My Cyanotype Story

My adventure started a year ago when I wasn't able to find the rhythm of wheelchair-photography and a timely remark by Rachel Wright, a photography friend, led me into the world of cyanotype printing. I knew of it, though nothing more, but I was minded that another photo-friend, Morag Patterson, also works with unconventional techniques (anthotypes and chromatograms). And so, inspired by them both, I ventured into the alternative world of camera-less photography techniques.

I'd read that cyanotype printing was a suitable activity for children's birthday parties so I was certain that it would be child's-play. But perhaps that was my downfall – I rushed at it. I got a piece of the pre-purchased cyanotype paper out of the packet, laid it flat on a piece of cardboard, cut a grass and placed it on top (in practice it wasn't a very good or distinctive subject) and then hurried out into the garden to place it all in the Yorkshire sunlight for the 'few minutes' that the instructions mentioned.

My first attempts

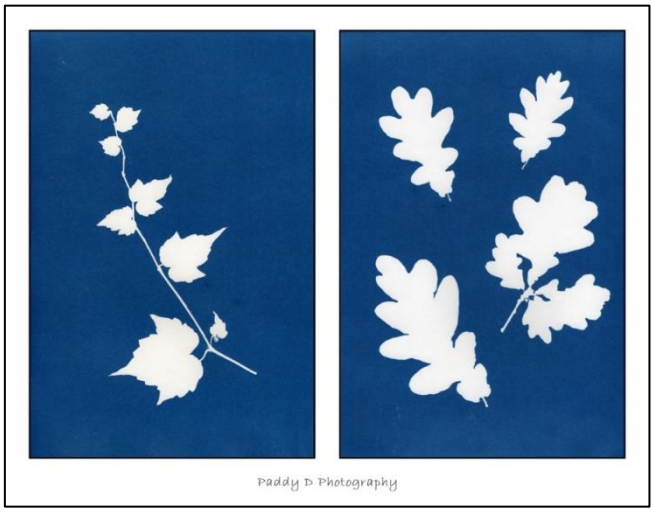
And the outcome? Well, not what I was expecting, that's for sure. Instead of a rich, blue, compelling cyanotype print, I produced that pale, indistinct, life-less one (on the left) even after leaving it in the sun for 15 minutes. Another attempt, the darker, more distinctive one (on the right) better fitted my expectations – after all, cyanotypes are sometimes called blueprints – but that was sitting in the sun for over 3 hours, not for those 'few minutes' I'd read about.

I describe the process and the 'kit' more fully, later in this piece.

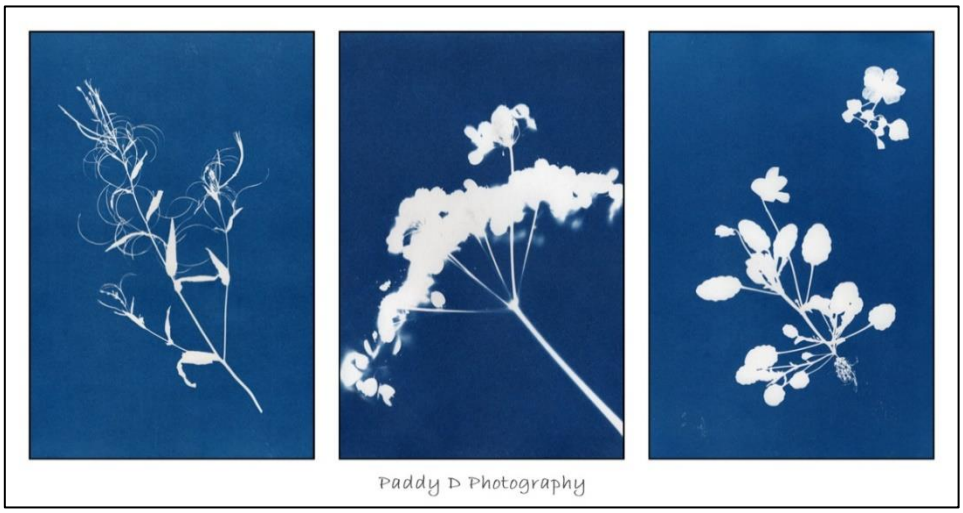
At that point I'd spent less than £20 (on pre-coated paper) and I could have abandoned the experiment, but the process intrigued and interested me – its combination of art, history and science; its tactile physicality – very different from camera work; and the knowledge that everything I produced would be unique. So I invested in an A4-sized UV lamp, got myself more organised and started again – with far better results.

There are two ways of preparing cyanotype paper. The first is to get someone else to do it for you i.e. buy it pre-coated (so it's already covered from corner to corner with light-sensitive solution and 'good-to-go') and the other is to self-coat it i.e. to buy the paper and the solution separately, and apply the latter yourself with a brush (it comes in two bottles that you mix together). However, I decided to stay with the pre-coated paper when I began to 'get organised' and came to make this choice. At the time, things were medically unsettled for me, so I wanted an element of certainty and control with cyanotype printing (at least at the start) – hoping that it would help me to build up my confidence.

Most of my specimen-subjects have come from nature, and I began with leaves – I reasoned that, being two dimensional, they'd deliver the best 'footprint' and be the most recognisable (oak leaves, Japanese maples, sycamores, ferns, ivy). Next, I tried flat-ish plants and grasses (herbs, crane's-bill, carrot-tops and willowherb) before venturing into the 3D world of seed-heads (common hogweed, smoke bush, sycamores).



Leaves with a very flat 'footprint'



More adventurous – plants and seedheads

Everyone who writes or talks about cyanotype printing cites the work of Anna Atkins in the 1840s. They tell you about her 3-volume book; that she created at least 17 copies of it, some volumes running to over 400 plates; that it's a companion to the 'Manual of British Algae', an unillustrated publication by William Harvey; and (most significantly, in this context) that it's entirely produced by the cyanotype process – every botanical illustration, every plate name for every specimen (in Latin), together with all her hand-written text!!

No one surpasses Anna Atkins in her creativity and artistry, and certainly not her dedication and diligence. But, in part, her rigour was well rewarded because the one key characteristic of the 'basic' cyanotype print – the type that she was making 175 years ago, and that I had started with – is that it's quite easy to do. It's easy to produce a pleasing print – easy to attain the 'gold-standard' that she set because, in practice, there is only one standard. It's more of a science than an art – if you do it 'correctly', you get the 'correct' outcome. Yes, a few of my initial attempts at the process should be labelled 'oops, that didn't work', but soon my prints became predictable, repeatable, consistent. They're beautiful; exquisitely delicate; richly blue. But, in truth, the basic cyanotype process is so 'well-behaved' that its predictability becomes, dare I say it, a bit boring.

So, at that point, like every other cyanotypist (is that a word?) I started to think of ways to make my prints more surprising – I don't mean shocking – I just mean unpredictable. More interesting, unique, unexpected. More creative, fun, playful, childlike. I wanted to find ways of starting the process with the idea, 'I wonder what will happen if I try …' – and be truly uncertain, full of wonder imagining the outcome. I wanted to stop hiding in the safe security of the basic process.

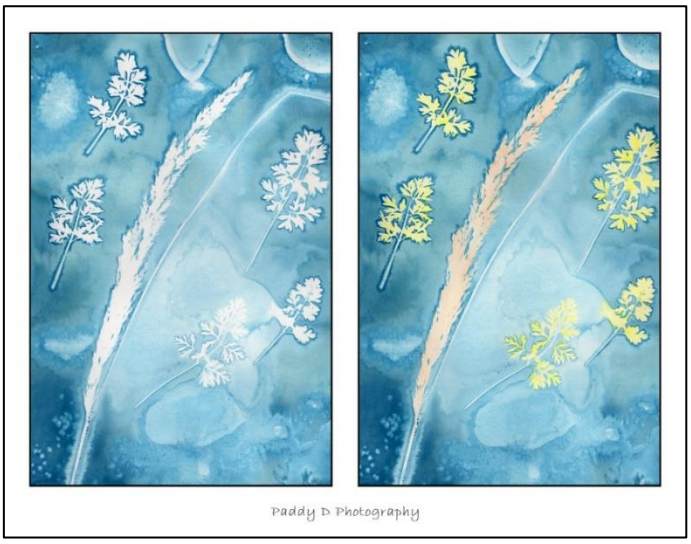
I wonder what will happen if I add/remove the carrot-tops during the process?

One of the words I could have added to my list describing those early cyanotypes (along with beautiful, exquisite etc.) is static – very static. Others would be solid, or sturdy, unbending, inflexible. So my first experiment (above) was to add and remove leaves during the printing process to see if that created a sense of movement. And although I can't say it did, it was enjoyable and interesting – and I felt encouraged to be more experimental.

So scientist-me created a diagram called ‘Making Sense of Alternative Photography’ – a diagram of options and possibilities. Just sampling it randomly it includes different ‘substrates’ – hand-made paper, old photos, old maps, cloth, eggshells; different finishes – gold-leaf, bleaching and tinting, toning; different processes – anthotypes, chromatograms and hapa zome (leaf-bashing). Not to mention hand-colouring; pre-treating options; free-hand calligraphy; digital negatives; double exposures; etc. And from the list I first chose ‘wet-spray pre-treatment’.

If you’re preparing your own paper, this can simply mean that you start making the print before the solution has dried. But more broadly, it means that you start with dry paper (pre-coated or self-coated) and you make it wet – by spraying it with water, or lemon juice, vinegar, bleach, for example – and, if you want to, sprinkling it with additives – such as salt or turmeric or soap. I won’t continue listing all the options I've read about – but you can guess that whatever you think of, someone on the internet has tried it.

In comparison to all those wild and wacky options, I started cautiously – I selected a piece of pre-coated paper, sprayed it with water and added a pinch of salt and drops of lemon juice. Then I put the ‘subjects’ in place (the grass and carrot-tops) and printed it under the UV lamp in the normal way.

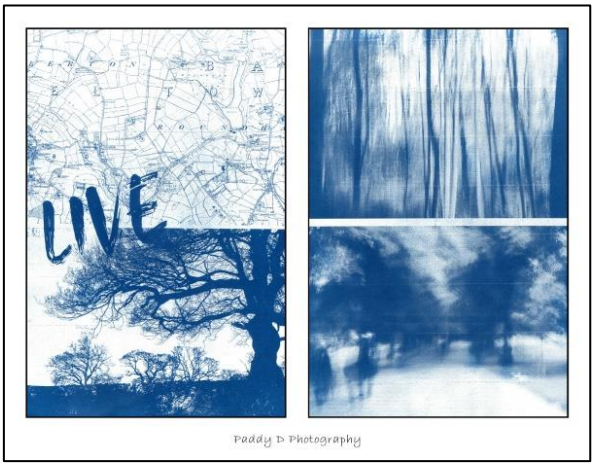


My first attempt at a wet cyanotype (left) and hand-colouring (right)

Initially I had scanned every cyanotype for safekeeping – aware that each print is unique and lost forever if I drop it into the washing up water! But, having digitised them, I realised I had the best of all worlds. I could retain the ‘original’ print (in digital form) and then modify that ‘original’ to create another version of it. In general, I could have tried adding gold-leaf or bleaching and tinting – but, in the example I've included above, I chose to hand-colour the print very simply, using felt-tip pens.

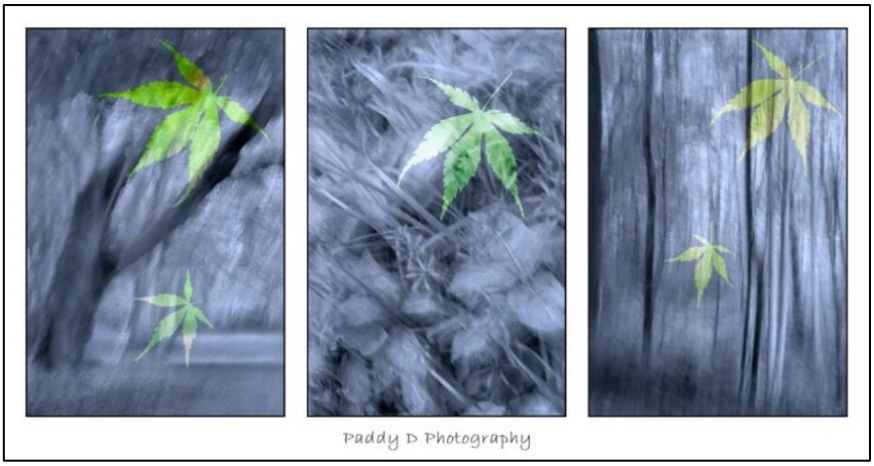
As a slight digression, I’ll admit that digitisation also allowed me to stray into the modern world. Overall, I had set myself the brief of working with the traditional processes (as developed in the 19th century) but I’ve also tried more contemporary ideas such as printing digital negatives and also

creating collaborative images – ones that digitally blend cyanotypes together, or blend a cyanotype with a digital photograph.



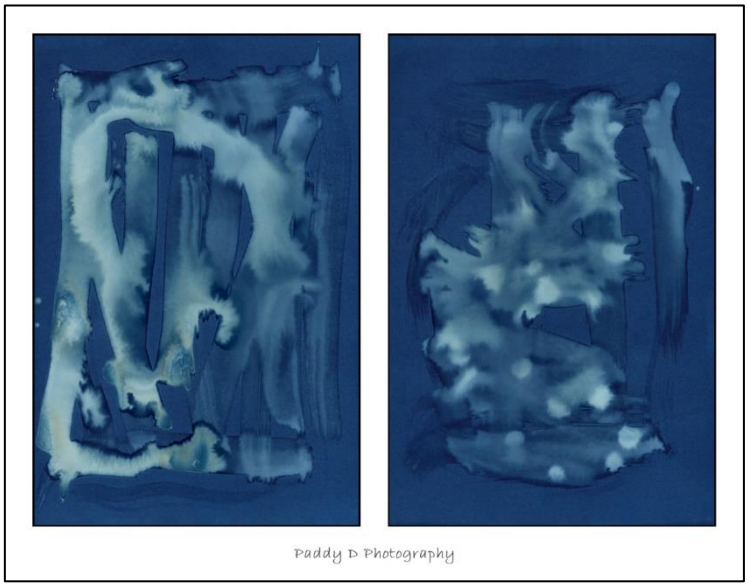
Printing from digital negatives

Collaboration – digitally blending cyanotypes together

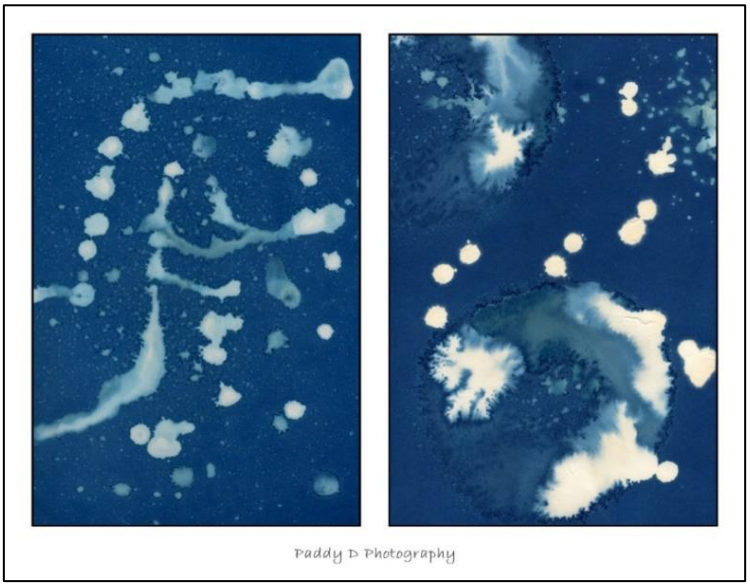


Collaboration – digitally blending cyanotypes and digital images

But returning to the main story, my experiments with wet cyanotypes continued, with me brushing dilute bleach across the pre-coated paper, or dripping it from a spoon or from a pipette.



Creating wet cyanotypes – brushing the bleach on

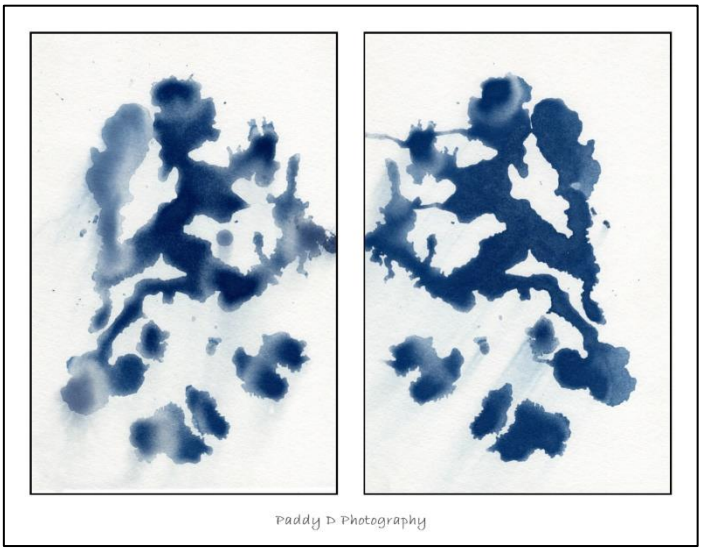


Creating wet cyanotypes – dripping the bleach on

At this point I'd made over 40 cyanotype prints, all using pre-coated paper, and I felt ready (more than ready, in truth) to graduate onto the next phase – preparing my own cyanotype paper i.e. mixing my own cyanotype solution, and painting it onto my own paper (what I've called 'self-coating'). I bought cyanotype solution (as far as I know, all brands are materially the same) but that can't be said of paper – did I want hot, cold or rough pressed for example? All I'd learnt so far was that a 'good' paper is about 300 gsm and a 'bad' paper (one that's too flimsy to wash and dry comfortably) is 100gsm or less. So I took a 'stab at it' and bought an A4 pad of 300gsm, rough-pressed watercolour paper from an art shop in the city.

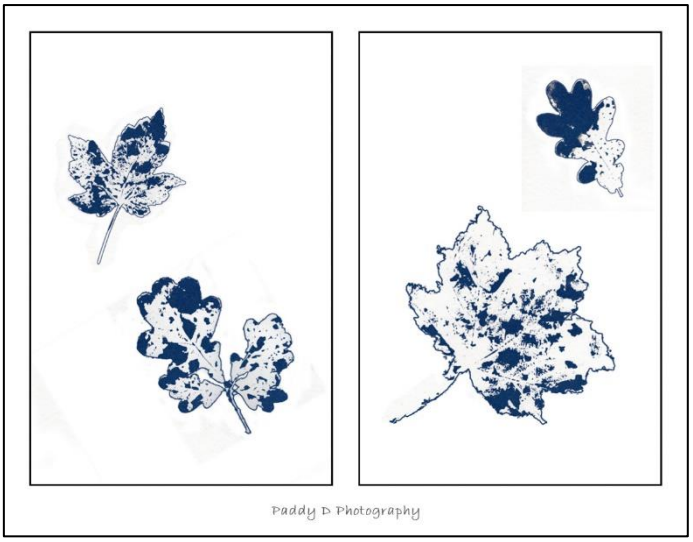
The next decision was how would I use it? How would I make my self-coated cyanotype prints distinctively different from my prints on pre-coated paper? And, after a few false starts, I found my answer, I made my 'mark-making' into the subject of the print – the action of my hand evident in the drips, the brush marks and the blots (you can even tell I'm right-handed).

Freehand mark-making on cyanotype prints flanking the traditional style.



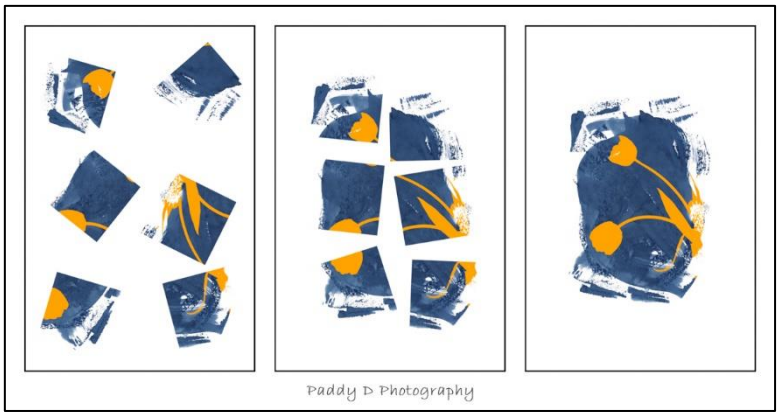
A pair of prints produced by dripping solution onto one piece of paper and blotting it with the other.

Then continuing with a playful theme, my next idea was to create 'handprints' (like a nursery school activity but using leaves and cyanotype-solution instead of messy hands and poster paints). It wasn't wholly successful in that I had to add an outline and do a lot of 'tidying' in Photoshop (removing splots and spludges) to ensure the diptych (overleaf) was clear enough. But, overall, I loved the hands-on element of all these mark-making prints – their immediacy and childlike playfulness. I found the process creative; expressive; kinaesthetic; sensory; communicative; in the moment; physically active; mentally absorbing; in practice, a timely form art-therapy.



Leaf 'handprints'

The last example (below) was inspired by David Hockney – a kind of deconstructed, backwards Hockney. I started by printing the digital negative of tulips onto self-coated paper and hand-colouring the print with a felt-tip pen. Next, I scanned it, cut the original print into 6 pieces, and scanned the pieces in various patterns. Then finally I created the triptych below, hoping that it looks a bit like one of the collages that Hockney makes from Polaroid prints.

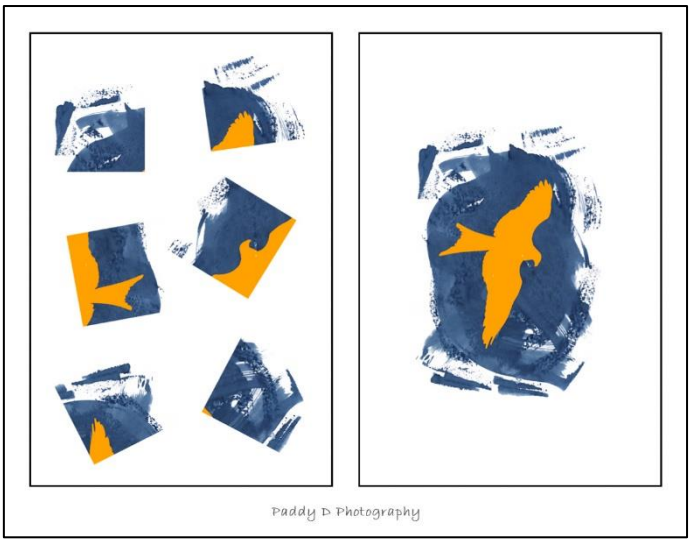


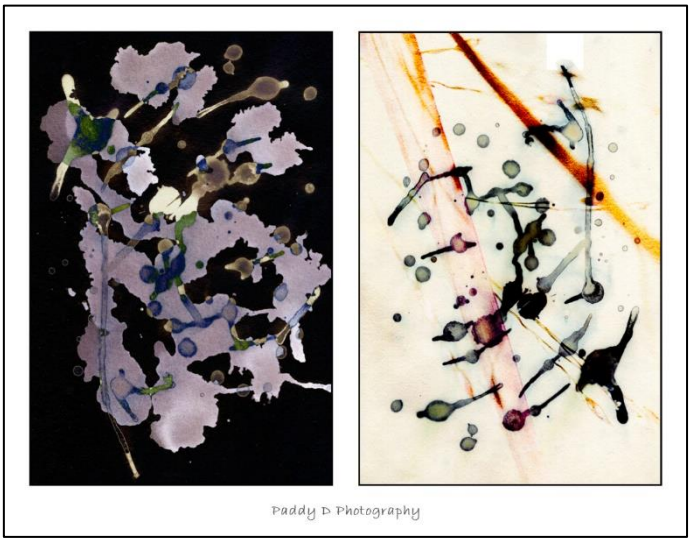
Inspired by David Hockney

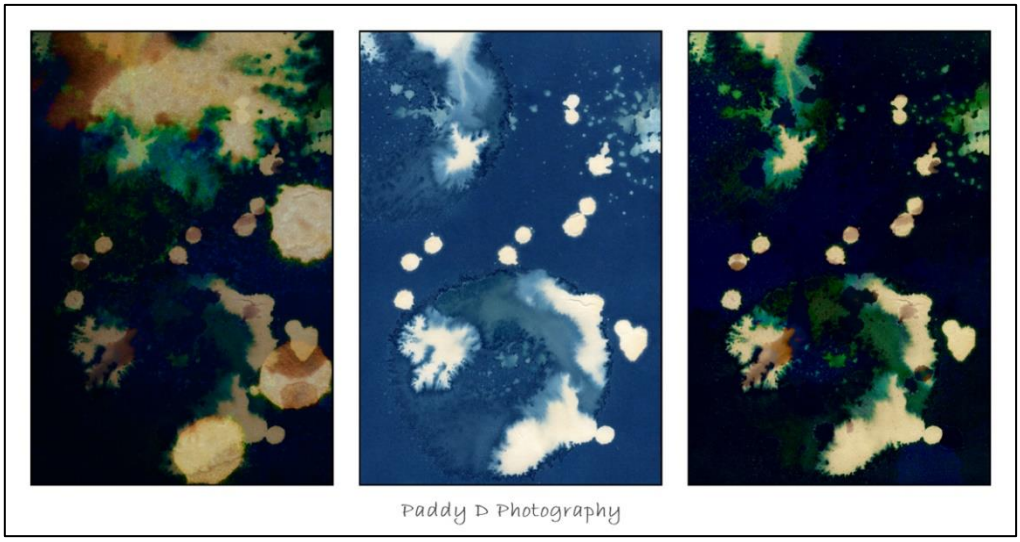
Now that brings me up to date and completes the cyanotype story – well, completes it for now – because the siren-call of the 21st century got too loud about a month ago, and lured back to the digital world. But I've thoroughly enjoyed writing about my cyanotype 'adventure' – and it's given me some new ideas – and the UV lamp and the box of cyanotype paraphernalia are waiting in the cupboard for the next 'timely-remark' by Rachel and the next burst of inspiration.

Paddy
4 June 2023

A Few More Examples







'Another World'

About The Process

In outline you create the basic (traditional) type of cyanotype print by:

1. Preparing a piece of paper (self-coating it with light-sensitive solution or buying it pre-coated)
2. Placing your opaque (or semi-opaque) subject on it
3. Exposing it to sunlight or a UV lamp
4. Washing the print to remove un-exposed solution and to 'fix' it
5. Drying the print

You do the first 3 elements in low light – but it doesn't have to be pitch dark. Then washing etc. is in normal light.

When I first started making cyanotype prints, I used the pre-coated paper above – a pack of 10 sheets of A4 (bought from the Cyanotype Co.) which comes in a black, light-proof plastic envelope.

UV lamp, also from the Cyanotype Co.

And this is the UV lamp at the centre of the process – it exposes the print to 'sunlight' i.e. to the UV component of sunlight. It doesn't come with the blue A4 mat shown in the picture – instead I use the hardboard and glass from a frameless picture frame (a glass clip frame) as my printing 'press'.

Setting up, I place a piece of the pre-coated paper onto the hardboard. Then I compose my 'subject' on top of it – arranging the leaves into patterns – and, if the subject is flat, I put the glass on top to keep everything flat and in place. (The glass is helpful, but not essential – because obviously you can't do it with a 3D subject). Then I slide it all into place under the lamp i.e. where the blue A4 mat is in the picture.

Next comes the exposure stage i.e. turning on the lamp.

> You're familiar with processes (like cooking) where the timing can be crucial, but cyanotype printing isn't one of them. The general recommendation is for an exposure-time of about 15 mins under the lamp. But, if the 'subject' is fully opaque, it can be left for longer without any ill-effect. (I often expose the prints for an hour, particularly if my back is bad, because it gives me time to rest). If the 'subject' is semi-opaque, the longer exposure times just results in some UV-light getting through it onto the paper, and hence the 'footprint' isn't crisply white, it's more lace-like.
>
> What do you see during the exposure process? Nothing very dramatic! Don't expect to see the rich blue colour straight away. Explaining this more fully …
>
> When you get a piece of pre-coated paper out of the packet, it looks a sort of greeny-blue colour (quite a light colour) and then, during the exposure, the greeny element turns more grey. As I said, it's not dramatic, you just realise that the paper isn't looking quite as green as it did when it was fresh from the packet. (As I mentioned, this is why I started to learn about cyanotype printing by using pre-coated paper – it helped me to get a 'feel' for all of this, without worrying that I was doing something wrong with self-coating).
>
> The rich blue colour starts to appear during the washing process but it's still quite subdued. But then, when you come downstairs in the morning and see the print (i.e. the fully dry print) it's well, wow. Rich, blue, striking!!

Now, back to the process, after exposure comes the washing stage that 'fixes' the print.

> We bought 3 of these trays from Homebase (they're called gravel trays – and are a bit bigger than A4). I half-fill them with water and line them up on the worktop. In practice, you don't need 3 (you could just have 1 and refill it a few times) but for me, having 3 pre-filled and ready is less stressful for my back.

Overall, you wash the print for 5 mins or so – maybe a bit more i.e:

You swish the print in the first tray – and you'll see some of the blue wash out – then move it onto the next tray (or, if you're only using one container, re-fill it with clean water) and swish again for a few minutes and then, typically, I repeat it once more, so that I'm fairly confident that it's fully washed by then.

Up until this stage, it doesn't make any difference whether you use 300 gsm paper or use 70 gsm. But I found that the heavyweight paper was easier to wash.

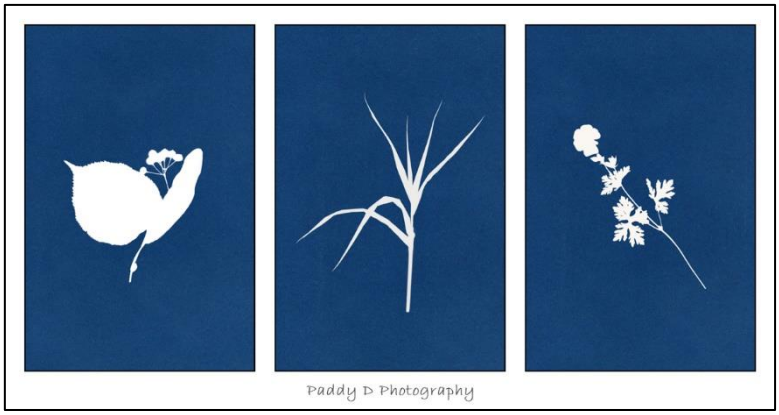
Then I hang the print up to dry on an indoor (string) washing line, using clothes pegs, and leave it overnight. And again, the heavyweight paper is much easier to dry – lightweight paper needs to be dried flat.

And finally I scan the print(s), partly for security (in case they get damaged) and partly because it allows me to work on them in their digital format.

A couple of other points:

I've described this all on the basis that you have a UV lamp but, if not, you simply replace the lamp-stage with a sunlight-stage – putting the printing 'press' outdoors in the sun. But here you'll need the glass 'cover' to keep everything in place, or to use heavy 'subjects' or to find a sunny, but wind-free, location to expose the print.

If you're self-coating the paper, do it the day (or more) before and let it dry overnight in a dark cupboard.



Traditional cyanotype prints – the style that Anna Atkins would recognise

So that's a description of 'how-to' create a basic, traditional cyanotype (above) and it produces these lovely rich, blue prints. But I think the whole process comes alive when you make it your own, for example by self-coating the paper (e.g. mark-making), pre-treating the paper (e.g. wetting it) or post-processing the print (e.g. bleaching and tinting). I spent a lot of time 'learning' the basic stages

but remember that I was an engineer in a previous life, and I did a lot of nerdy things (like keeping a logbook, making test strips to compare exposure times, trying different pre-coated papers etc.)

I could have started to fly – become more free and creative – a lot earlier than I did.

A Few Links

Firstly, this is Rachel's website – she's a professional, visual artist:

https://www.rachelwrightphotography.com/

This is Morag's – again a professional, often working with her husband Ted Leeming:

https://www.leemingpaterson.com

And there's an artist called Marianthi Lainas who works with cyanotypes a lot – creating really beautiful and exciting prints – by taking the paper down onto the beach and (somehow) exposing it in the sea and on the beach.

https://marianthilainas.com/

Then there's **The Cyanotype Co** who are my 'go-to' for materials – Renate Richards – but be aware they take a month off in the summer (it was August last year).

https://cyanotype.co.uk/

Sunprint Org are good for ideas and information, but I don't recommend that you buy their Sunprint paper – it's only about 70 gsm which I found makes it very difficult to handle (when wet) and that affects the lovely tactile element of cyanotype printing.

https://www.sunprints.org/

And, inevitably, the internet is full of ideas – including ones that are more environmentally friendly than cyanotypes e.g:

https://www.alternativephotography.com/processes/

https://www.alternativeprocesses.org/blog

I think that's all – more than enough for now.