be sitting ducks, but observe and abide by local laws. They can vary greatly.

A law called *Allemansrätten* in Sweden, Finland and Norway means “everyman’s right”,

and gives the right of public access to the wilderness, or the right to roam. It means that you can pick flowers, berries and mushrooms anywhere in nature. The only exceptions are if they are under protection, if they grow in a national park, nature preservation area or in someone’s garden.

Not all countries’ laws are so generous. In England and Wales the Countryside and Rights of Way Act was passed in 2000. It grants the freedom to roam, but does not include picking specimens along the way. In Scotland the Land Reform Act 2003 was put in place to grant Scots access to the land, but again, not access to picking and collecting plants along the way.

Austria’s *Wegefreiheit*, has allowed people to roam since 1975, but does not include the right to pick flowers. Find out what applies for your area before getting your scissors out. And, don’t even think about picking flowers in public parks! Try buying them at garden centers or plant nurseries instead. 

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Below: Francis Schanberger separating the petals before preparing emulsion.



## Unable to get straight to work?

**Y**ou are away, or out for a hike in the woods, finding a perfect flower to try. How do you savor it? If it is a matter of hours before you can use the petals, store them in a cool place, moist grass or fresh water. If it is not possible to throw the flower into the mortar right away, there are a few ways to save the day, though none of them are as good as using the fresh plant. Try to...



**... dry the petals:** Spread them out on newspaper in a dark room. Dryish petals, such as roses (*Rosa centifolia*),

poppies (*Papaver rhoeas*), or marigold (*Tagetes patula*) will dry in a couple of days. Toss them gently a few times a day to hasten the process. Stickier petals, like the Jamaican forget-me-not (*Browallia americana*), will take a few weeks. Dried petals can be used later, and some will keep up to a year, but over time, the pigments will fade.



**... freeze the petals:** Put the petals in a plastic bag and squeeze the air out before freezing them. When you are ready to work, thaw the petals, and make up emulsion. This method is one of the best ones mentioned

here, in terms of preserving the pigment. The prints will be *almost* as good as from fresh petals.



**... make up emulsion:** Store the emulsion in the dark and use it later, but

preferably within a few days. The pigment will start to fade quite quickly, losing its vibrancy. Some emulsions also turn moldy.



**... coat the paper:** Store coated paper in the dark, until you have your

contact frame within reach again. Paper has been kept for up to a year and still produced good prints. Not always a safe bet though, as papers precoated with emulsion from roses (*Rosa centifolia*) did not produce a print at all.



**...collect them in a plastic bag:** The last resort, as the petals will not stay fresh and usable for more than a day or two. Keep the bag in the dark to prolong the time as much as possible.


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*Plants used in the test: Blackcurrant (Ribes nigrum), coneflower, (Rudbeckia fulgida), ericales, (Rhododendron simsii), geranium (Pelargonium hortorum), Jamaican forget-me-not (Browallia americana), marigold (Tagetes patula), poppies (Papaver rhoeas) and roses (Rosa centifolia).*

*Image above right, bottles: Marydorsej Wanless, 2010. The petals were picked, diluted with acetic acid, crushed in the blender and stored in the bottles.*

Useful knowledge that can be applied when guests arrive for dinner with a bouquet of flowers (with perhaps 10 anthotype possibilities!) and all your contact frames are tied up! Please note that these tests and observations are based on research of only a few plants. They cannot be applied to all flora.

There are of course also variations to how long the pigment can be stored depending on the plant of your choice.

Emulsion is however not color permanent, and will change over time. 



*Above "See me" and left "Little people" by Nicole Lawrence, 2011.*

*These two images were both made up by spinach (*Spinacia oleracea*) leaves. The emulsion was blended with a little water. Making "Little people" the paper was coated at once, but "See me" was made using a week old emulsion. Notice the difference in color and how the emulsion can change color over time.*

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# Making up emulsion

**B**efore choosing between the mixer or the mortar to prepare your emulsion, try figuring out where most of the pigment in the plant is located. With flowers it is most often the petals that carries the pigment; in leaves, the entire leaf; but in fruit, the peel can be what you need to make your paint.

Using the mortar for petals is more economical, since a print can be produced using only one or two flowers. Using the mixer will require petals from a dozen flowers to make pulp. Using leaves as the base for your emulsion, a mixer may be a better choice, since leaves are often quite dry - like spinach - and can usually be found in abundance. Grinding leaves in a mortar is hard work. Chopping them or simply cutting them into smaller pieces with a pair of scissors may make the job easier. Using berries as your base can produce different results depending on which tool to use for the job.

## Pestle and mortar

### Advantages

- Needs only a few petals to make a print
- Therapeutic
- Strengthens arms
- Quick and easy to clean



### Disadvantages

- Peel does not get into the mix, but is strained away
- Your hands may blister

Crushing the plants by hand using a pestle and a mortar is a very therapeutic choice, it just feels good. But using a berry as a base for the emulsion, a lot of times the pigment is in the peel - like in blueberries - and when crushed and strained through a cloth later on, the pigments stay in the cloth. If mixed with a blender, more of the pigment of the peel may end up in the emulsion.



Place the petals or berries in the mortar. When using a mortar, it may be quicker to grind the plants if cutting them up by scissors first.

Rotate the pestle in circular movements when grinding. Grind until there is a fine pulp, adding a little water or alcohol if necessary.





### Advantages

- Fast when making large batches
- Includes pigments from the peel of berries

### Disadvantages

- Noisy
- A lot of petals needed
- Takes time to clean



## Mixer or blender

Put the petals, berries or your pigment of choice in the mixing bowl and mix it with a little help by Benjamin Franklin's invention electricity, using an electric food blender or food processor. I prefer to use a small hand mixer, since it is easy to clean. Rosemary Horn found a wheat grass juicer to be an excellent choice - like a meat mincer but for plant material!

Add a little alcohol or water - distilled if possible - to the blend to make the emulsion into a thick soup. Don't add too much liquid, as this will dilute the emulsion and make the print lighter. If the plant is juicy enough on its own, like raspberries, there is no need to add more liquid.

## Making the emulsion stronger


Boiling down the emulsion will also concentrate and strengthen the pigment, but require quite a lot of emulsion to begin with.

## Straining the emulsion

Once the soup is blended or crushed into pulp, strain it through a cheesecloth, a piece of cotton rag or a coffee filter. Once all the liquid has drained through, use a teaspoon to squeeze the excess liquid out, and then discard the pulp left in the filter. Make sure you wash the cloth thoroughly between different emulsions, or the emulsions may get "contaminated", or use a new filter each time you strain.



If you don't strain the emulsion properly after mashing or crushing the plant, bits of the plant will stick to the final print, causing spots. Strain the emulsion unless this is an effect that you actually want to achieve.

Although most flowers smell nice, many of the emulsions smell vile! Tulips stink like cat's pee, lilies are worse than fumes and roses give me a blinding headache. The only emulsions that please my nostrils are those made from berries, tea, herbs and wine. 

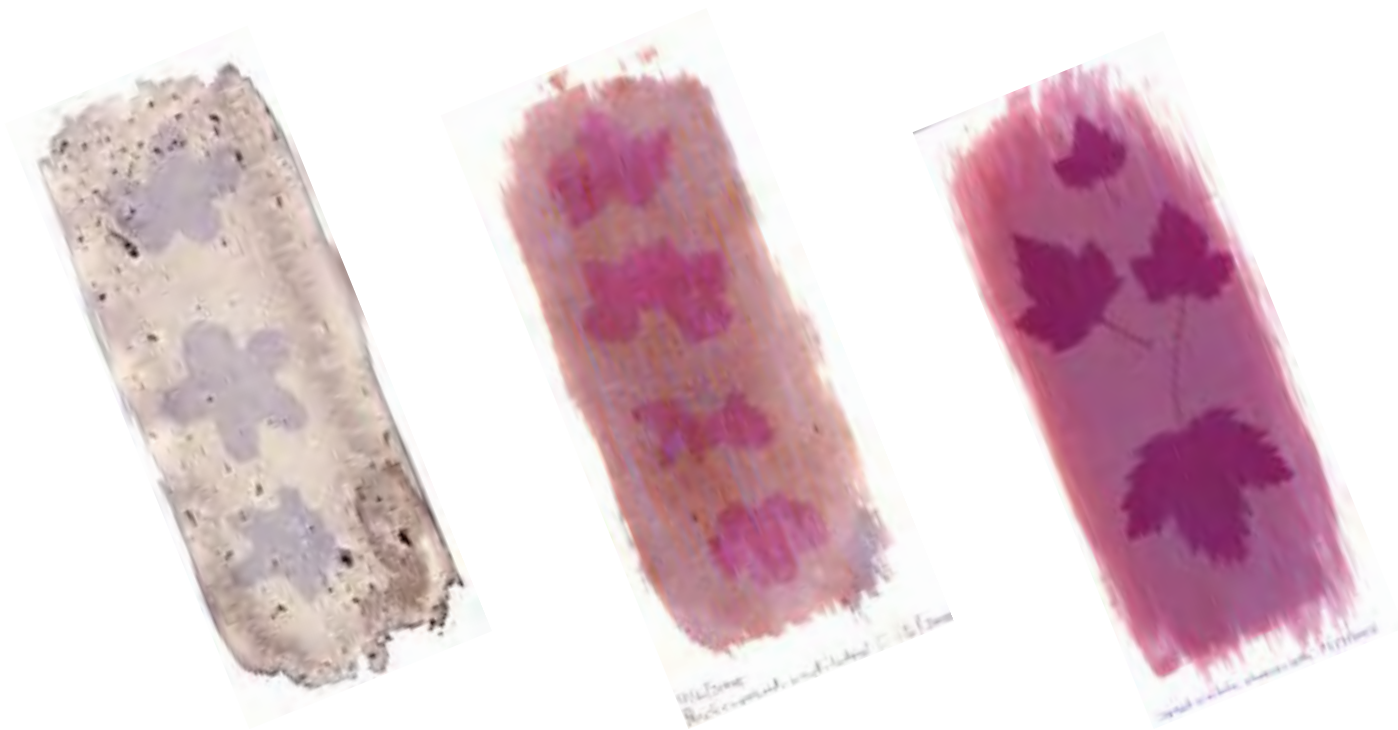
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Right: "Anthotype 07" by Silvino González, 2011. The emulsion was made from beetroot (*Beta vulgaris*) using a mixer blending with distilled water and alcohol. An acetate was contact printed for 4 days on opaline paper. The emulsion was not strained.

Below: *Browallia*, the emulsion was not strained. The brush was simply dipped into the mashed petals.

Middle: Black currant emulsion strained through a fine masked sieve.

Right: Black currant emulsion strained through a cheesecloth.





## Diluting with alcohol, oil or water

Different recipes recommend mixing the emulsion with different liquids: tap water, purified water (distilled water and deionized water have been the most common forms of purified water), denatured alcohol, (ethanol which has been rendered toxic or otherwise undrinkable), another tincture (a tincture is an alcoholic extract e.g. of an herb or emulsion of a non-volatile substance) or just plain cheap vodka.

The argument for using distilled water over tap water is that it contains fewer impurities - impurities that may affect the outcome of the final print.

Henry Hunt Snelling describes the effects of using alcohol as a diluter in his book *History and Practice of the Art of Photography*, chapter X, page 64, in the following way:

**“Most flowers give out their coloring matter to alcohol or water. Some, however, refuse to do so, and require the addition of alkalis, other of acid, &c. Alcohol has, however, been found to enfeeble, and in many cases to discharge altogether these colors; but they are, in most cases restored upon drying, when spread over paper. Papers tinged with vegetable colors must always be kept in the dark, and perfectly dry.”**

Herschel's 1842 paper *On the Action of*

*the Rays of the Solar Spectrum on Vegetable Colours, and on some new Photographic Processes*, in the *Philosophical Transactions of the Royal Society*, vol. 133 (1842), pp. 181-215, says the following:

**“If alcohol be not added, the application on paper must be performed immediately, since exposure to the air of the juices of most flowers (in some**

**cases even but for a few minutes) irrecoverably changes or destroys their colour. If alcohol be present this change does not usually take place, or is much retarded and in some cases entirely prevented.”**

And, L.L. Hill writes in a brief mention of anthotypes in his treatise - with a name as long as my arm: *A Treatise On Heliochromy: or, the*

*production of Pictures, by Means of Light, in Natural Colors. Embracing A Full, Plain, and Unreserved Description of the Process Known As the Hillotype, including the Author's Newly Discovered Collodio-Chrome, or Natural Colors on Collodionized Glass*, published in 1856 by Robinson and Caswell, New York: **“There is a difficulty in respect to the alcohol, since, in many cases, if it is not employed the color of the juice is irrecoverably destroyed, and the employment of it retards the action of the light. The alcohol effects a**

### Diluters

Different diluters that can be used - with various result of course!

- Tap water
- Purified water (Deionized water)
- Denatured alcohol
- Cheap vodka
- Lighter fuel
- Paraffin oil
- Olive oil
- Rapeseed oil

***temporary destruction of the color, in many cases, but the color re-appears on drying the paper.”***

Experimenting with the different liquids shows that:


## **Oil**

The oils tried do not extract the pigment better than ordinary tap water, and is not worth the extra hassle of stickiness and mess. It is quite annoying to work with since everything turns oily. To be avoided.

## **Water**

Tests comparing ordinary tap water and distilled water show no differences in extracting pigments or exposure times. Water is a very good diluter to use, since it is always at hand.

## **Alcohol**

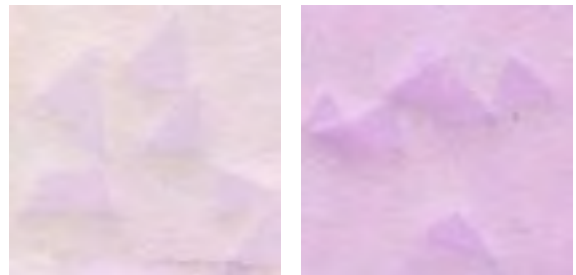
Tests comparing plain cheap vodka with denatured alcohol show no differences. When comparing alcohol and water, the alcohol tends to draw out a lot more of the pigment from the plant than the water does, making for a stronger, darker emulsion. The only drawback is that it penetrates the paper quite a lot, so if you have notes on the back of the paper they will show through. Alcohol is otherwise recommended for use. 



*The three images above show prints from the same plant, bergamot (*Monarda*) exposed for the same amount of time in the same contact frame. To make the left print the emulsion has been extracted with rapeseed oil, the middle with tap water and the right with denatured alcohol.*



*The two images above show prints from the same plant, red nasturtium (*Tropaeolum tricolor*) exposed for the same amount of time in the same contact frame. To make the left print the emulsion has been extracted with tap water and the right with denatured alcohol.*



*The two images above show prints from the same plant, cultivated pink orchid (*Phalaenopsis lindenii*) exposed for the same amount of time in the same contact frame. To make the left print the emulsion has been extracted with tap water and the right with denatured alcohol.*


# Choosing the base support

The material you choose to print your anthotype on will affect the final look and feel of your print. The structure, texture and color of the support are all factors to take into consideration.

Watercolor or art paper are common, and very usable supports, but there are several more interesting options to try. Don't limit yourself to using only paper. Any material that will hold the emulsion can be used. Silk will add a lustrous shimmer to your print, a rough cotton rag will add a woven structure and handmade paper brings textures. There is also the possibility to make your own paper, adding pieces of plant and petals to the mix, complementing the print.

Also try wood, ceramics, crepe paper and cardboard. Using colored materials will add another color into the mix, and blend with

your emulsion color. Experiment and find your preferred support.

Anthotyping on household goods such as pillowcases may not be such a good idea, at least not if you intend washing the pillowcase from time to time. Anthotype emulsion will not last through a spin in the wash machine, or even a gentle hand wash. 

*"Untitled" by Sarah Van Keuren, 2010. Pokeberries emulsion printed on glove. Ripe pokeberries were mashed and squeezed in cheesecloth. Some isopropyl alcohol was added and the emulsion brushed onto the back of an alum-tawed pigskin glove. Exposed in soft contact frame for about a week.*



# Coating the paper

**A**ny paper that will hold the emulsion can be used. Since it will be out in the sun for a few days or even weeks, it is best to start with a sturdy paper. Try a medium or heavy weight watercolor paper before you start experimenting with other base supports. Once you are feeling more confident you can try coating and printing on any material that will hold the emulsion. Just remember that it will be exposed in the sun for quite a long time, so it shouldn't be too fragile.

Always work in a dimly lit area, since any exposure to sunlight will destroy the color of the emulsion. Prepare a drying area in the dark before you start coating.

## Brushing or dipping?

Two ways of getting the emulsion onto the paper is brushing it on or dipping the paper, both adding different qualities to your final print. Coating with a brush will enable you to leave brush strokes on the paper, adding a handmade quality. Coating by dipping will give you a more even coat.



The four anotypes are made from the same emulsion, turmeric (*Curcuma longa*).

Top left (the orange shape): Coated once with a brush.

Top right (the broccoli shape): Coated by dipping the paper once.

Bottom left (the citrus shape): Coated three times with a brush. Bottom right (the banana shape): Coated by dipping the paper three times.

As you can see, brushing three times (bottom left, the citrus shape) and dipping once (top right, the broccoli shape) will give almost the same strength and intensity of emulsion.

## The brush method

Brush coating paper can be a little tricky, sometimes the paper curls, and the emulsion pools or blotches. But, there are ways to secure an even coat:

1. Moisten the back of the paper. You can do this using a damp sponge brush or a damp household sponge. Take care not to wet the paper too much. If that is the case, take some kitchen towels and blot the paper. Do not wet the front of the paper, since this will only dilute your emulsion.

2. Pin the paper to a board to prevent it from curling. Moist side down.

3. Dip the brush or sponge brush in the emulsion and squeeze out any excess fluid so that the brush is damp, and not dripping. Apply the emulsion by brushing the paper from left to right in even strokes.

4. Let the paper dry in the dark. If you are in a rush you can use a hand dryer to dry the paper more quickly. Don't use too much heat.

5. If you wish to get a stronger color, apply another coat moving the brush up and down the paper this time. Make sure no pools of liquid remains on the paper, as this will cause stains on the print. Plan to coat several times if the emulsion is of a weak color. Often a couple of thin layers are preferable to one thick layer, thus avoiding pooling of liquid. Let the paper dry between coats.

6. Let the paper dry in the dark. Then, finally, it is time to print!



*"Rainbow" by Malin Fabbri, 2009.*  
Several emulsions were used: Turkish wartycabbage (*Bunias orientalis*), phlox (*Phlox divaricata*), allium (*Allium aflatunense*) and pansy (*Viola wittrockiana*) were left unexposed on the paper. The blotches on the left are a result of pooling.



## The dip method

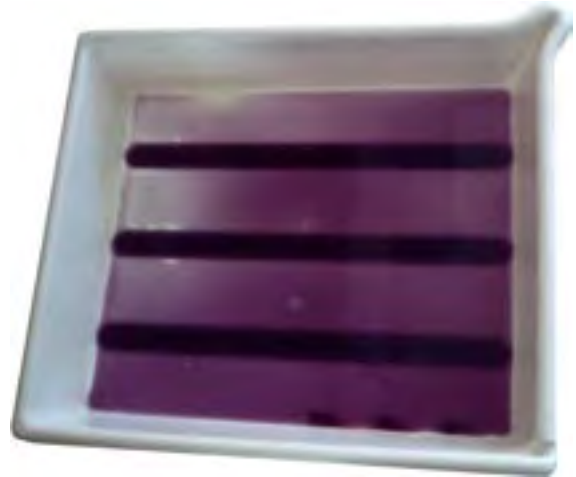
I have not heard of anyone else using this method of coating the paper, but I have found it to be very effective, and it is definitely my preferred method, providing I have enough plant material to make up a lot emulsion. With only one brush coat, you get the same intensity as you get with three brush coats, and you save the time waiting for the emulsion to try in between coats. Emerging the entire paper in emulsion will also result in a very even coat. The drawback is that it will require a lot more emulsion than using a brush, since the whole paper will have to be emerged in the tray.

1. Make up emulsion - a mixer is easier to use than a mortar when making a lot of emulsion. At least half a cup will be necessary, perhaps more, depending on what type and size of tray you are using. The plastic trays used for developing prints in a darkroom are good, but a lot of the emulsion runs down into the grooves. Using a flat kitchen dish is more economical use of the emulsion.

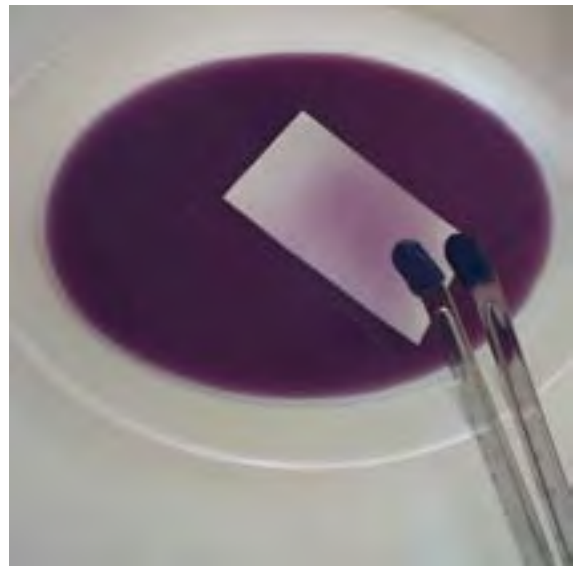
2. Pour the emulsion into the tray, and emerge the whole paper into the emulsion. Let the paper sit in the emulsion for a couple of minutes, until the emulsion is soaked right into the core of the paper.

3. Lift out the paper using thongs. Hold it in one corner and let the excess fluid drip back into the tray. Let it drip for at least a minute, so there won't be any excess fluid causing pools on the paper.

4. Dry the paper on a flat surface in the dark. You can coat several times using the dip



*When using a darkroom tray (above) a lot of the emulsion will run into the grooves at the bottom of the tray, a more economical use of the emulsion will be using a flat kitchen tray (below).*



method. But, one coat is usually enough, with several coats, the contrast seem to lower and the print will not be as clear as with one coat. This is of course dependent on the emulsion you are using. Try it, is the best advice!

5. Let the paper dry in the dark. Then, finally, it is time to print!





*"Stockholm at my feet" by Malin Fabbri, 2011.  
The emulsion was made using blueberry (*Vaccinium myrtillus*) purée and water mixed together. The emulsion was poured into a flat tray - a baking tray - watercolor paper was dipped once, dried in the dark and then exposed for a couple of weeks using a transparency negative. The original photograph was taken with a pinhole camera.*

*Below: The four prints are all made from the same blueberry (*Vaccinium myrtillus*) emulsion, but coated differently.*

*Top left (butterfly): Coated once with a brush.  
Top right (duck): Coated by dipping the paper once.  
Bottom left (cat): Coated three times with a brush.  
Bottom right (fish): Coated by dipping the paper three times.*



**RECOMMENDED**

## How many coats?

If the emulsion is very light or transparent, such as with common marigolds (*Tagetes patula*), coating several times will give you a stronger print. Coat the print in a darkened area, leave it to dry, and apply another coat, until the color is richer and less transparent. With richer pigments, like pansy (*Viola wittrockiana*) or blueberry (*Vaccinium myrtillus*), one coat is enough to give you a strong print.



## Blotchy print?

Blotches may be caused by pooling. Coating with too much emulsion may pool and dry unevenly causing blotches that will show up on your print. Start again, and coat more carefully with less emulsion on the brush.

## Storing emulsion

You can keep any left over emulsion in a brown bottle. It will usually keep for a few days, but the pigments will start to fade. If it has sediments in it when you re-open the bottle it may be a good idea to strain the emulsion again before using it.

## Storing coated material


Emulsion from many plants that are coated onto paper or cloth can be stored “forever” as long as it is in the dark. I once coated too many papers, there was no room in my contact frames to expose them at the time. The papers were put in a black bag and the bag in a dark cupboard. There they were forgotten until the cupboard was emptied out a few years later. The papers were still usable and produced a few very nice prints. Some plants do, however change color even in the dark, and some will not for some strange reason produce a print at all, so if you don’t have time to do a print right away, it is a matter of trying to see how your specific emulsion holds up. 📖

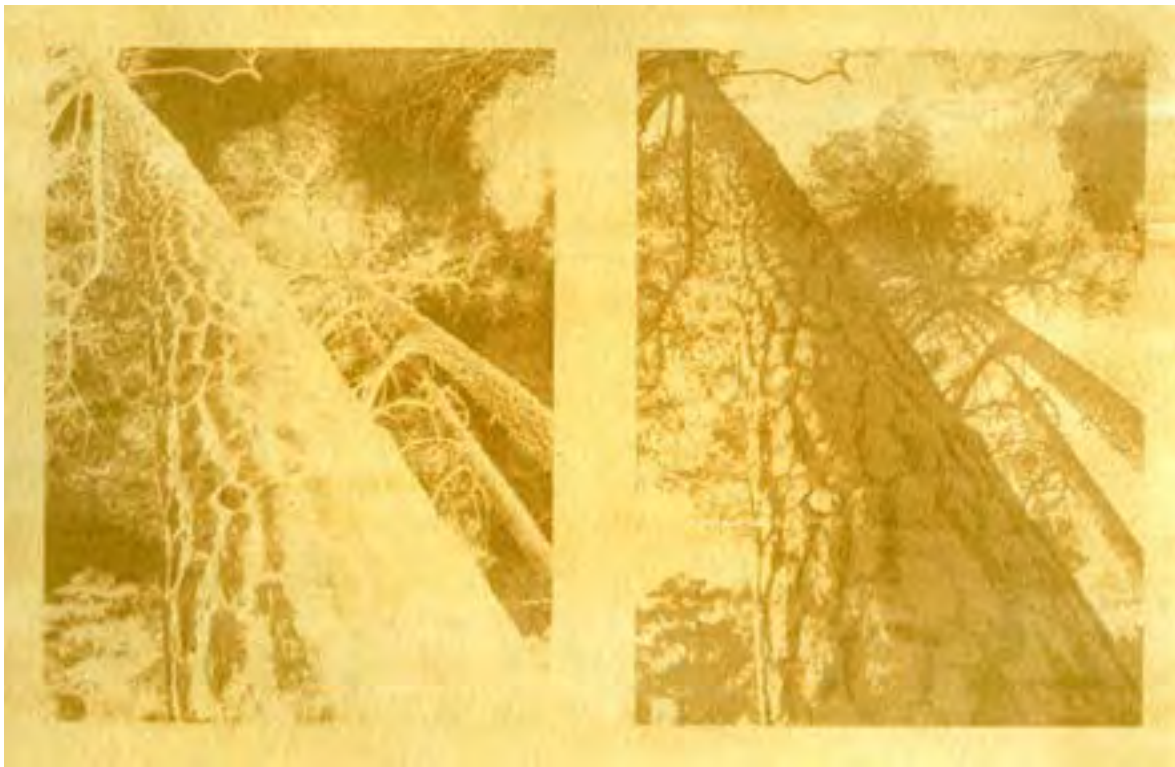
# Positive or negative

In most photographic processes, and traditional darkroom photography, a “negative” is used to produce an image. Making anthotypes, you will need a “positive”.

Where there are light areas on the positive, the sunlight will shine through, and bleach the image lighter. Where there are dark areas on the positive, the light can not reach and the image will retain the color of the emulsion.

This is the case using most of the emulsions, but some rare exceptions are where the emulsion actually turns darker when exposed, as it can do with emulsion from berries such as blueberries (*Vaccinium cyanococcus*). We will however, in the book, talk about positives most of the time, to keep confusion at a minimum.

Start with a high contrast positive. 



*"Downside up" by Malin Fabbri, 2011. Both images were made using stinging nettles (*Urtica dioica*).*

*Top left: This print has been made using a negative. The negative is shown to the left.*

*Top right: The same print using a positive. The positive is shown to the right.*





*"Elderberry1" by Jake Groenhof, 2010.*

*Using berries the emulsion often turns darker on the exposed areas, rather than bleach out. In this print Jake Groenhof used elderberry (*Sambucus nigra*). The image shows digital positive taped over paper. 100ml of berries and 10ml of denatured alcohol made 50ml of juice and coated 125 square inches with five coats. A digital positive made with black plus all colors was used. The exposure time was 9 Colorado September days (total of 73 hours). Image eventually "went negative" with a reversed color bleach-out.*



# Making a positive (not negative!)

To make the final anotype image you have to first make a “positive”, that you will use to contact print the final image.

## Contact printing

Contact printing means the positive is placed in direct contact with the material. The final image will therefore be the same size as the positive.

When choosing an image to use, bear in mind that the process is monochromatic - it only uses one color.

There are many ways of making a positive. Here are two methods that you are likely to be able to carry out without buying a lot of expensive equipment.

## The photocopy method

Use acetate transparency film, which is a material that accepts the heat and toner from a photo copier. Load it into the paper tray, and then photocopy your photograph onto the transparency.

If the positive is too thin, that is if you can see through the black areas of the positive by holding it up to the light, make two copies and layer them on top of each other. This method of

making a positive is quite crude.

## The computer method

Following is a short description of how to make a digital positive in Photoshop. It should be seen as a starting point. Making digital positives with consistency and precision can be

explored in-depth, see Dan Burkholder’s book *Making Digital Negatives for Contact Printing* and Mark Nelson’s *Precision Digital Negatives* system. There is also lots of information at [AlternativePhotography.com](http://AlternativePhotography.com).



*Positives made by Jake Groenhof. Three digital positives used in making anotypes. They are printed on Pictorico OHP film using an Epson 7900 pigment ink printer.*

There are numerous factors to consider, ranging from what type of printer you have

and the ink that it uses, to the film used to print your positive on and the strength of the sunlight. One of the great things about the anotype process is that it yields immediate results, but at the same time it can be refined and explored over time.

For this method you’ll need a computer, a printer and transparency film. You also have to have the image in digital format, such as a photograph taken with your digital camera, a scanned picture, or an image drawn from scratch on the computer.



A great advantage of using the computer to make a positive is that you can alter the image: make it lighter or darker, layer several photographs, add grain or other effects, make collages and add type. Basically, you can play until your heart's content, and really stretch your imagination.

## Choose a photograph

Start with a high resolution image. Even though it will be in color when you start, imagine what it will look like in black and white, since the anothype process is monochrome. For example, red and green may be the same shade of grey when the photograph is turned into black and white, and the tones will merge into each other.



## Crop the image

Define the area with the crop tool and crop the image to close in on the subject. Change the photograph's dimensions or the juxtaposition of the motif.

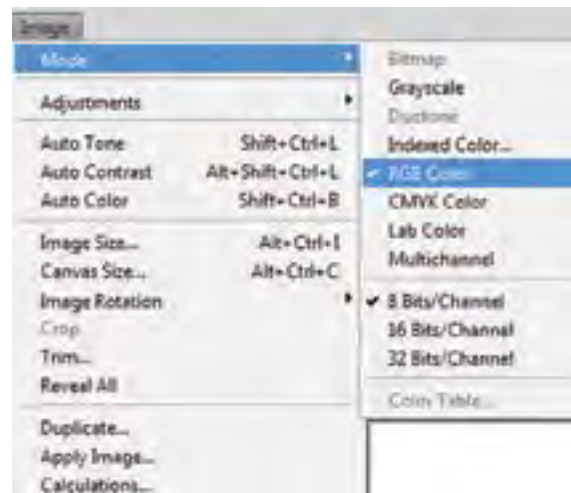
- Image >> Crop

## Convert the image to RGB

If the image, for some reason, is not already RGB (meaning it uses red, green and blue color channels) convert it from CMYK or the format it is into RGB. Go to the Image menu in Photoshop and pull it down to find the right options:

- Image >> Mode >> RGB Color

**Freebees!**  
Photoshop is quite expensive to buy, but there is an alternative - the Gimp. The Gimp can be downloaded free from [www.gimp.org](http://www.gimp.org). All they ask is that you make a donation - a small thing to do for a fully fledged image editing software that is supplied for free. The working method is very similar to Photoshop.



## Adjustment layers

Working with adjustment layers may seem a little complicated at first, but it has great advantages. Instead of changing and manipulating the image itself, the changes are done on a separate layer. This way, if you change

your mind at any time during the process, you can simply go back to the adjustment layer and change the values there or delete the layer altogether and start with a new adjustment layer. You never directly affect your original.

## The channel mixer

Make a new adjustment layer and choose the channel mixer.

- Layer >> New Adjustment Layer >> Channel Mixer

Make sure the box next to “Monochrome” is ticked and “Gray” selected in the “Output Channel”.

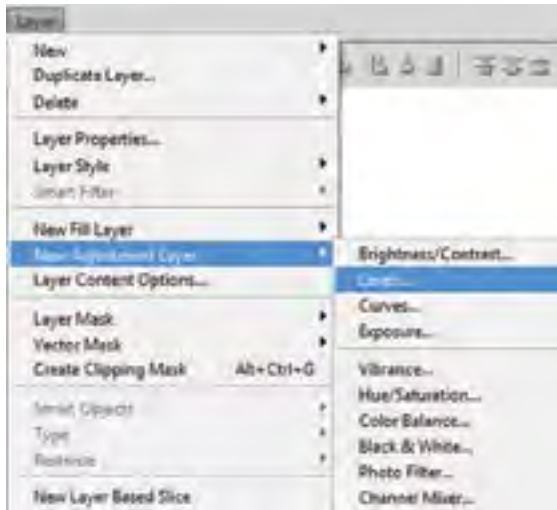
Then pull the red, green and blue sliders to adjust the image until you are happy with how it looks in black and white.



## Advanced tweaking

Adjusting the levels and curves requires patience and practice. Keep your eyes on the picture that you are manipulating, and

start with a picture that is good from the beginning. Use levels and curves to make minor adjustments. These minor adjustments can have a major impact.



## Change the levels

- Layer >> New Adjustment Layer >> Levels

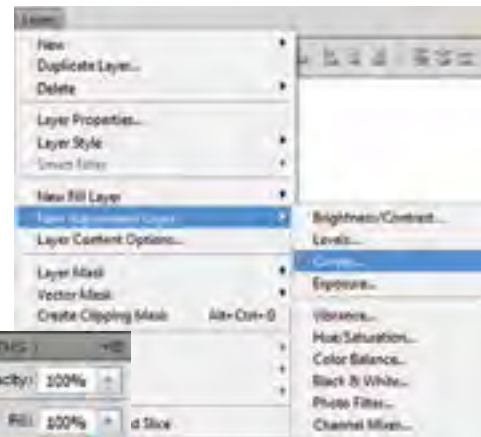
Pull the black slider and the white slider towards the middle to adjust the whitepoint and the blackpoint of the positive.



## Adjust the curves

- Layer >> New Adjustment Layer >> Curves

This time make a new adjustment layer with curves. Adjust and play with the curve adding points and gently pulling them up or down to change the midtones of the image.

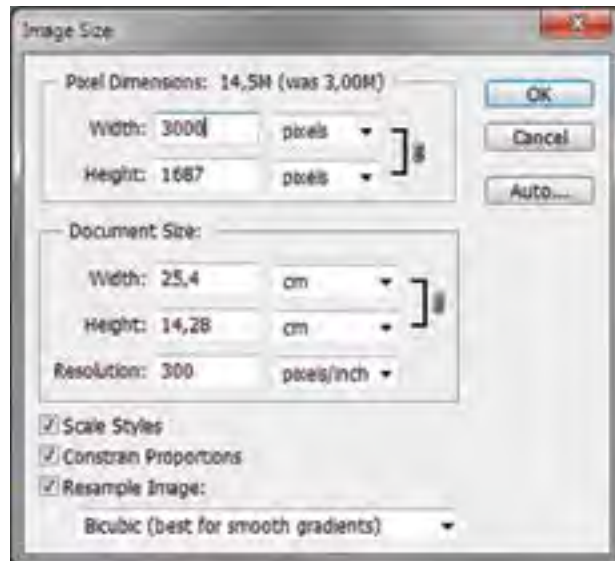


## Alter the resolution of your image

The resolution of your image is the quality of the image. Not the artistic quality, but the number of pixels it contains. It is important to print the image at the right resolution. Too low resolution and the image will be pixelated, with jagged edges. Too high resolution and the file size will be huge and it will take unnecessary long to print.

- Image >> Image size


Change the height and the width to the size you want your negative to be and the resolution to 300 dpi. 300 is a good resolution for printing.



## Print the image

- File >> Print


Now you have a ready positive on your screen and you just need to print it out onto acetate transparency film to make a “real” positive. The Pictorico OHP film with its ceramic coating is recommended - but very expensive. Try transparency film made from the manufacturer of your printer, for example Epson transparency for an Epson printer for a more inexpensive alternative. Some find that ordinary laser acetates from the local stationery shop work just as well.

The final positive will be dependant on your set-up, which kind of printer and ink you are using. Start by printing with the highest settings, the highest lines per inch (lpi) available in your printer. The kind of ink you use is also a factor: different inks have different UV properties and react differently to light, and so it may take a few attempts to get it right, but don't be afraid to experiment. 



# Printing the image

Once your paper is coated with emulsion and has had time to dry, it is finally time to print. Place your positive on top of the paper and sandwich them together using a contact frame. There is no need to use an expensive contact frame, a cheap version can be made very easily. Use a clip frame - the sort used for framing pictures - and four clamps, and you have a very inexpensive contact printing frame.

The old Kodak printing frames are great to use. They secure the print nicely and also have handles so that the frame can be hung in a window during long exposures. They can be found on eBay. 



Top: The more expensive and luxurious version from Douglas Kennedy.

Above: A mid-priced contact frame found in general photography suppliers stores.

Left: Four prints being exposed in Kodak printing frames.

Left below: Prints being exposed in clip frames by Jake Groenhof.

Below: Several anothypes in a large printing frame also by Jake Groenhof.





# Photograms

Instead of using a positive, you can make a photogram by placing items on top of the paper to make an image.

Making a photogram is a bit like stencilling. The printed image will take on the shape of the object placed on the paper during exposure. The areas covered by the object will remain the same color as the emulsion and the areas exposed to the sun will bleach out to a lighter, or even white color, leaving the print in the same shape as the object. Semi-transparent objects will produce nice mid tones.

Any object can be used to make a photogram. Plants, lace, or paper shapes may be a good to start with. Kitchen utensils, toys or rope can also be used. Try keeping the objects in close contact with the paper and the glass, or some blurring may occur, due to the long exposure time.

Sometimes photograms can be perceived as flat, due to the one dimension where the object is pressed to the paper. That does not have to be the case, there are several ways of making photograms more 3-dimensional. If you use an object that won't be flattened, such as a glass, you will get more depth in your image. You can also use flat object, but raise some of them with a couple of glass panes, to get a blurred effect.


To the right is a layered photogram, where some of the glasses appeared to be in focus and some out of focus. A piece of paper was coated with red wine.



Cardboard cut out shapes of wineglasses were used. Two of the shapes and a piece of string for the horizon were placed directly onto the coated paper.



A piece of glass was placed over the composition and several more shapes added on top of the glass. A final piece of glass and some clamps held the shapes together during exposure.

This caused some glasses to be “in focus” and some to be “out of focus”. See the final print on the next page. 





Examples of photograms.

Above left and right: "Ditch Lily" and "Red Geranium" by Marydorsey Wanless, 2010. Photograms made by exposing the paper with a whole fresh flower placed directly on the paper.

Left: "Wine on the line" by Malin Fabbri, 2007.

A photogram made with wine, using several cut outs shaped as wineglasses, a piece of string and several panes of glass.

Below: Photograms made the classic way by placing plant material directly onto the paper, and sandwiching it there during the exposure. From left to right: Red oxeye daisy, bellflower, garden lupin, potato and tulip by Malin Fabbri, 2008 and 2010.



# Exposing the print

**T**he anotype print develops as the rays of the sun destroy the color of the pigment, bleaching the print.

Or quoting Henry Hunt Snelling from his book *History and Practice of the Art of Photography*, chapter X, page 65:

***“From an examination of the researches of Sir John Herschel on the coloring matter of plants, it will be seen that the action of the sun’s rays is to destroy the color, effecting a sort of chromatic analysis, in which two distinct elements of color are separated, by destroying the one and leaving the other outstanding.”***

To achieve the bleaching effect, place the contact frame in the sun for a very long time. The sun is preferable to a UV light-box since the exposure times can vary from a few days to a few weeks. A light-box may overheat in that time, and use up a lot of bulb life and electricity. And, a light box is not using the full range of

rays in the color spectrum, which may affect the outcome of the print. The stronger and more direct the sunlight is, the quicker the exposure will be.

The process is very much WYSIWYG

- What You See Is What You Get. When you can see that the color on the exposed area of the paper has bleached out, the print is done. Using a cheap clip frame you will have to guess and remove the print when you think the time is right. Using a more expensive contact frame with a hinge back, it is possible to lift the composition, check the print and then replace it with the same registration as before. That is the preferred option, if you can tie up your expensive frame for that amount of time. Failing that, you will just have to experiment until you find the right exposure time for the emulsion of your choice. The image will probably be quite dreamlike and sometimes - depending on the initial color of the emulsion - quite faint.



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*"Folding chairs with flower pattern"*


Rosemary Horn, 2009.

*The right exposure time is sometimes hard to predict, but the difference between the right and wrong exposure time can be striking. To the left is Rosemary Horn's print made using a beetroot emulsion. The exposure time was too short. To the right is the same print with correct exposure time.*

No rinsing, fixing or other frills necessary. The print is ready to be hung on a wall and admired. But, be careful the wall the print is hung on is not exposed to the sun, or the darker areas of the print will start to fade too.

Each and every emulsion will need a different exposure time. Some emulsions need only a few hours to change color, some a few weeks. Corn poppy (*Papaver rhoeas*) will produce one of the most sensitive emulsions. Sir John Herschel found that the juice from merrygold and corchorus japonica was the

fastest, changing color as rapidly as ten minutes in clear sunshine, while Mrs. Somerville found the juice from the dark red dahlia to be speedily changing colors.

The thousands of different plant emulsions will have various colorfastness, and the different strength the sun, depending on your season, weather and geographical location will also matter. One thing that can be said for certain, is that it is a matter of days or weeks, rather than minutes or hours. Patience is required. A lot of patience! 





# Image permanence

**A**ll images produced by these processes (Anthotypes) quickly fade, and are of no value except as curiosities while they last". At least if you believe the author of *Encyclopedia of Photography* [5]. Personally I believe Mr. Jones is wrong. Granted, that since there is no processing and no fixing, the image is not permanent but will continue to bleach as long as it is exposed to the sun, and sometimes even when it's put away in a dark drawer. Exactly how much will depend on a few factors. But, in 1911, he should have been able to see, or at least hear of examples still around from 1839, a considerable time. Some of those prints still exist. Take a look in the history chapter of this book, and you will see an anthotype from 1839 by Sir John Herschel himself.

Finding lasting colors has preoccupied people for centuries - and is the basis for the anthotype process. The knowledge being useful for dyeing fabrics, clothes, tools and building materials. However, when making anthotypes the search is one step removed; the color has to be lasting, pleasant BUT FIRST be able to change in the sun within a reasonable exposure time. If the pigment is too colorfast it will not produce a print. If it is too unstable it will fade very quickly.



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[5] Note: Edited by Bernard E. Jones and published by Arno Press in New York, in 1974 - a reprint of the 1911 edition, published by Cassell, London, New York, under the title Cassell's Cyclopaedia of Photography.

As soon as it was discovered that plant juices could be used to produce pictures, it was also discovered that the pictures can fade as easily. So, how do we extend the life of the print?

Herschel tried to fix images, exposing them to muriatic acid fumes, ammonia and alkali environments, but found that both the tint and sharpness suffers in the process [6].

The permanence of the image - how long the image will last - can be lengthened by:

- Using a more colorfast pigment. Perhaps it is safe to assume that pigments that take longer to expose, will take longer to fade too.
- Using archival paper and framing material.
- Storing the print in the right environment. Prints exposed to sunlight will fade quicker.
- Using a fixative on the image. A fixative may help to protect a print.

Though anthotypes can not be considered a permanent process, a few historic anthotype prints can be found, some at the Museum of the History of Science at the University of Oxford, in the UK. The Harry Ransom Research Center at University of Texas, Austin, USA also holds both portraits and landscapes by Sir John Herschel dating back to 1839. 

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[6] Note: Herschel's 1842 paper *On the Action of the Rays of the Solar Spectrum on Vegetable Colours, and on some new Photographic Processes* the Philosophical Transactions of the Royal Society, vol. 133 (1842), pp. 181-215.



# Gallery and plant index

## Naming of plants

Where possible, a photograph of the plant or pigment has been provided for the purpose of identification, since common names of plants vary. Each plant or pigment, wherever possible, has also been named both with its common name, and also its scientific name, for easier identification.

The scientific name is also more popularly known as the “Latin name” of the species, although this terminology is frowned upon by biologists and philologists, who prefer to call the naming system the “scientific name”.

The essence of the scientific naming system is that it is in modern scientific Latin and has two parts.

The binomen, or binomial name, or binomial nomenclature, is a name combining two parts: a genus name and a specific epithet. This ensures the unique identification of a species of plant or organism. For example, humans are uniquely identified as *Homo sapiens*. No other species has this binomial. The Neanderthals have their own name of *Homo neanderthalensis*, similar species, but not the same. The same goes for the plant kingdom. For example a sunflower’s binomial name is *Helianthus annuus*.


This naming system is the innovation of a Swedish botanist, Carl Linnaeus, or Carl von Linné as he was known after his ennoblement. The system is also called the *Linnaean taxonomy*.

## Plant rating

Most plants will yield some sort of print, but some are easier to work with than others. As Charles Brooke concludes in 1868, in his book *The Elements of Natural Philosophy or An Introduction to the study of the physical sciences*, published in London by John Churchill and Sons, New Burlington Street, the juices of most plants and vegetables are sensitive to light:

***“From the elaborate researches of Sir J. Herschel, it has been proved that scarcely any coloured fluid from the vegetable kingdom, or any compound with which chemistry has made us acquainted, exists, which is not more or less sensitive to the chemical influence of light. He succeeded in obtaining well-defined photographs, by merely using paper impregnated with the coloured juices of flowers and other parts of vegetables; and to these the generic term of anthotypes has been applied.”***

The ratings is a means of trying to indicate which plant will produce an emulsion that is both pleasing in color, and which will change its color within a reasonable exposure time, producing a duo tone that is contrasty enough to use. The plants have been rated in terms of how well they produce an image and how easy they are to use. The rating is not of the artistic merit of the actual print.

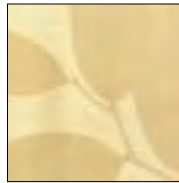
The gallery is a collection of anthotype prints from a number of artists. We hope that you are inspired to start anthotyping! 



**Achiote**  
***Bixa orellana***

Part used: Seeds. Rating: ☼☼☼  
Emulsion made by infusion of distilled water and alcohol. An acetate was contact printed for 3 days in sunny weather on linen paper.

"Portrait John Calderun"  
Silvino González, 2011



**Aster, wild blue**  
***Symphyotrichum novae-angliae***

Part used: Petals. Rating: ☼☼  
Exposed 60 hours in full sunlight. Bienenfang water-color paper. Strong emulsion was obtained. Faint at first but improved greatly with exposure time. Lovely color.

"Untitled Experiment #3"  
Martin Reis, 2009



**Amarelle or sour cherries**  
***Prunus cerasus***

Part used: Skin. Rating: ☼  
Only the skin was used, but the emulsion - as with many of the fruits tried - had time to oxidize and turn brown whilst coating, ruining the color. However, the final print was quite contrasty.

"Klarbär" Malin Fabbri, 2008



**Azalea**  
***Rhododendron simsii***

Part used: Petals. Rating: ☼☼  
A color I would call "old fashioned blue" was made from 3 coats of emulsion from the petals. Nice enough and strange enough color.

"Azalea" Malin Fabbri, 2008



**Andes berry**  
***Rubus glaucus***

Part used: Fruit. Rating: ☼☼☼  
Crushed in mortar using alcohol. An acetate was contact printed for 7 days in sunny weather on linen paper.

"Portrait Aleja Pardo"  
Silvino González, 2011



**Basil, sweet**  
***Ocimum basilicum***

Part used: The leaves. Rating: ✕  
Extracted some whilst making pesto. Wonderful smell. The final print had low contrast and dull colors. Stick to eating it instead of making prints!

"Basilika" Malin Fabbri, 2009



**Anemone**  
***Anemone coronaria***

Part used: Petals. Rating: ☼☼☼  
Crushed with pestle and distilled water added. Brushed on Arches 300g paper. Dried in the dark. Left in sun for 3 days. Faded quite a lot but left a beautiful subtle print.

"Untitled" Sarah Lycksten, 2011



**Beer**  
**Guinness Foreign Extra**

Rating: ☼  
Number of coats: 1, on Water-color paper. The paper was submerged in Guinness and dried, then set under plexiglas. An overhead transfer sheet with the printed image on top.

"Anthotype"  
Katherine M. Hill, 2011



# Beetroot

*Beta vulgaris*



Part used: Whole root. Rating: ❀❀

Beet juice mixed with small amount of distilled water. Five coats onto Pentalic brand "Paper for Pens" 110 lb. tablet paper. Digital positive using all colors. Exposure time: four Colorado October days (29 hours total exposure).

"Campus" Jake Groenhof, 2010

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Plant rating: ❀❀❀=Brilliant, every time   ❀❀=Good   ❀=OK   ✕=Waste of time

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**Beer, Samuel Adams Cranberry Lambic**

Rating: ☼  
Number of coats: 1, on Water-color paper. The paper was submerged in Samuel Adams, dried, then set under plexiglas. An overhead transfer sheet with the printed image on top.  
"Anthotype"  
Katherine M. Hill, 2011



**Beetroot Beta vulgaris**

Part used: Root. Rating: ☼☼  
Beet juice mixed with small amount of distilled water. Five coats onto Pentalic "Paper for Pens" tablet paper. Digital all colors positive. Exposure time: 6 Colorado October days. My first successful anthotype!  
"Tree Snow"  
Jake Groenhof, 2010



**Beer Yuengling Porter**

Rating: ✖  
Number of coats: 1, on Water-color paper. The paper was submerged in Yuengling Porter, dried, then set under plexiglas. An overhead transfer sheet with the printed image on top.  
"Anthotype"  
Katherine M. Hill, 2011



**Beetroot Beta vulgaris**

Part used: Root. Rating: ☼☼☼  
Cooked root mashed with mixer; 15 cc 96% alcohol added for two roots; sieved; watercolor paper coated twice. Exposed 17 days in bright sunlight using positive print on transparency scanned from paper negative (Fomaspeed 13x18) with home built camera.  
"Mieke" Ko Oosterwijk, 2010



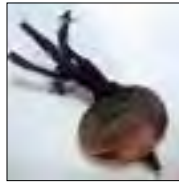
**Beetroot Beta vulgaris**

Part used: Root. Rating: ☼☼☼  
Exposure time: 4 - 6 weeks. Excellent results.  
"Untitled" Nicky Thompson, 2011



**Beetroot Beta vulgaris**

Part used: Root. Rating: ☼☼☼  
Crushed in mixer using distilled water and alcohol. An acetate was contact printed for 4 days on opaline paper.  
"Anthotype 07"  
Silvino González, 2011



**Beetroot Beta vulgaris**

Part used: Root. Rating: ☼☼  
Exposure is very slow, contrast OK but enough to make a good print with patience. Roemerturm Aquarell 250gsm paper. Inkjet positive on transparency.  
"Folding chairs with flower pattern"  
Rosemary Horn, 2009



**Beetroot Beta vulgaris**

Part used: Bulb. Rating: ☼☼  
Using a blender the beets did not need any extra liquid. Exposed for 3 days in direct sunlight on Artist's Loft water color paper. The emulsion was much lighter that anticipated, even after several coats.  
"Headboard"  
Nicole Lawrence, 2011



## Bergamot, wild / bee balm, red

### *Monarda fistulosa*



Part used: Petals. Rating: ❁❁❁

Chopped in blender, splash of denatured alcohol, squeezed through cheesecloth. Juice brushed onto Arches Platine paper. Exposed lith positive to coated paper for 5 days.

"Observer", Scott McMahon, 2010

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Plant rating: ❁❁❁=Brilliant, every time   ❁❁=Good   ❁=OK   ✕=Waste of time

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# Blackberry

*Rubus villosus*



Part used: Berries. Rating: ♂♂♂

Exposure time: 4 - 8 weeks. Excellent results, but need to do it as early in season as you can for strongest sunlight possible.

"Untitled" Nicky Thompson, 2011

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Plant rating: ♂♂♂=Brilliant, every time   ♂♂=Good   ♂=OK   ✕=Waste of time



**Beetroot**  
***Beta vulgaris***

Part used: Leaves. Rating: ☼☼  
The leaves from the plant were ground in a mixer producing a nicely delicate print, though somewhat weak in contrast.  
"Downside Up"  
Malin Fabbri, 2011



**Bergamot, garden / bee balm, red**  
***Monarda***

Part used: Petals and some black stuff. Rating: ☼  
Smells wonderful. Mixed with a few drops of denatured alcohol in a mortar. Picking the petals without getting the black stuff in was quite hard and the print easily contaminated.  
"Monarda" Malin Fabbri, 2011



**Beetroot, pickled**  
***Beta vulgaris***

Part used: Liquid from jar. Rating: ☼☼☼  
Liquid from a jar of pickled beetroot also containing vinegar, sugar and preservatives was used in 3 coats. Exposed for 5 weeks. Worked really well!  
"Angel Heart"  
Malin Fabbri, 2008



**Bergamot, wild / bee balm, red**  
***Monarda fistulosa***

Part used: Petals. Rating: ☼☼☼  
Chopped in blender, splash of denatured alcohol, squeezed through cheesecloth. Juice brushed onto Arches Platine paper. Exposed lith positive to coated paper for 5 days.  
"Observer" Scott McMahon, 2010



**Begonia**  
***Begonia semperflorans***

Part used: Flowers and flower parts. Rating: ☼☼  
Crushed with mortar and pestle (no water added) and sponge brushed (unstrained, but avoiding solid bits) onto Fabriano Artistico 300 lb. paper. Exposed under acrylic in a southeast facing window for 24 days.  
"Peter" Nancy Breslin, 2009



**Blackberry**  
***Rubus fruticosus***

Part used: The berries. Rating: ✖  
What deep purple emulsion. Rocked my boat! I was really hoping for a spectacular print, but the emulsion failed to change color, even after 6 months exposure!  
"Björnbär" Malin Fabbri, 2009



**Bellflower, giant**  
***Campanula latifolia***

Part used: Petals. Rating: ☼  
After 8 coats (!!!) the color was strong enough to produce a nice delicate print. A little too much work to be worth it.  
"Hässelklocka"  
Malin Fabbri, 2008



**Blackberry**  
***Rubus villosus***

Part used: Berries. Rating: ☼☼☼  
Exposure time: 4 - 8 weeks. Excellent results, but need to do it as early in season as you can for strongest sunlight possible.  
"Untitled" Nicky Thompson, 2011





**Blackberry**  
***Rubus villosus***

Part used: Fruit. Rating: ☼☼☼  
Excellent results using fresh and frozen berries. Pureed in a blender with denatured alcohol and strained. Arches 140 lb. was coated twice with foam brushes. Exposure times in Colorado summer: 3-4 weeks.  
"Blackberry Zodiac"  
Carol Golemboski, 2007



**Blueberry**  
***Vaccinium corymbosum***

Part used: Fruit. Rating: ☼☼  
Excellent results fresh and frozen berries. Pureed in a blender with denatured alcohol and strained through cheesecloth. Two coats applied to Arches 140 lb. paper. Exposed areas can get brownish and dingy. Exposure: 2-3 weeks.  
"Blueberry Donkey"  
Carol Golemboski, 2008



**Blackcurrant**  
***Ribes nigrum***

Part used: The whole berries. Rating: ☼☼☼  
Grinding it in a mortar produced a nice colored emulsion - that was quite slimy, but resulting in a vibrant pink print. Best result by straining through cheesecloth!  
"Svarta vinbär"  
Malin Fabbri, 2008



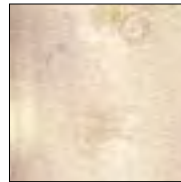
**Borage or starflower**  
***Borago officinalis***

Part used: Petals. Rating: ☼☼  
This little tasty plant made a nice delicate sepia toned print. Quite usable, but not strong enough to make a favorite.  
"Gurkört"  
Malin Fabbri, 2008



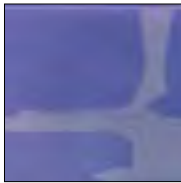
**Bleeding heart**  
***Lamprocapnos spectabilis***

Part used: Petals. Rating: ☼☼  
The pink petals produced a blue toned print of a very delicate nature. Several more coats may perhaps increase the strength of the color.  
"Löjtnantshjärta"  
Malin Fabbri, 2008



**Buttercup**  
***Ranunculaceae acris***

Part used: Petals. Rating: ☼  
Boring grey, yellow print. Made from petals and a little tap water.  
"Smörblomma"  
Malin Fabbri, 2008



**Blueberry**  
***Vaccinium myrtillus***

Part used: Puree from the berries. Rating: ☼☼☼  
The emulsion immediately gave a nice color. The puree was mixed with water and the paper dipped once into the emulsion, and exposed for four weeks.  
"Stockholm at my feet"  
Malin Fabbri, 2011



**Cabbage, red**  
***Capitata rubra***

Part used: Leaves. Rating: ☼☼  
Exposure is a bit slow but makes a good print. Roemerturm Aquarell 250gsm paper. Inkjet positive on transparency.  
"Horse, girl and housing estate"  
Rosemary Horn, 2009



# Cabbage, red

## *Capitata rubra*



Part used: Leaves. Rating: ✿✿

Exposure is a bit slow but makes a good print. Roemerturm Aquarell 250gsm paper. Inkjet positive on transparency.

"Horse, girl and housing estate" Rosemary Horn, 2009

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Plant rating: ✿✿✿=Brilliant, every time   ✿✿=Good   ✿=OK   ✕=Waste of time

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**Camelia, pink**  
***Camellia japonica***

Part used: Petals. Rating: \*\*  
Exposed for 3 weeks. Subtle yellow color - from pink petals. Printed on Fabriano 5 or Arches Aquarelle paper.

"Untitled" Nicky Thompson, 2011



**Chard or silverbeet**  
***Beta vulgaris cicla***

Part used: Leaves. Rating: \*\*\*  
Cut most of the stem to avoid dilution. Fabriano Magnani Pescia hot press 300gsm. Exposure varies depending on location and season. Inkjet positive on transparency.

"Banner" Rosemary Horn, 2009



**Campion, red**  
***Silene dioica***

Part used: Petals. Rating: \*\*  
Printed on Fabriano 5 or Arches Aquarelle paper.

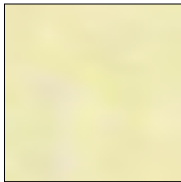
"Untitled" Nicky Thompson, 2011



**Chard**  
***Beta vulgaris cicla***

Part used: Leaves. Rating: \*\*\*  
A few coats will yield a nice light green print. Very usable. The exposure time is somewhat long, print exposed for 2 months.

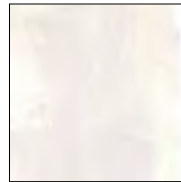
"Mangold" Malin Fabbri, 2010



**Carrott**  
***Daucus carota***

Part used: Root. Rating: X  
Finely grated the carrot and crushed it with alcohol in mortar. Juicer would have been simpler. Brushed 5 times to make a light orange coat. After several weeks of exposure the print still refused to provide any sort of contrast at all. Quite useless.

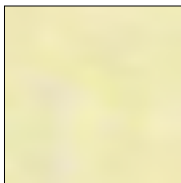
"Morot" Malin Fabbri, 2011



**Cape primrose**  
***Streptocarpus hybridus***

Part used: Petals. Rating: X  
Hard to get hold of in Scandinavia. Weak color and low contrast.

"Streptokarpus"  
Malin Fabbri, 2009



**Carrot**  
***Daucus carota***

Part used: Root. Rating: X  
Finely grated and boiled in water. Strained through sieve. Emulsion very thin. Brushed 5 times, but the emulsion was still only light orange. The final print had no contrast at all. Carrots are better for eating than for making prints, that is quite clear.

"Morot" Malin Fabbri, 2011



**Charcoal**

Part used: Blocks of coal. Rating: X  
If this had worked dipping right into the barbecue for paint, it would have been a great way to produce black. However, it did not. After 2 months exposure, not a single imprint on the paper.

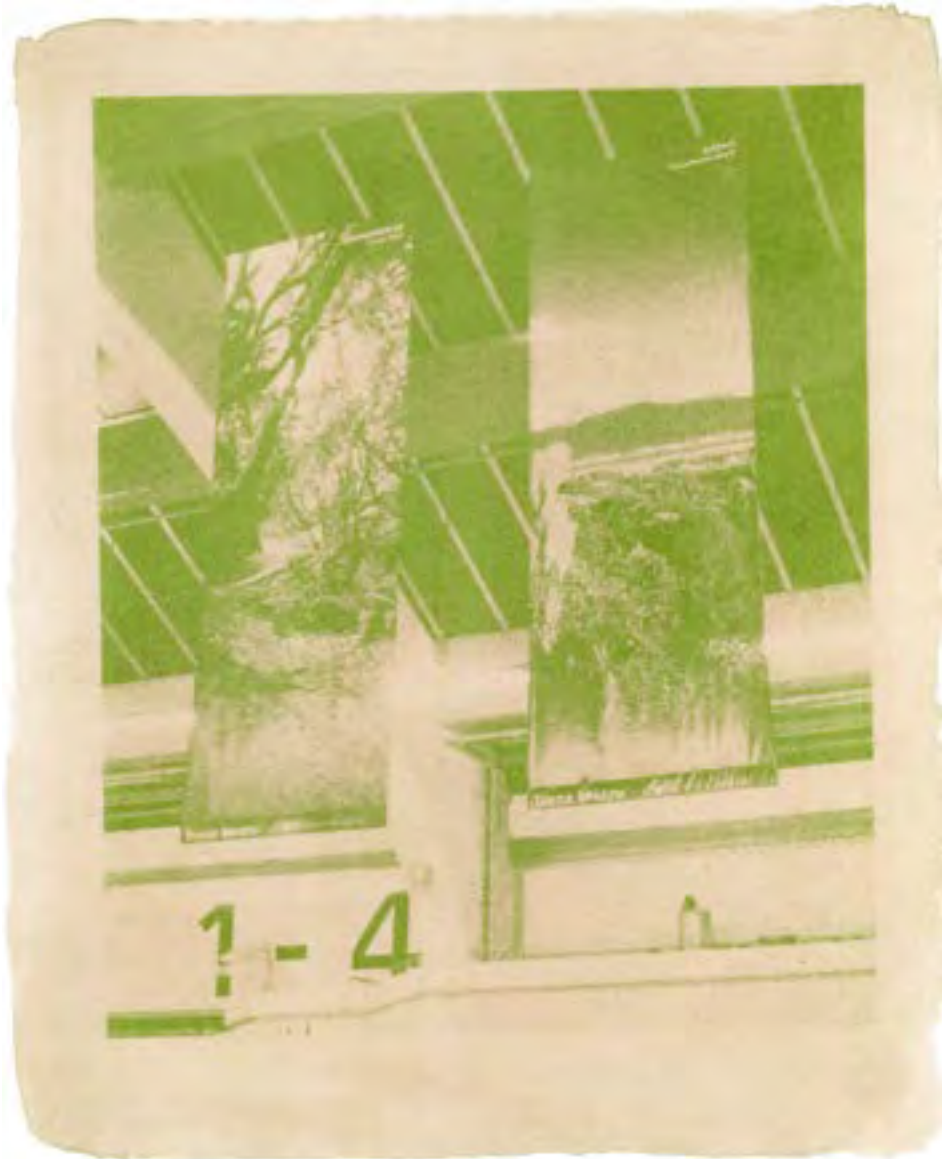
"Grillkol" Malin Fabbri, 2008





# Chard or silverbeet

*Beta vulgaris cicla*



Part used: Leaves. Rating: ❀❀❀

Cut most of the stem to avoid dilution. Fabriano Magnani Pescia hot press 300gsm. Exposure varies depending on location and season. Inkjet positive on transparency.

"Banner" Rosemary Horn, 2009

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Plant rating: ❀❀❀=Brilliant, every time   ❀❀=Good   ❀=OK   ✕=Waste of time

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**Chives**  
***Allium schoenoprasum***  
 Part used: The stems. Rating: ✘  
 Thin emulsion, resulting in no print to speak of.  
 "Gräslök" Malin Fabbri, 2009



**Cinquefoil, shrubby**  
***Dasiphora fruticosa***  
 Part used: Petals. Rating: ☼  
 A yellow print of almost no contrast, despite 2 month of exposure. Not particularly usable.  
 "Ölandstok" Malin Fabbri, 2008



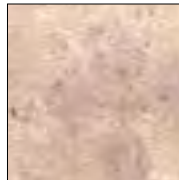
**Chrysanthemum**  
***Chrysanthemum morifolium***  
 Part used: Petals. Rating: ☼☼  
 Petals, diluted with a few drops of tap water. The print was quite faint, but had some delicate qualities, and nice colors. Quite long exposure, 8 weeks during spring.  
 "Anastasia" Malin Fabbri, 2008



**Clematis**  
***Clematis jackmanii***  
 Part used: Petals. Rating: ☼  
 Ground in mortar & pestle, with just enough alcohol to thin the emulsion. Better on thinner papers. Exposure times can be slow, up to a few weeks for decent highlights. Nice bluish emulsion fades to pale brown.  
 "Hat Study"  
 Dan Estabrook, 2010



**Cinnamon**  
***Cinnamomum verum***  
 Part used: Powder from the jar. Rating: ✘  
 Thin emulsion, and catch 22: hard to strain the powder away without losing color, but print looks bad with powder in it! Perhaps boiling a "cinnamon soup" would work better.  
 "Kanel" Malin Fabbri, 2009



**Clematis**  
***Clematis hybrid***  
 Part used: Petals. Rating: ☼  
 I was expecting the purple petals to make a nice colored strong print. Instead a low contrast sepia toned print emerged.  
 "Klematis" Malin Fabbri, 2008



**Cinnamon**  
***Cinnamomum verum***  
 Part used: Powder from the jar. Rating: ☼☼  
 Trying to extract the pigment by boiling it turned slimy and hard to extract pigment. Dip coated. The print turned out nice in color and contrast, though the exposed parts were darker than the covered ones.  
 "Kanel" Malin Fabbri, 2011

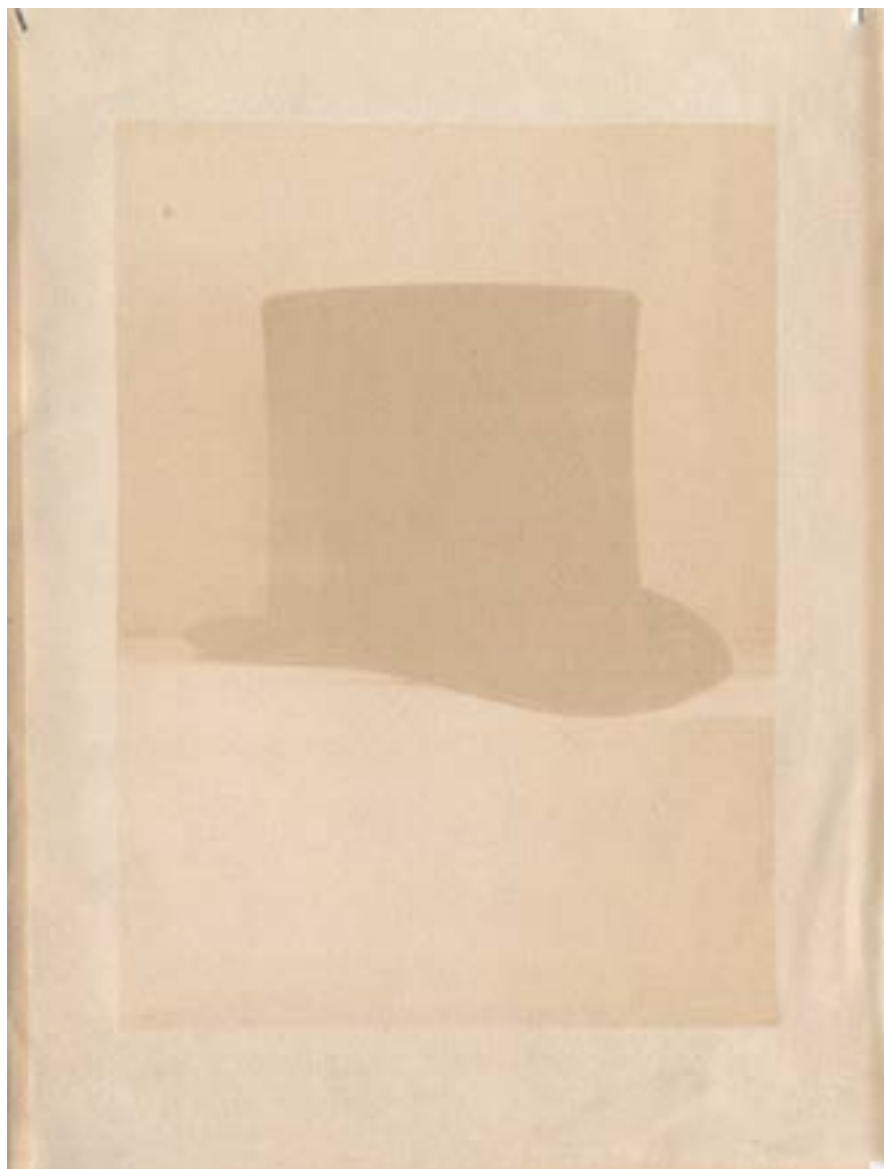


**Coca-Cola**  
 Rating: ☼☼  
 Number of coats: 1, on Watercolor paper. The paper was submerged in Coca-Cola and dried overnight. It was then set under a sheet of plexiglas. An overhead transfer sheet with the printed image was on top.  
 "Anthotype"  
 Katherine M. Hill, 2011



# Clematis

## *Clematis jackmanii*



Part used: Petals. Rating: ⚡

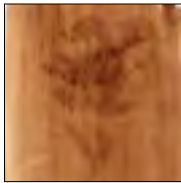
Ground in mortar & pestle, with just enough alcohol to thin the emulsion. Better on thinner papers. Exposure times can be slow, up to a few weeks for decent highlights. Nice bluish emulsion fades to pale brown.

"Hat Study" Dan Estabrook, 2010

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Plant rating: ⚡⚡⚡=Brilliant, every time   ⚡⚡=Good   ⚡=OK   ✖=Waste of time

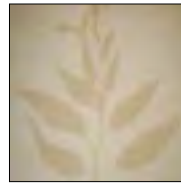
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**Coffee**  
***Coffea arabica***

Part used: The liquid coffee itself. Rating: ☹☹  
Coffee was spread onto water-color paper. Too low contrast to be of real interest.

"Kaffe" Malin Fabbri, 2010



**Comfrey**  
***Symphytum officinale***

Part used: Leaves. Rating: ☹☹  
Exposed for 3 weeks. OK results very subtle green.

Printed on Fabriano 5 or Arches Aquarelle paper.

"Untitled" Nicky Thompson, 2011



**Coleus**  
***Solenostemon***  
***scutellarioides***

Part used: Leaves. Rating: ☹  
Crushed with mortar and pestle (no water added) and sponge brush used to coat unstrained liquid - avoiding solid bits - onto Fabriano Artístico 300 lb. paper. Exposed under acrylic in a southeast window for 24 days.

"Eliza" Nancy Breslin, 2009



**Coneflower, orange**  
***Rudbeckia fulgida***

Part used: Petals. Rating: ☹☹  
3 coats of the petals mixed with a little tap water gave a nice sepia toned print. The petals were a little hard to mash, cut up with scissors first.

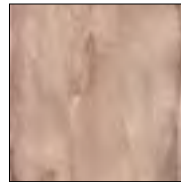
"Rudbeckia" Malin Fabbri, 2008



**Coltsfoot**  
***Tussilago farfara***

Part used: Whole heads. Rating: ☹  
The whole head of the plant was used and diluted with a few drops of tap water. Using only the flower of the plant resulted in a slightly weaker print than using both the flower and the stem.

"Tussilago" Malin Fabbri, 2008



**Cornflower**  
***Centaurea cyanus***

Part used: Petals. Rating: ☹  
This flower produced quite a boring color and a very low contrast print. Leave this weed by the wayside.

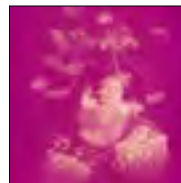
"Trädgårdsblåklint" Malin Fabbri, 2008



**Coltsfoot**  
***Tussilago farfara***

Part used: The flower and the stem. Rating: ☹☹  
A nicer color than expected, though somewhat faint in contrast. A mushy looking emulsion that resulted in a nicely toned brown print. Relatively strong.

"Tussilago" Malin Fabbri, 2009



**Crepe myrtle**  
***Lagerstroemia indica***

Part used: Petals. Rating: ☹☹☹  
Chopped in blender, splash of denatured alcohol, squeezed through cheesecloth. Juice brushed onto Arches Platine paper. Exposed lith positive to coated paper for 3 days.

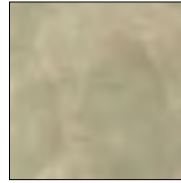
"Bloom" Scott McMahon, 2010





**Crocus, yellow**  
***Crocus chrysanthus***

Part used: Petals. Rating: ☼  
Emulsion was quite thin. Coated several times, which resulted in a light brown / gold colored print. Quite weak, but usable.  
"Krokus, gul" Malin Fabbri, 2009



**Dandelion**  
***Taraxacum officinalis***

Part used: Leaves. Rating: ☼☼☼  
Mashed with mixer; 10 cc 96% alcohol added for 100cc mash; after two days sieved; water-color paper coated three times. Exposed 20 days with some rainy days. Transparent positive.  
"Favourite model"  
Ko Oosterwijk, 2011



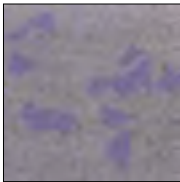
**Crocus, purple**  
***Crocus vernus***

Part used: Petals. Rating: ✖  
A very dark green emulsion which turned much lighter on exposure, both the exposed and the unexposed areas. The result was too light and too weak to be good.  
"Krokus, lila" Malin Fabbri, 2009



**Dandelion**  
***Taraxacum officinalis***

Part used: Petals. Rating: ☼☼  
Whole petals in 96% alcohol for three days; sieved; water-color paper coated three times. Exposed for 14 days with some rainy days using positive print on transparency scanned from paper negative (Fomaspeed 13x18) with home built camera.  
"Patience" Ko Oosterwijk, 2011



**Cyklamen, Persian**  
***Cyclamen persicum***

Part used: Petals. Rating: ☼  
Mixing both withered and fresh petals with alcohol in a mortar. Brushed 3 times. The emulsion looked thin but darkened when dried. The final print came out a little too grainy for my liking, though the color was quite pleasant and contrasty.  
"Cyklamen" Malin Fabbri, 2011



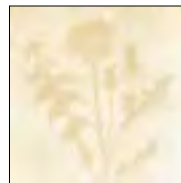
**Dandelion**  
***Taraxacum officinale***

Part used: The whole head. Rating: ☼☼☼  
The whole head was used, both the yellow petals and the green, mixed with a little tap water. A good print was not expected, so the sepia toned print was a nice surprise!  
"Maskros" Malin Fabbri, 2008



**Daisy, red oxeye**  
***Chrysanthemum leucanthemum***

Part used: Petals. Rating: ☼☼☼  
The petals mixed with a little tap water made a lovely sepia toned print in quite a short time too, only about a week.  
"Prästkrage" Malin Fabbri, 2008



**Dandelion**  
***Taraxacum officinale***

Part used: Petals. Rating: ☼  
Exposed for 3-4 weeks. Very pale yellow.  
Printed on Fabriano 5 or Arches Aquarelle paper.  
"Untitled" Nicky Thompson, 2011





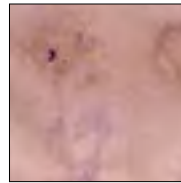


**Dill**  
***Anethum graveolens***

Part used: The stems and the leaves. Rating: ☼☼

Vibrant green color in the emulsion, that turned to a pleasant golden tone, though somewhat weak.

"Dill" Malin Fabbri, 2009



**Fireweed or rosebay willowherb**  
***Chamaenerion angustifolium***

Part used: Petals. Rating: ☼

This one was quite a disappointment. I really believed the pink petals would yield a nice print. Not the case.

"Mjölkört / Rallarros"

Malin Fabbri, 2008



**Dusty miller**  
***Lychnis coronaria***

Part used: Petals. Rating: ✖

Boring brown grey print. No contrast. Quite unusable.

"Purpurklätt" Malin Fabbri, 2008

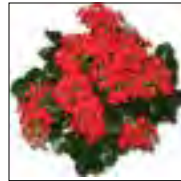


**Flaming Katy**  
***Kalanchoe blossfeldiana***

Part used: Petals. Rating: ☼☼

Emulsion from petals and some green head was exposed for 8 weeks in spring. A very vibrant purple. The emulsion was left unstrained, perhaps straining would be better to avoid too much texture.

"Våreld" Malin Fabbri, 2008

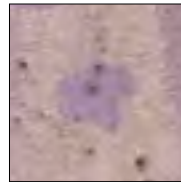


**Elderberry**  
***Sambucus nigra***

Part used: Berries. Rating: ☼  
100ml of berries and 10ml of denatured alcohol made 50ml of juice and coated with five coats.

Digital positive (all colors). Exposed 9 Colorado September days. Image "went negative" with a reversed color bleach-out.

"Elderberry1"  
Jake Groenhof, 2010



**Flowering currant**  
***Ribes sanguineum***

Part used: Petals. Rating: ☼

Petals from the bush were diluted with a few drops of tap water and exposed for 8 weeks in spring. The emulsion was left unstrained, adding texture. However, the final color of the print was not particularly nice.

"Rosenrips" Malin Fabbri, 2008



**Elderberry**  
***Sambucus nigra***

Part used: Berries. Rating: ☼☼

The whole berries are used, not diluted with water. They are mashed with a spoon and strained through a fine fabric, making the juice clean. The print was exposed for 3 weeks in the summer, in really hot sun.

"Untitled" Katja Krajnc, 2010



**Flowering onion**  
***Allium aflatunense***

Part used: Petals. Rating: ☼☼

The long hard petals of the plants were used. The emulsion may work better reduced. Interesting color as a dark print, but perhaps a little dull color.

"Allium" Malin Fabbri, 2008



# Elderberry

## *Sambucus nigra*



Part used: The berries. Rating: ❁❁

The whole berries are used, not diluted with water. They are mashed with a spoon and strained through a fine fabric, making the juice clean. The print was exposed for 3 weeks in the summer, in really hot sun.

"Untitled" Katja Krajnc, 2010

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Plant rating: ❁❁❁=Brilliant, every time   ❁❁=Good   ❁=OK   ✕=Waste of time

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### Food dye

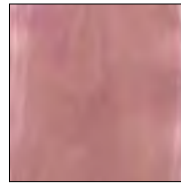
Used: Traditional PAAS Easter Egg Color Kit.

Rating: ☼☼

How it was made: Paas egg dye with water. Number of coats: 1, on Watercolor paper.

"Anthotype"

Katherine M. Hill, 2011



### Fuchsia

#### *Fuchsia magellanica*

Part used: Petals. Rating: ☼☼

Though the color of the print is nice, the contrast is very low. Others have had more luck with Fuchsia, so perhaps I will try again sometime with a much longer exposure.

"Fuchsia" Malin Fabbri, 2008



### Food dye

Used: Traditional PAAS Easter Egg Color Kit.

Rating: ☼☼

How it was made: Paas egg dye with white distilled vinegar.

Number of coats: 1, on Watercolor paper.

"Anthotype"

Katherine M. Hill, 2011



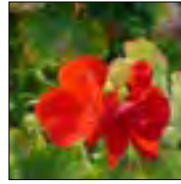
### Geranium, garden

#### *Pelargonium hortorum*

Part used: Petals. Rating: ☼☼☼

A nice purple in a short exposure time. Highly usable.

"Pelargoner" Malin Fabbri, 2008



### Food dye

Used: Traditional PAAS Easter Egg Color Kit.

Rating: ☼☼

How it was made: Paas egg dye with white distilled vinegar.

Number of coats: 1, on Watercolor paper.

"Anthotype"

Katherine M. Hill, 2011



### Geranium, red

#### *Pelargonium*

Parts Used: Petals. Rating: ☼☼☼

Fresh petals were diluted with acetic acid and crushed in the blender. The liquid was then strained from the mix. Rives BFK paper was coated, dried, and exposed with a whole fresh flower for 2 weeks.

"Red Geranium"

Marydorsey Wanless, 2010



### Food dye

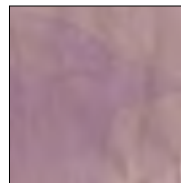
Used: Traditional PAAS Easter Egg Color Kit.

Rating: ☼☼☼

How it was made: Paas egg dye mixed with lemon juice. Number of coats: 1, on Watercolor paper.

"Anthotype"

Katherine M. Hill, 2011



### Geranium

#### *Pelargonium*

Part used: Petals. Rating: ☼☼

Whole petals in 96% alcohol for three days; sieved; watercolor paper two times coated. Exposed 24 cloudy days. Transparent positive printed from digital photo.

"Jackdaw" Ko Oosterwijk, 2010

# Hackberry or bird cherry

*Prunus padus*



Part used: Berries. Rating: \*\*

The berries were mashed in a mortar. They are watery, so only a few drops of alcohol were added. The color of the juice is strong magenta, but will fade to red-brown during the exposure. Double coating on Guarro Casas paper. Exposure time: 6 weeks.

"Free Flight" Jalo Porkkala, 2010

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Plant rating: \*\*\*=Brilliant, every time   \*\*=Good   \*=OK   X=Waste of time

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**Goldenrod**  
***Solidago virgaurea***

Part used: Petals. Rating: ☼☼  
Stems removed, petals used with 5-10ml distilled water / 25 grams of petals, crushed in a mortar. Exposed 32 hours in full direct sun. Printed on Bienenfang 100g watercolor paper. Not a very powerful pigment. Next time, extend exposure and less water. "Untitled" Martin Reis, 2009



**Heather**  
***Calluna vulgaris***

Part used: Petals. Rating: ☼  
Heads from the heather bush flower was used for pigment with a little tap water. Hard to mash. It was exposed for 8 weeks, but still showed no particular change in color. The final color was not very nice. "Ljung" Malin Fabbri, 2008



**Grass, common lawn**  
***Poaceae***

Part used: The grass straws. Rating: ✕  
Though the emulsion had a rich green color, the final print was of quite a dull green and low in contrast. "Gräsmatta" Malin Fabbri, 2009



**Hellebore, dark pink**  
***Hellebore niger***

Part used: Petals. Rating: ☼☼  
Exposed for 3 weeks. Subtle yellow color - from dark pink petals. Printed on Fabriano 5 or Arches Aquarelle paper. "Untitled" Nicky Thompson, 2011



**Hackberry or bird cherry**  
***Prunus padus***

Part used: Berries. Rating: ☼☼  
Berries were mashed in a mortar. They are watery, so only a few drops of alcohol were added. The color of the juice is strong magenta, but fades with exposure. Double coating on Guarro Casas paper. Exposure time: 6 weeks. "Free Flight" Jalo Porkkala, 2010



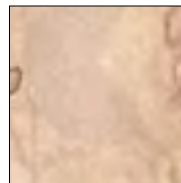
**Henbit**  
***Lamium amplexicaule***

Part used: Petals. Rating: ☼  
Not very contrasty. Petals were frozen and thawed to break up (lyse) cell wall then diluted in 80 proof alcohol. Fabriano Artistico may have contributed to pigment shifting to blue. Inkjet negative exposed for 36 h in early spring. "Mel Miller" Francis Schanberger, 2011



**Harebell**  
***Campanula rotundifolia***

Part used: Petals. Rating: ☼  
5 coats still did not make this print contrasty enough. The color is not particularly pleasing either. "Liten blåklocka" Malin Fabbri, 2010



**Honeysuckle, beauty bush**  
***Kolkwitzia amabilis***

Part used: Petals. Rating: ☼  
Even after 5 weeks exposure, the petals produced a very low contrast print. Not really worth it. "Paradisbuske" Malin Fabbri, 2008







**Honeysuckle or woodbine  
*Lonicera periclymenum***

Part used: Petals. Rating: ☼☼  
A nice enough sepia toned print was made from the petals. A little too weak in color to make it to the top emulsions though.  
"Kaprifol" Malin Fabbri, 2008



**Jamaican forget-me-not  
*Browallia americana***

Part used: Petals. Rating: ☼☼  
Petals from browallia were diluted with a few drops of tap water and exposed for 8 weeks in spring. Unstrained emulsion gave the print extra texture.  
"Browallia" Malin Fabbri, 2008



**Honeysuckle, Tatarian  
*Lonicera tatarica***

Part used: Petals. Rating: ☼☼☼  
Crushed in a mortar, the emulsion from the pink petals produced a very nice yellow and brown golden print. One of my favorites.  
"Rosentry" Malin Fabbri, 2008



**Juice,  
Containing red grape,  
cranberries, apple and  
aronia**

Part used: Juice. Rating: ☼☼  
Brushed on two coats straight from the box. The bits of fruit in it made some darker dots on the print. The colour quite nice and the contrast fine.  
"Juice" Malin Fabbri, 2011



**Hyacinth, common grape  
*Muscari botryoides***

Part used: Petals. Rating: ☼  
The little "blue balls" were mashed up with tap water. Despite 8 weeks exposure it was very low in contrast. Mashing the plant produced a green slime, that was quite sticky.  
"Pärlhyacint" Malin Fabbri, 2008



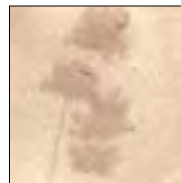
**Kale or borecole  
*Brassica oleracea***

Part used: Leaves. Rating: ✕  
Very dry plant, so extracting liquid is hard - and smells very bad. Exposure is quite fast but tends to lose any depth/density fast so lacks contrast. Roemerturm Aquarell 250gsm paper. Inkjet positive.  
"Fenced out"  
Rosemary Horn, 2009



**Iris, flag, fleur-de-lis,  
sword lily  
*Iris germanica***

Part used: Petals. Rating: ☼  
Interestingly, the petals did not produce a strong and weak shade of the same color, but a yellow and blue print. Must experiment further!  
"Iris" Malin Fabbri, 2010



**Lavender, common  
*Lavandula angustifolia***

Part used: Petals. Rating: ☼☼  
A beautiful smell, and quite a beautiful sepia toned print made from the flower. A little hard to separate from the plant though.  
"Lavendel" Malin Fabbri, 2010





**Lilac, common**  
*Syringa vulgaris*

Part used: Petals. Rating: ★★★  
The purple-blue colored petals crushed in a mortar and mixed with a little tap water produced a nice golden toned print in a very short time.  
"Syrener" Malin Fabbri, 2008



**Lily of the valley**  
*Convallaria majalis*

Part used: Leaves. Rating: ★★★  
Leaves of the national flower of Finland were put in a blender, with a few mls of alcohol, then filtered through a coffee filter. Three coats were applied to Canson drawing paper. Exposure time: 7 hours from a digital positive film. Very fast emulsion.  
"Leaf" Jalo Porkkala, 2010



**Lily, daylily**  
*Hemerocallis*

Part used: Petals. Rating: ★  
A nice yellow color of the print, but no contrast to speak of. Perhaps as many as 10 coats will do it?  
"Dagililja" Malin Fabbri, 2008



**Lobelia, water**  
*Lobelia dortmanna*

Part used: Petals. Rating: ★  
These tiny flowers made an OK emulsion. But, they are so small and take forever to pick, so choose something a little more workable for the same color.  
"Notblomster" Malin Fabbri, 2008



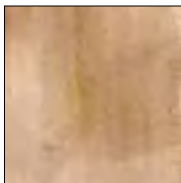
**Lily, ditch lily**  
*Hemerocallis fulva*

Part used: Petals. Rating: ★★★  
Fresh petals were diluted with acetic acid, crushed in the blender, then strained. Rives BFK paper was coated, dried and exposed with a whole fresh flower in the contact printer 2 weeks.  
"Ditch Lily"  
Marydorsej Wanless, 2010



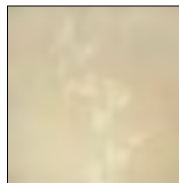
**Lupin, garden**  
*Lupinus polyphyllus*

Part used: Petals. Rating: ★★★  
The petals crushed in a mortar made a delicate print in blue. Could be a little stronger in contrast, but interesting enough.  
"Blomsterlupiner"  
Malin Fabbri, 2010



**Lily, fire lily or orange lily**  
*Lilium bulbiferum*

Part used: Petals. Rating: ★  
Not much of a print. Very weak sepia tone, even after 3 coats and 2 months exposure.  
"Brandlilja" Malin Fabbri, 2008



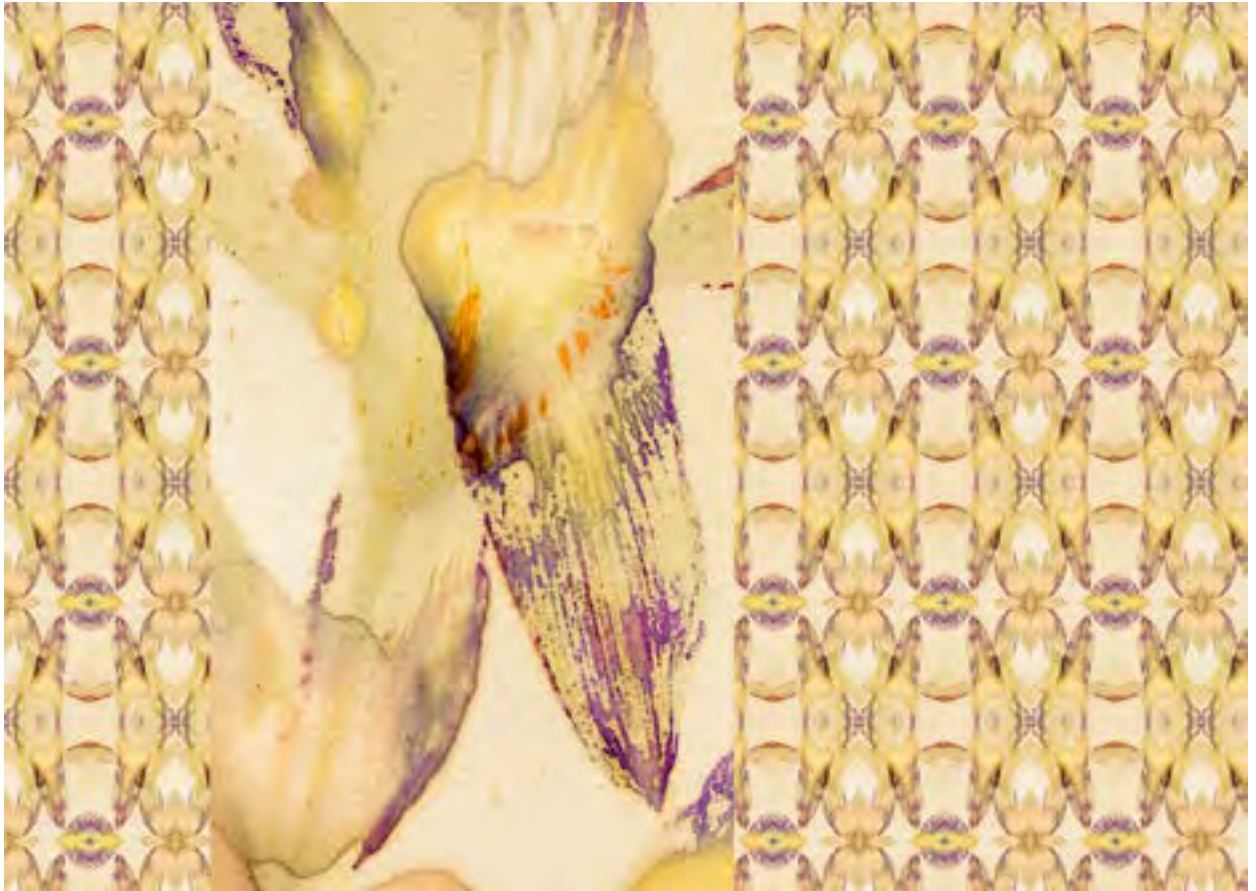
**Mangetout**  
*Pisum sativum*

Part used: Fruit/pods.  
Rating: ★★  
Exposed for 3 weeks. Good results - very subtle green color. Printed on Fabriano 5 or Arches Aquarelle paper.  
"Untitled" Nicky Thompson, 2011



## Lily, ditch lily

### *Hemerocallis fulva*



Parts used: Petals. Rating: 🌸🌸🌸

Fresh petals were diluted with acetic acid, crushed in the blender, then strained. Rives BFK paper was coated, dried and exposed with a whole fresh flower in the contact printer 2 weeks.

The image was then scanned and made into a pattern in Photoshop for this postcard.

"Ditch Lily" Marydorsey Wanless, 2010

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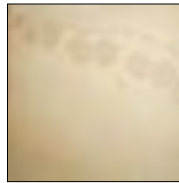
Plant rating: 🌸🌸🌸=Brilliant, every time   🌸🌸=Good   🌸=OK   ✖=Waste of time

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**Marigold, common  
*Tagetes patula***

Part used: Petals. Rating: ☼☼☼  
A vibrant gold was the result of crushing the petals in a mortar with a little water. Marigolds are reported not to be color stable, though, mine are still there after 4 years.  
"Tagetes" Malin Fabbri, 2008



**Nasturtium, orange  
*Tropaeolum majus***

Part used: Petals. Rating: ☼  
Exposed for 2-3 weeks. Very pale yellow orange. Printed on Fabriano 5 or Arches Aquarelle paper.  
"Untitled" Nicky Thompson, 2011



**Marigold  
*Tagetes patula***

Part used: Whole flower. Rating: ☼☼☼  
Whole flowers ground with pestle and added vinegar, then brushed on Arches 300g paper, dried and exposed in sunshine for 3 half-sunny days. Gives nice strong color, the vinegar improved and strengthened the color.  
"Untitled" Sarah Lycksten, 2011



**Nasturtium, red  
*Tropaeolum tricolor***

Part used: Petals. Rating: ☼  
The orange petals made a brown emulsion mixed with denatured alcohol in a mortar. The final print had a purple tint to it and was quite pleasant. The contrast was also good enough. Extracting emulsion with water did not make a nice print.  
"Färgkrasse" Malin Fabbri, 2011



**Meadow widow flower, blue buttons, field scabious  
*Knautia arvensis***

Part used: Petals. Rating: ✕  
A sepia toned color, but no print emerged after 10 weeks of exposure. Don't bother.  
"Lila åkervädd"  
Malin Fabbri, 2008



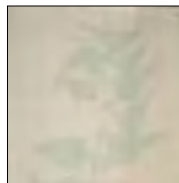
**Nettles, stinging nettles  
*Urtica dioica***

Part used: Leaves. Rating: ☼☼  
Picking requires gloves - but stings can be reduced using vinegar, and the final print is worth it. A nice green print was produced after 6 weeks exposure.  
"Toronto"  
Malin Fabbri, 2011



**Mountain cornflower  
*Centaurea montana***

Part used: Petals. Rating: ☼☼  
Mortar was used, the dry petals needed denatured alcohol. The juice was squeezed through a coffee filter. Three coats were applied (dried between coats) with a foam brush on Canson Drawing paper. Exposure time: 12 weeks in Finnish summer.  
"Lacock" Jalo Porkkala, 2010



**Nettles, stinging nettles  
*Urtica dioica***

Part used: Leaves. Rating: ☼☼  
Exposed for 3 weeks. Good results - very subtle green color. Printed on Fabriano 5 or Arches Aquarelle paper.  
"Untitled" Nicky Thompson, 2011





# Nettles, stinging nettles

*Urtica dioica*



Part used: Leaves. Rating: ☼☼

Picking requires gloves - but stings can be reduced using vinegar, and the final print is worth it. A nice green print was produced after 6 weeks exposure.

"Toronto", Malin Fabbri, 2011

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Plant rating: ☼☼☼=Brilliant, every time   ☼☼=Good   ☼=OK   ✕=Waste of time



# Onion, yellow

*Allium cepa*



Part used: The dried brown skins. Rating: 🌟🌟🌟

The brown skins were peeled off. 11 cups of skins and 8 cups of water simmered for 45 minutes - until the liquid turned rich orange/brown. The skins were removed from the water and let the liquid cool. The onion water was poured into a flat baking dish and the paper immersed in the liquid until it dyed to a rich orange color. It was printed on Epson Smooth Fine Art Paper. It took a long time to expose, 3-4 weeks in the sun. "Nahanni" Beverly Conway, 2011

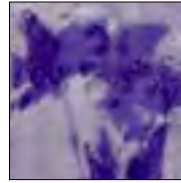
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Plant rating: 🌟🌟🌟=Brilliant, every time   🌟🌟=Good   🌟=OK   ✖=Waste of time



**Onion, yellow**  
*Allium cepa*

Part used: Skins. Rating: ☼☼☼  
11 cups of skin and 8 cups of water simmered for 45 minutes. The skins were removed and the liquid poured into a baking dish. Epson Smooth Fine Art Paper was immersed and dyed orange. Exposure was 3-4 weeks. "Nahanni" Beverly Conway, 2011



**Pansy**  
*Viola wittrockiana*

Part used: Petals. Rating: ☼☼☼☼  
A wonderful vibrant purple. Gorgeous! Definitely one of my favorites!  
"Panseer" Malin Fabbri, 2008



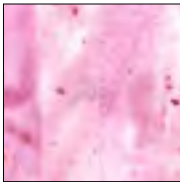
**Onion**  
*Allium cepa*

Part used: Skin. Rating: ☼☼☼  
Exposed for 4-6 weeks. Excellent results. Printed on Fabriano 5 or Arches Aquarelle paper. "Untitled" Nicky Thompson, 2011



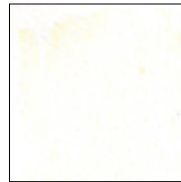
**Parsley**  
*Petroselinum crispum*

Part used: The leaves. Rating: ✕  
High hopes pinned on luminous green emulsion, turned to disappointment with hardly a print showing. "Persilja" Malin Fabbri, 2009



**Orange, blood**  
*Citrus sinensis*

Part used: The orange itself. Rating: ☼☼  
Juice from an orange, cut into wedges was rubbed onto the paper. Exposure time: 5 weeks in March until May in Stockholm. It was an organic orange and very nice tasting! "Blodapelsin" Malin Fabbri, 2008



**Pea**  
*Pisum sativum*

Part used: Frozen peas with peel and all. Rating: ✕  
Like British mushy peas? Well, this emulsion is it! It did not work though. Perhaps fresh peas, using just the peel will work? "Ärtor" Malin Fabbri, 2009



**Orchid, cultivated, pink**  
*Phalaenopsis lindenii*

Part used: Petals. Rating: ☼  
Mixed with a few drops of denatured alcohol in a mortar. Coated three times. The print was quite faint, but with a pleasant pink/magenta tone. Perhaps several more coats will work better. Extracting with water will make a too weak print. "Orchid" Malin Fabbri, 2011



**Peony, Chinese**  
*Paeonia lactiflora*

Part used: Petals. Rating: ☼☼  
Three coats produced a delicate pink. The plant has potential, with either reducing the emulsion or using several more coats. "Luktpeon" Malin Fabbri, 2008



# Pansy

## *Viola wittrockiana*



Part used: The purple colored petals only. Rating: 🌸🌸🌸

This emulsion was vibrant, a really beautiful purplish blue, both when coating the paper and after exposure.  
One of my favourite plants for anthotyping!

"Panseer" Malin Fabbri, 2011

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Plant rating: 🌸🌸🌸=Brilliant, every time   🌸🌸=Good   🌸=OK   ✖=Waste of time



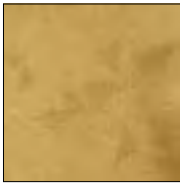
**Pepper, chili**  
***Capsicum annuum***

Part used: Powder from the jar.  
Rating: ☼☼  
Mixed with water. Quite thin emulsion. Strained and then coated a few times. The print turned out in a very nice golden brown.  
"Chilli" Malin Fabbri, 2009



**Petunia**  
***Photinia integrifolia***

Part used: Flowers and petals.  
Rating: ☼☼  
100% washed cotton fabric was used. Flowers and petals were ground with pestle with a small amount of vinegar added. It was mixed and brushed onto fabric and dried in dark. Exposed in the sun for 3 days.  
"Flower" Sarah Lycksten, 2011



**Pepper, chili**  
***Capsicum annuum***

Part used: Powder from the jar.  
Rating: ✖  
Mixed with water and boiled for a few minutes. Emulsion thicker than when mixed cold. Strained and then coated a few times. The color was not as nice as when mixed cold, quite murky print.  
"Chilli" Malin Fabbri, 2011



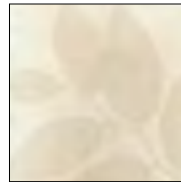
**Phlox, wild blue phlox, woodland phlox or wild sweet william**  
***Phlox divaricata***

Part used: Petals. Rating: ☼  
A boring low contrast print of a mushy color. Not worth the hassle.  
"Flox" Malin Fabbri, 2008



**Pepper, sweet**  
***Capsicum annuum***

Part used: Powder from the jar.  
Rating: ✖  
Very thin emulsion. Don't bother. Tried both straining in cheese-cloth and using a sieve. None of it worked.  
"Paprika" Malin Fabbri, 2009



**Phlox**  
***Jamesbrittenia grandiflora***

Part used: Petals. Rating: ☼☼  
5-10ml distilled water / 25 grams of petals. Removed stems and crushed in a mortar. Exposed 32 hours full sunlight. Paper: Bienenfang 100g water-color paper. Not very powerful emulsion - try extended exposure time and less water.  
"Untitled 1" Martin Reis, 2009



**Petunia**  
***Petunia hybrida***

Part used: Petals. Rating: ☼☼  
A few coats made the emulsion strong enough. Though, the color could have been nicer.  
"Hängpetunia / Million bells"  
Malin Fabbri, 2008



**Pokeberries**  
***Phytolacca americana***

Part used: Berries. Rating: ☼☼  
I would give Pokeberries higher marks but they ripen in the early fall, when light is starting to become a precious commodity for outdoor printing, with several weeks exposure needed.  
"PJ Antho"  
Francis Schanberger, 2011





**Pokeberries**  
***Phytolacca americana***

Part used: Berries. Rating: ☼☼  
Ripe pokeberries were mashed and squeezed in cheesecloth. Some isopropyl alcohol was added and the emulsion brushed onto the back of an alum-tawed pigskin glove. Exposed in soft contact frame for about a week. "Untitled"

Sarah Van Keuren, 2010



**Poppy, corn**  
***Papaver rhoeas***

Part used: Petals. Rating: ☼☼☼  
Emulsion made from the petals makes a wonderful contrasty print almost every attempt, in a relatively short time - only a few days.

"Vallmo" Malin Fabbri, 2008

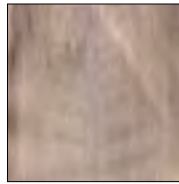
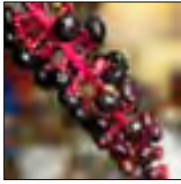


**Pokeberry, pokeweed**  
***Phytolacca americana***

Part used: Berries. Rating: ☼☼☼  
Ripe berries ground in mortar & pestle, with just enough alcohol to thin the emulsion for coating. Thin papers with a smooth surface, like Cranes Crest Wove, work best. A decent print can be done in a week.

"Baby Dress (Pokeberry)"

Dan Estabrook, 1999



**Poppy, corn**  
***Papaver rhoeas***

Part used: The whole head. Rating: ☼  
Emulsion made from the whole heads is very different to just using the petals. The print is of a dark brown mushy color of low contrast. Stick to using the petals only.

"Vallmo" Malin Fabbri, 2008



**Pokeberries**  
***Phytolacca americana***

Part used: Petals. Rating: ☼☼☼  
Chopped in blender, splash of denatured alcohol, squeezed through cheesecloth. Juice brushed onto Arches Platine paper. Exposed lith positive to coated paper for approximately 5 days.

"Observer" Scott McMahon, 2010



**Poppy**  
***Papaver rhoeas***

Part used: Petals. Rating: ☼☼  
Whole petals in 96% alcohol for three days; sieved; water-color paper three times coated. Exposed for 19 cloudy days.

"Lady Flora" Ko Oosterwijk, 2011



**Poppy, red**  
***Papaver rhoeas***

Part used: Petals. Rating: ☼☼☼  
Exposure time: 3 weeks. Subtle pink color - from red petals.

"Untitled" Nicky Thompson, 2011



**Potato**  
***Solanum***

Part used: Petals. Rating: ☼☼☼  
3 coats from emulsion made from the petals of the flowers from the potato plant produced a lovely gold and brown toned print. Beauty!

"Asterix" Malin Fabbri, 2008





# Pokeberries

## *Phytolacca americana*



Part used: The berries. Rating: ❁❁❁

Printed using plexiglas against the paper held to a large sheet of cardboard with spring clamps and exposed for several weeks. During one of the exposure days, while Francis was in another city, he watched the pouring rain from a window. Water got into the piece he had left outside to expose which created the different types of "drip" marks. Sharp drips are from the water directly on the paper. Broad drips are water on the pajama coming in contact with the coated anthotype. "PJ Antho" Francis Schanberger, 2011

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Plant rating: ❁❁❁=Brilliant, every time   ❁❁=Good   ❁=OK   ✕=Waste of time

## Raspberry, blackberry and blueberry

*Rubus idaeus, Rubus villosus, Vaccinium corymbosum*



Top left: "Raspberry Ferris Wheel" Carol Golemboski, 2007

Top right: "Blackberry Zodiac" Carol Golemboski, 2007

Bottom left: "Blackberry Bird Cage" Carol Golemboski, 2008

Bottom right: "Blueberry Tightrope" Carol Golemboski, 2007

Plant rating: ☼☼☼=Brilliant, every time   ☼☼=Good   ☼=OK   ✕=Waste of time



**Raspberry**  
***Rubus idaeus***

Part used: Fruit. Rating: ☼☼☼  
Excellent results using fresh and frozen berries. Pureed in a blender with denatured alcohol and strained through cheese-cloth and sieve. Two coats were applied. Raspberries have a fast "ISO" of only a week.  
"Raspberry Ferris Wheel"  
Carol Golemboski, 2007



**Redcurrant**  
***Ribes rubrum***

Part used: The berries. Rating: ☼☼☼  
A very nice vibrant pink print was made from crushing red currants undiluted in a mortar. Does make a nice jelly too!  
"Röda vinbär" Malin Fabbri, 2008



**Raspberry**  
***Rubus idaeus***

Part used: Berries. Rating: ☼☼☼  
Exposed for 4-6 weeks. Excellent results. Printed on Fabriano 5 or Arches Aquarelle paper.  
"Untitled" Nicky Thompson, 2011



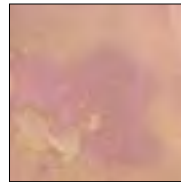
**Rhododendron, common**  
***Rhododendron ponticum***

Part used: Petals. Rating: ☼  
The emulsion produced a very odd colored print. Purple and brownish. Works, but the colors could be a little nicer.  
"Rhododendron"  
Malin Fabbri, 2008



**Raspberry**  
***Rubus idaeus***

Part used: Frozen berries. Rating: ✘  
Seems to oxidize, turning a little brown. The print also had very low contrast and failed to change color over 7 months. Try using fresh berries.  
"Hallon" Malin Fabbri, 2009



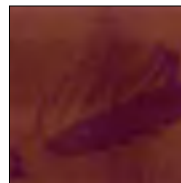
**Rose, provence rose or cabbage rose or rose de mai**  
***Rosa centifolia***

Part used: Petals. Rating: ☼  
A strange color combination in this print, purple and sepia. Perhaps another type of rose will yield a better, stronger color.  
"Röda rosor" Malin Fabbri, 2008



**Raspberry jam**  
***Rubus idaeus***

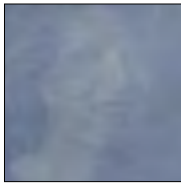
Part used: Jam from a jar. Rating: ☼  
Interesting mix of pink and brown in the final print, though the print never dried. After a year it is still sticky and sticks to glass, my scanner and everything else in its way.  
"Hallonsylt" Malin Fabbri, 2009



**Rose, red**  
***Rosa centifolia***

Part used: Petals. Rating: ☼  
The petals had started to mildew when blended - not sure if this added to anything. Adding a little water. Exposure: 5 days (underexposed?) on Artist's Loft water color paper. Did positive have enough contrast? The roses created a nice color.  
"Leaf" Nicole Lawrence, 2011





**Satinflower**  
***Lunaria annua***

Part used: Petals. Rating: ☼☼  
Whole petals in 96% alcohol for three days; sieved; coated watercolor paper two times; 30 mostly sunny days. Transparent positive printed from digital photo. Very nice color but low in contrast.  
"Hanneke" Ko Oosterwijk, 2011



**Snapdragon**  
***Linaria vulgaris***

Part used: Petals. Rating: ☼☼  
Petals crushed with distilled water. Exposed 60 hours. Very beautiful gold color. Print is a bit faint though very subtle and pretty. The yellow gold is lovely. Longer exposure and less water may produce stronger image.  
"Experiment #3"  
Martin Reis, 2009



**Scilla**  
***Scilla hyacinthoides***

Part used: Petals. Rating: ☼☼  
Petals diluted with a few drops of tap water gave a very delicate print of a shade of blue with a sepia color. Perhaps several coats will produce a stronger print?  
"Scilla" Malin Fabbri, 2008



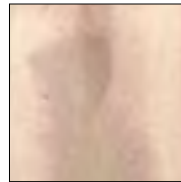
**Soy sauce**  
**The bean= *Glycine max***

Part used: Liquid from the bottle. Rating: ☼☼  
The sauce was very sticky and would not dry. Stuck to the contact frame. Showed up details in an interesting way, and a vibrant golden brown color.  
"Sojasås" Malin Fabbri, 2009



**Sedum**  
***Hylotelephium telephium***

Part used: Petals. Rating: ✖  
Very thin emulsion. Boring color. Low contrast.  
"Kärleksört" Malin Fabbri, 2009



**Spider plant**  
***Chlorophytum comosum***

Part used: Leaves. Rating: ✖  
Had no hopes for this one, just some space left in a contact frame, so it got thrown in. Don't bother.  
"Ampellilja" Malin Fabbri, 2009



**Sedum**  
***Hylotelephium telephium***

Part used: Leaves. Rating: ✖  
Very thin emulsion. Don't waste your time on this one, did not produce a print.  
"Kärleksört" Malin Fabbri, 2011



**Spinach**  
***Spinacia oleracea***

Part used: Leaves. Rating: ☼☼  
Exposure varies depending on location and season. Perhaps it lacks a bit of contrast. No mortar, or sizing used. Roemerturm Aquarell 250gsm paper. Positive used is an inkjet print on transparency.  
"Pentland fences"  
Rosemary Horn, 2009





## Spirulina

### *Spirulina maxima*



Part used: Powder. Rating: ✿✿

Due to the presence of blue phycocyanin pigment and green chlorophyll, it is light sensitive and possible to obtain interesting prints. Add water to powder, mix and then cover a cotton paper. Expose about 30 hours under summer sun.

"Calle" Fabio Pasquarella, 2011

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Plant rating: ✿✿✿=Brilliant, every time   ✿✿=Good   ✿=OK   ✕=Waste of time

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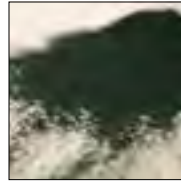
**Spinach, frozen**  
***Spinacia oleracea***

Part used: Leaves from frozen spinach. Rating: ✘  
From reports of others I expected the emulsion to be denser. I assume using fresh spinach will work better. Frozen did not work at all.  
"Spenat" Malin Fabbri, 2009



**Spirulina**  
***Arthrospira platensis***  
***/maxima***

Part used: Dried seaweed powder. Rating: ✘  
Difficult to paint onto paper. Good contrast, but no tones between dark and light, no details. Fabriano Magnani Pescia hot press. Inkjet positive.  
"Balcony garden"  
Rosemary Horn, 2009



**Spinach**  
***Spinacia oleracea***

Part used: Leaves. Rating: ☼☼☼  
Blended with water until right consistency. Less water gives stronger concentration. Exposure: 4 hrs on sunny day on Arches Platine. Bleaches extremely quickly, had to check every hour not to over expose.  
"Little People"  
Nicole Lawrence, 2011



**Strawberry**  
***Fragaria ananassa***

Part used: Fruit. Rating: ☼☼  
Frozen berries give a darker color than fresh. Pureed in a blender with denatured alcohol, strained and coated onto Arches 140 lb. paper in two coats. Despite being stored in the dark, the print faded.  
"Strawberry Pig"  
Carol Golemboski, 2007



**Spinach, week old emulsion**  
***Spinacia oleracea***

Part used: Leaves. Rating: ☼☼☼  
Blended with water. Less water gives a stronger concentration of color. Exposure: 6hrs (too long?) on Arches Platine (emulsion brushes on smoother). The emulsion darkened from its first use, but stilled exposed quickly.  
"See me" Nicole Lawrence, 2011



**Strawberry**  
***Fragaria ananassa***

Part used: The whole berries. Rating: ☼☼  
The berries were crushed undiluted in a mortar and made a nice pink print, though of a very low contrast. Reducing the liquid by boiling before coating will perhaps work better.  
"Jordgubbar" Malin Fabbri, 2008



**Spirulina**  
***Spirulina maxima***

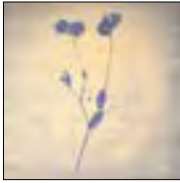
Part used: Powder. Rating: ☼☼  
Due to the presence of blue phycocyanin pigment and green chlorophyll, it is light sensitive and possible to obtain interesting prints. Add water to powder, mix and then cover a cotton paper. Expose about 30 hours under summer sun.  
"Calle" Fabio Pasquarella, 2011



**Strawberry, woodland**  
***Fragaria vesca***

Part used: Leaves. Rating: ✘  
The whole leaves were mixed in the blender, but failed to produce a liquid strong enough for a print. Even several coats left the print colorless.  
"Smultron" Malin Fabbri, 2011





**Sweetpea**  
***Lathyrus odoratus***

Part used: Petals. Rating: ★★★  
Exposure time: 3 weeks. Vivid purple and sometimes blue color - from dark crimson and purple flowers.

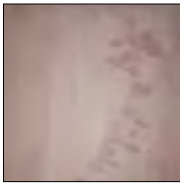
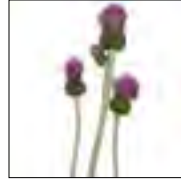
"Untitled" Nicky Thompson, 2011



**Thistle**  
***Cynarae heterophyllum***

Part used: Petals. Rating: ✘  
Not much of a print from this weed. Leave it by the wayside.

"Brudborste tistel"  
Malin Fabbri, 2008



**Tayberry**  
***Rubus X***

Part used: Berries. Rating: ★★★  
Exposed for 4-6 weeks. Excellent results. Printed on Fabriano 5 or Arches Aquarelle paper.

"Untitled" Nicky Thompson, 2011



**Tomato puree**  
***Solanum lycopersicum***

Part used: The puree. Rating: ★  
The puree produced a yellow print of far too low contrast to be of any interest.

"Tomato puree"  
Malin Fabbri, 2008

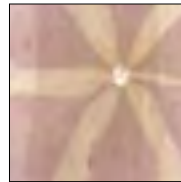


**Tea**  
***Camellia assamica***

Part used: Brewed tea. Rating: ★★

Making extremely strong tea, brewing it for several hours and coating three times made a brown print. Perhaps several more coats are needed. Worth experimenting further.

"Assam tea" Malin Fabbri, 2008



**Tulip, red**  
***Tulipa liliaceae***

Part used: Petals. Rating: ★★★

Red tulips petals were easy to use, once a little liquid was added to the mix. The paper was coated three times to strengthen the color. Although tulips smell very nice, in concentrated form the mixture smelled vile!

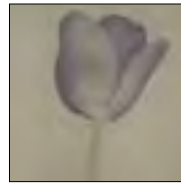
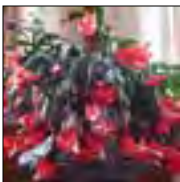
"Tulpan" Malin Fabbri, 2008



**Thanksgiving cactus**  
***Schlumbergera truncata***

Part used: Petals. Rating: ✘  
Emulsion slimy but interesting pink. The print turned completely white, both exposed and non exposed areas!

"Novemberkaktus"  
Malin Fabbri, 2009



**Tulip, red**  
***Tulipa liliaceae***

Part used: Petals. Rating: ★★★

Exposure time: 3 weeks. Subtle purple color.

"Untitled" Nicky Thompson, 2011



# Tulip, red

*Tulipa liliaceae*



Part used: Petals. Rating: ⚡⚡⚡

Exposure time: 3 weeks. Subtle purple color.

"Untitled" Nicky Thompson, 2011

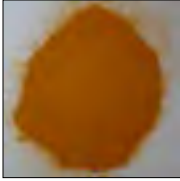
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Plant rating: ⚡⚡⚡=Brilliant, every time   ⚡⚡=Good   ⚡=OK   ✖=Waste of time



**Turmeric**  
***Curcuma longa***

Part used: Powder. Rating: ☼☼  
I boiled powder with water to extract the pigment. Emulsion has the same nice yellow color as the sun, but it really stinks! It also stains every surface it comes into contact with. A little too low contrast.  
"Gurkmeja" Malin Fabbri, 2011



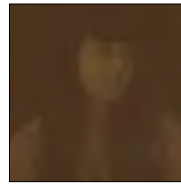
**Vinegar, red wine**

Part used: Liquid from the bottle.  
Rating: ✕  
Very weak emulsion. Too weak to produce a print.  
"Rödvinsvinäger"  
Malin Fabbri, 2009



**Turkish wartycabbage,**  
**Turkish rocket**  
***Bunias orientalis***

Part used: Petals. Rating: ☼  
Quite tricky to separate the small petals from the plant. The result was pleasing enough in color but not in contrast. Leave this weed be.  
"Ryssgubbar" Malin Fabbri, 2010



**Walnut, eastern black**  
***Juglans nigra***

Part used: The hulls.  
Rating: ☼☼☼  
16 hulls were boiled in several cups of water until the water turned dark. Moab Entrade 100% rag paper was soaked in the cooled "dye" until the paper was dark. Exposure 4 weeks.  
"Carrie"  
Beverly Conway, 2011



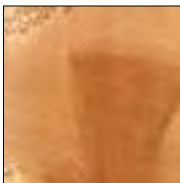
**Vanilla extract**

Used: Trader Joe's Pure Vanilla Flavoring (Alcohol Free).  
Rating: ☼☼  
Number of coats: 1, on Water-color paper. The paper was submerged in vanilla extract. The paper dried, and set under plexiglas with an overhead transfer sheet on top.  
"Anthotype"  
Katherine M. Hill, 2011



**Weigela**  
***Weigela rosea***

Part used: Flower. Rating: ☼☼  
Only the flowers were used, stamped in a mortar with 98% alcohol. The fluid brushed on Fabriano Artistico 300 gr. paper three times. After drying the exposure time with a transparent positive was 3 days in full sun.  
"Weigela" Hans de Bruijn, 2010



**Vinegar, balsamic**

Part used: Liquid from the bottle.  
Rating: ☼☼  
Nice strong brown-black emulsion. Pleasant golden brown color in the print.  
"Balsamvinäger"  
Malin Fabbri, 2009



**Wine, red**  
***Montepulciano D'Abruzzo***

Part used: Wine. Rating: ☼☼☼  
Three coats gave a nice purple color after a week. The photogram was made sandwiching cut out wine glasses, sheets of glass and string so the print appeared out of focus.  
"Wine on the line"  
Malin Fabbri, 2007





# The anthotype artists



Portrait by  
Amy Colombo

## Nancy Breslin

Nancy was raised in New Jersey, USA and, after spending a decade as an academic psychiatrist, went back to school for an MFA in photography. She now teaches part-time at the University of Delaware and works mostly with

pinhole or plastic cameras.



## Hans de Bruijn

Hans was born in Amsterdam in 1945 and now lives in Gouda where he works as an IT manager.

After graduating from the Fotovakschool in The Hague in 1964 he stopped working with photography, though he still collected historic photographic literature. Reading about gum printing and other historic photographic processes made him take up gum printing and anthotypes again, and he now works with gum prints in up to six layers of pigment - trying to retain a realistic color.



## Beverly Conway

Beverly has been working with alternative photographic processes for many years, anthotype, collodion, palladium, albumen, and cyanotype.

One project has been to create a series of anthotype portraits of young

adult women. In addition to her own artistic expression, she also enjoys passing on her knowledge and skills. Beverly received her MFA in Visual Arts from the Art Institute of Boston at Lesley University and is a full-time faculty member in the New Hampshire Institute of Arts Photography Department.

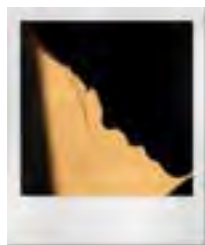


Portrait by  
Margret Hall

## Dan Estabrook

For over twenty years Dan has been making contemporary art using a variety of 19th-century photographic techniques.

He balances his interests in photography with forays into sculpture, painting, drawing and design. Dan has exhibited widely and received several awards, including an Artist's Fellowship from the National Endowment of the Arts in 1994. He is also the subject of a recent documentary by Anthropy Arts. Dan lives and works in Brooklyn, New York.



## Malin Fabbri

Originally from Stockholm, Sweden, Malin discovered her love of anthotypes when exploring ways to tone cyanotypes. She started researching the process and

was captivated by the many rich color combinations that could be achieved with the plants. Malin is also the editor of [Alternative-Photography.com](http://Alternative-Photography.com) - researching and exploring other alternative photographic processes.



## Carol Goleboski

Carol received an MA in Art from the University of Wisconsin-Madison and an MFA in Photography from Virginia Commonwealth University. Her anthotypes, made of pigments of pureed berries, conjure a carnival atmosphere. She has been the recipient of numerous grants and her work has been exhibited widely in the United States and published in notable photographic journals. Carol is an Associate Professor of Photography at the University of Colorado Denver. She lives in Lakewood, Colorado with her husband and two children.

## Silvino González

Silvino is a Colombian photographer and designer. His work explores pathways between traditional cultural roots and a global worldwide vision. Describing himself as a bipolar person, he is looking at his own place in an over populated world full of communication, where people are stuck in meaningless work and lack dreams beyond money or fame. Silvino was awakened to his interest in alternative photographic technique after taking classes taught by Colombian artist Omaira Abadia, who he credits with giving him both skill and courage.



## Jake Groenhof

From Golden, Colorado, USA, Jake returned to photography after nearly two decades. Jake found himself wanting more than just instant preview screens and push-button prints. He began reading the history

of photography and took to the hands-on approach of carbon transfer and (polymer) photogravure processes. Jake read about Herschel's anthotype experiments and was inspired to try his hands at the "process which has no fix."



## Katherine M. Hill

Katherine is a 2008 Towson University graduate with a bachelor of science in journalism/new media and a bachelor of science in art/photography. She loves analogue and alternative processes. Katherine might buy a digital camera before the end of 2012. She continues to create work in beautiful Crown Heights, Brooklyn where she works as an editor.



## Rosemary Horn

Rosemary, from New Zealand, studied design and took photography as her major. Concerned about the environment and inspired by nature she started experimenting with photosynthesis and anthotypes and completed a research project to address concerns for the environment through the photographic medium. After her

studies Rosemary and her husband have biked 12000 km through New Zealand, Great Britain and Europe - quite often with a anothotype frame tied to the bike, being exposed.



### **Katja Krajnc**

Katja was born in Ptuj, Slovenia in 1978. She is a photographer, ethnologist and cultural anthropologist.



### **Nicole Lawrence**

Nicole resides in Maumelle, Arkansas, USA. She has been photographing since college. Her interest in

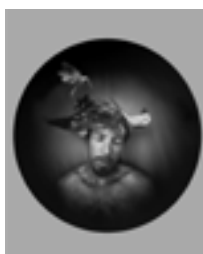
alternative processes blossomed when she started taking classes at her local art center. Nicole was introduced to the anothotype process after reading through *The Book of Alternative Photographic Processes* by Christopher James. With the local art center closing its darkroom she was looking for ways to create images without an enlarger.



### **Sarah Lycksten**

Sarah started out doing children's portraits in her living room, moving on to teaching beginners' classes and alternative photography at a college. She now runs workshops from her own

studio in Gothenburg and at Hönö - a small island in the northern archipelago, Sweden. All her work is exclusively analogue.



### **Scott McMahon**

Scott received his MFA in photography from Massachusetts College of Art in Boston, MA and his BFA in Photography from The University of the Arts in

Philadelphia, PA. His work has been published in *Pinhole Photography, Rediscovering a Historic Technique* by Eric Renner, and *The Book of Alternative Photographic Processes* by Christopher James. Scott works primarily with historic photographic techniques and is currently working on a series that incorporates video projections, machines, found objects, photographs and sound.



### **Ko Oosterwijk**

Ko finds anothotypes one of the rare alternative - and lesser known - techniques that he experiments with when not working to earn the daily bread

for his "favourite model" and himself. Ko owns a company that provides consultancy and interim-management for not-for-profit, especially cultural organizations.



### **Fabio Pasquarella**

Fabio is an Italian artisan and poet living in Rome, though he was born in Zurich. He works mainly in

alternative photography such as the anothotype and Mike Ware's (new) cyanotype. He uses handmade 4x5" pinhole cameras as well as digital cameras. He loves Zen and Japanese art, paints with Sumi ink and writes in haiku style.



## Jalo Porkkala

Jalo studied photography in Finland where he lives and works. He has worked on photographic projects in photojournalism, in museum and theater photography as a freelancer, and has also taught photography. As a museum photographer, Jalo became interested in historical and alternative photographic printing processes, which he is now also researching and teaching.



## Nicky Thompson MA

Nicky lives on Dartmoor, Devon U.K. and works as an artist. The surroundings are a source of inspiration and an important part of her work. Nicky's practice involves exploring alternative photography techniques and expressing her ideas of biography, life cycles and transformation, with the focus around the allotment, gardening and the act of growing vegetables.



## Martin Helmut Reis

Born in Kassel, Germany, Martin is a visual artist and independent photo journalist in Toronto. His artwork has been featured on the CBC, in Canadian, US & UK film festivals and his photography is published regularly. Exhibitions include the Canadian Centre for Architecture and the Brighton Media Centre, UK. He has been working with alternative processes since 1999.



## Sarah Van Keuren

Sarah majored in art history at Swarthmore College, studied printmaking at the Philadelphia College of Art, and has an MFA in Photography from the University of Delaware. Since 1980 she has taught non-silver printmaking processes and is now an adjunct professor. She is author of *A Non-Silver Manual*. Schmidt-Dean Gallery in Philadelphia represents her work.




## Francis Schanberger

In fourth grade Francis presented a homemade, long focal length pinhole camera as his science project. In the mid 1990's working as a laboratory assistant at the University of California, San Diego, he would make cyanotype photograms of labware after hours. Moving to the Midwest he began teaching photography. He lives in Dayton where he takes photographs and teaches at the university.



## Marydorsey Wanless

Marydorsey lives in Topeka, Kansas, where she is an Assistant Professor of Photography in the Art Department at Washburn University in Topeka. She teaches b&w darkroom photography, alternative processes, and digital photography. Her work combines personal experiences with alternative photographic processes. She has exhibited widely. 

# Further reading

With a thorough search, you will find some books containing chapters on anothotypes. Most titles are unfortunately out of print, but you may be able to get hold of these on Powells.com or Amazon - it's definitely worth trying!

## **The Book of Alternative Photographic Processes**

Christopher James (2009) Thomson Delmar Learning.

The history, materials, techniques for many alternative photographic process and a chapter on anothotypes.

## **History and Practice of the Art of Photography**

Henry Hunt Snelling (2006) Hard Press  
Reprint of the book from 1849.

Free on the internet: [www.worldwideschool.org/library/books/tech/photography/History-andPracticeoftheArtofPhotography/toc.html](http://www.worldwideschool.org/library/books/tech/photography/History-andPracticeoftheArtofPhotography/toc.html)

With a good dose of humor and disrespect for the British, this American found the need to educate young Daguerrotypists in the "production of pictures". Describing state-of-the-art photography at a time when photographs on a plate were slowly being taken over by photographs on paper. Interesting facts on anothotypes.

## **Nature's palette, the science of plant color**

David Lee (2007) University of Chicago Press  
Not a word about anothotypes in this book, but good for anyone wishing to understand the science and culture of plant color.

## **On the Action of the Rays of the Solar Spectrum on Vegetable Colours, and on some new Photographic Processes**

Sir John Herschel (1842) The Philosophical Transactions of the Royal Society, vol. 133, pp. 181-215.

Herschel mentioned anothotypes elsewhere, but this paper describes the anothotype experiments over 21 pages. If you want to experiment further, read this paper.


## **Photogenic Manipulation - Containing the Theory and Plain Instructions in the Art of Photography (The Literature of photography)**

Robert J. Bingham (1973) Arno Press, reprint of the 1852 edition. Out of print.

Description of the anothotype process over two pages.

## **Researches on Light: An Examination of All the Phenomena Connected with the Chemical and Molecular Changes Produced by the Influence of the Solar Rays : Embracing All the Known Photographic Processes and New Discoveries in the Art**

Robert Hunt (1844) Longman, Brown, Green, and Longmans

The rare original is from New York Public Library, and can be found in bookstores for a lot of money. The online version can be read for free on Google books. This oldie has a chapter on anothotypes, and the information still holds up. 



## Internet resources

### **AlternativePhotography.com**

A resource for all alternative processes.  
Includes technical information on anthotypes,  
artists' galleries and a free newsletter.  
[www.AlternativePhotography.com](http://www.AlternativePhotography.com)

### **Dan Burkholder's website**

Information on digital negatives and Photoshop  
tutorials for sale.  
[www.danburkholder.com](http://www.danburkholder.com)

### **Precision Digital Negatives**

Mark Nelson's invention of a system for making  
digital negatives - for sale on the site.  
[www.precisiondigitalnegatives.com](http://www.precisiondigitalnegatives.com)

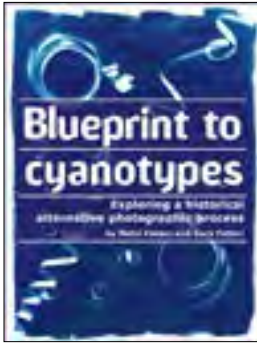
### **The-alt-photo-process mailing list:**

This mailing list - usually referred to as "the  
list" is brilliant for sharing information and has  
been going for years.  
[http://lists.altphotolist.org/mailman/listinfo/  
alt-photo-process-list](http://lists.altphotolist.org/mailman/listinfo/alt-photo-process-list)

***"It is not possible to conceive a  
more perfect or more beautiful  
system of harmonious  
arrangement than this. If the  
vegetable world was swept  
away, animal life would soon  
become extinct; and if all  
animal existence was brought  
to a close, the forest would  
fall, and the flowers of the  
field, which now clothe the  
earth with gladness, perish in  
the utterness of a lamentable  
decay"***

- Quoting Mr. Hunt, in the journal from  
1849-1850 called *The chemist; a monthly  
journal of chemical philosophy, and of  
chemistry applied to the arts, manufactures,  
agriculture, and medicine, and record of  
pharmacy* edited by John and Charles Watt,  
Volume I, new series, published in London by  
W. and T. Piper

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## Blueprint to cyanotypes

All you need to get started with cyanotypes. It offers the beginner a step-by-step guide, from choosing material to making the final print. It is full of information and tips. Even the experienced cyanotypist may learn a thing or two.

- Paperback, 68 pages, full color and eBook

More info: [www.alternativephotography.com/blueprint-to-cyanotypes/](http://www.alternativephotography.com/blueprint-to-cyanotypes/)



## Alternative Photography: Art & Artists, Ed. I

Highlights the work of over 100 of today's most active photographers working with alternative processes. Discover how the different processes create a unique look in a print, and get an insight into how the processes function. The images are great inspiration. And, the purpose of this book? To inspire.

- Paperback and hardback, 238 pages, full color and eBook

More info: [www.alternativephotography.com/art-and-artists-edition-1/](http://www.alternativephotography.com/art-and-artists-edition-1/)

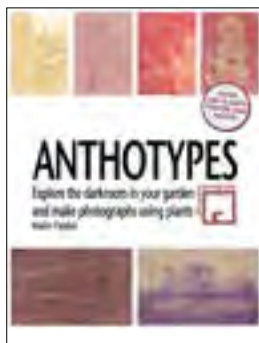


## From pinhole to print

Guiding you from drilling your first pinhole to printing your first pinhole photograph. An easy to read, step-by-step guide to making a pinhole camera and creating images. Today – when most cameras are brimming with digital functionality - many seek relief in the simplicity of a basic pinhole camera.

- Paperback, 44 pages, black & white and eBook

More info: [www.alternativephotography.com/from-pinhole-to-print/](http://www.alternativephotography.com/from-pinhole-to-print/)

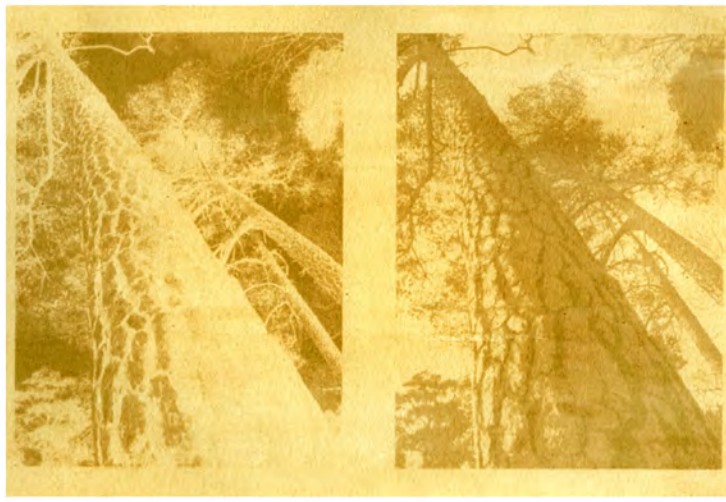


## Anthotypes

Anthotypes will make you look at plants in a whole new light. It will show you how to make photographs from the juice of flowers, fruits and plants, using a totally environmentally friendly photographic process.

- Paperback, 100 pages, full color and eBook

More info: [www.alternativephotography.com/anthotypes/](http://www.alternativephotography.com/anthotypes/)



It is possible to print photographs using nothing but juice extracted from the petals of flowers, the peel from fruits and pigments from plants. This book will show you how it is done, and expand your creative horizons with plenty of examples from artists working with anthotypes today. Anthotypes will simply make you look at plants in a whole new light. And, if that is not enough, anthotype is a totally environmentally friendly photographic process.

*“Anthotypes show us just how much early photography is a kind of natural magic. Malin Fabbri's book is a real gift – a much-needed manual on this beautiful and almost-forgotten process.”*

- Dan Estabrook  
Artist and educator

*“The anthotype is a quaint and charming nexus from the very beginnings of photography and the fertile imaginations of artist - scientists such as Herschel, Hunt, and Somerville. It is perfect in it's simplicity, requiring only the petals of new flowers, the essences of fruits and vegetables, a little alcohol, and sunshine... all of the perfect ingredients required for a romantic vacation. Malin Fabbri has collected an abundance of anthotype information and constructed a modest and lovely book that expresses not only the beauty of the process but also her genuine affection for the organic clarity of the materials.”*

- Christopher James  
Director MFA in Photography  
at The Art Institute of Boston



## Historical photographic methods in use today

- Techniques and processes
- Photographers' gallery
- Articles and forums
- Specialist literature

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