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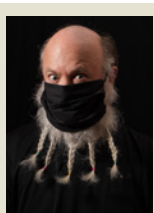
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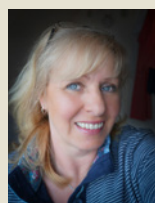
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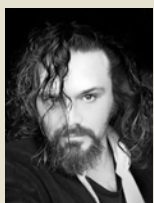
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By Emily Endean – <https://www.emilyendeanphotography.co.uk/>  
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# TAMRON





## Canon announces beefy R3 and new R-mount lenses

**KEEPING** in touch with the spirit of their user-base, Canon is to introduce the first mirrorless system camera made for big hands. The EOS R3 is reminiscent of press pack 'fighting DSLRs' of twenty years ago, with a bulked up design and a second vertical grip in the traditional battery-base position. It has a brand new Canon proprietary sensor and will shoot at an amazing 30fps, with another revival from the 1990s ensuring AF hits the mark – Eye-sensing AF, not identifying the subject's eye but tracking the gaze of the photographer's eye through the viewfinder eyepiece. The R3 is clearly built for action, sports, wildlife and heavy duty professional use.

New lenses in the R mount include a 100mm *f*2.8 macro with adjustable spherical aberration for bokeh control and a 1.4:1 magnification, a 400mm *f*2.8 and 600mm *f*4. All are with in-lens stabilisation for the best tele and macro performance. While the macro will cost a little over £1,450 the big teles may bust your budget at over £12k for the 400 and over £13k for the 600. We look forward to seeing results!

See: <https://www.canon.co.uk>



## Once a trinity – now a family with big ideas

**A COMPACT** super-tele zoom for Sony full frame E-mount joins the growing family of well matched Tamron Di III lenses, alongside the second dedicated zoom in the Di III-A series for APS-C format.

The 150-500mm *f*5-6.7 VC VXD is one of the smallest lenses in its class, weighing only 1725g and under 210mm length before zooming to 500mm and gaining just 73mm of extending barrel. It's styled to match the family, but as a specialist tele lens has more features including a Flex Zoom Lock which can be used at different focal lengths (they have been listening to us!) and grippable tripod mount ring with Arca Swiss compatible base. The VXD AF motor is similar to the acclaimed 70-180mm

*f*2.8. The series filter thread of 67mm is impossible in such a lens and it uses an expected 82mm. Focus goes down to just 60cm at 150mm and 1:3.1X scale. The new crop sensor lens is an 11-20mm *f*2.8 fast



companion to the 17-70mm *f*2.8 we reviewed in the last issue, equivalent to a 16.5-30mm, focusing down to 15cm with a 1:4 closest scale, 67mm filter thread and just 335g weight. The new lenses will become available from June 10th and 24th respectively.

See: <https://www.tamron.co.uk>



Tamron's FE lens line-up now includes ten matching models

## Samyang's classic 12mm *f*2 gets an upgrade to AF

**THE** manual focus 12mm *f*2 Samyang has been one of the best such wide angles made regardless of aperture, popular in Sony, Fuji X and other fits. Now there's a revised optical formulation optimised for astro, with AF down to 19cm and a 1:11 close-up capability. It is an 18mm equivalent. A new AF stepper motor allows a group rather than element to be used for focusing, and the 12-element design features two aspherical and three extra-low



dispersion lenses. It has a 62mm filter thread, is under 60mm long and weighs just 213g. It is weather and dust sealed including the rear glass, and the retail price is under £360.

See: <https://www.intro2020.co.uk>

## Sony's latest GM is a superfast 14mm



**FOLLOWING** the launch the 50mm *f*1.2 G-Master FE lens in March, Sony is extending the fast line of prime glass with a 14mm *f*1.4. This lens has the same key features including an aperture control ring on the lens (declickable), advanced focus motors (only two needed not four) and controls, and environmental sealing. The 50mm is £2,100 and the 14mm £1,400. It's got a complex optical design with extreme aspherical surfaces and is optimised for astro photography where infinity point source resolution is critical. For landscape

photographers a front filter holder adaptor overcomes the curved front element, and a rear gelatin filter slot is provided ideal for NDs.

In March the company also introduced three affordable small prime G lenses for full frame – 24mm *f*2.8, 40mm *f*2.5 and 50mm *f*2.5. All use 49mm filters and short parallel sided lens hoods which fit the lens cap directly. They are styled similarly to many video lenses, an industry trend. The price is also the same – £630 each.

See: <https://www.sony.co.uk>

## Sigma fp L – the real 61MP camera

**IN THIS** issue we look at high resolution but one camera was too new to be included – the Sigma fp L, which is a 61 megapixel version of the smallest full frame mirrorless made. And the sensor is larger than Sony's 60/61MP – it captures 9520 x 6328 pixels instead of 9504 x 6336. It has electronic stabilisation. It also has smaller raw capture settings for 25MP, 15MP, 10MP and 2MP plus a full range of JPEG formats beyond 2:3 ratio including square 1:1, 21:9

and 16:9 widescreen, 4:3, 7:6, and the perfect solution for editorial photographers an A-format (like A4 etc)  $\sqrt{2}$ :1. There are also smaller raw formats for the APS-C crop option. As a movie camera, the fp L is a bit like crossing a Black Magic with a Sony A7RIV – 4.2.2 8-bit, 8/10/12 bit CinemaDNG, 12-bit raw and Atomos Ninja V. An EVF is available but many movie and new generation still shooters will just use the rear screen. <https://www.sigma-imaging-uk.com>



# Dealer's Digest

There's a whole spectrum of unusual kit out there, and unusual collectors hunting it down. Paul Waller of Commercial Cameras goes beyond the visible.



I am sometimes told that I am 'on the spectrum' as I exhibit characteristics of OCD and certain traits of Autism... 'on a different wavelength they say'.

I have no problem with this. It is what makes me 'me'. I find it actually helps me – I obsess about details. I need to know everything I can about the item and only want to handle the best of the best.

I see beauty in the likes of Hasselblad, Leica, Linhof and other great cameras. I marvel at the engineering but of course I can see only a part of it.

Just like you see only a small part of a person's inner self.

The last year has been very difficult for a lot of people and heightened a lot of pre-existing conditions amongst other things.

Anyway... as usual I have gone off on a tangent but I hope it will make sense.

When Diane told me that the in this issue we wanted more colour, the full spectrum and not just rainbows, I thought of course not about that part of the electromagnetic spectrum that is visible to us but of the parts that you do not see but which play an important part in certain fields of photography.

I have recently supplied to one of my industrial clients a pair of Nikon 105mm f4.5 AI-S UV lenses. This is one of the rarest and most specialised lenses ever made by Nikon and provides a transition wavelength of 220nm allowing the full bandpass of long wave, medium and even some short wave UV. It has elements made of fused silica and synthetic calcium fluoride in six groups and no conventional A/R coating. It really is an amazing lens.

The subjects sits underneath and the camera at the top – D50



Another unusual item that we supply is the Broncolor Scope D50 UV/IR. It looks like an upside down wok and housed within are 48 tri coloured LEDs that fire in the visible, UV, and IR light covering a range from 390nm to 960nm.

The technical name is a *Multispectral Reflectance*



UV Nikkors can command high prices – like this one at Gray's of Westminster for £12,800 at the time of writing. Photo © Tony Hurst.

## Transformation Imaging Device.

It is used in fields including forensic science/heritage ballistics and many more. It makes the smallest surface detail visible by taking 48 individual photographs from all angles and then when put through the special software gives breathtaking results. It can even be used in the field using an external battery.

Another area of the unseen part of the spectrum is X-Ray, although this is outside my normal area the lenses used in the machines are sought after by photographers looking for something a bit different as they have ultra fast apertures.

Examples include the Leica Elcan 65mm f0.75 made for the Picker X-ray company in 1970. It has an E37mm thread which can be adapted to fit certain camera mounts.

Other examples are the 50mm f0.75 Rodenstock XR-Heligon and the Canon 65mm f0.75.

One of the reasons that these lenses can be made so fast compared to normal photographic optics is that they were designed to be optimised for a narrow range of wavelengths from a filtered or monochromatic light source, in this case X-Ray. Others exist for thermal imaging, UV, and other medical or scientific uses.

I find them intriguing and fascinating. Predictability and a touch of boredom is present in 'yet another' offering from the current camera brands.

As image makers we are looking to different areas to express something more than just what is in front of us – to peel back the curtain and look at what is behind it.

Now, where was I? Ah – the market!

Not too far back in time the lenses

found on Russian cameras were cheap as chips – not any more. Soviet lenses have outperformed the market with prices rising fast, easy to adapt to most mounts and now very sought after.

Medium format prices are still rising fast – quality is the key, as is condition. It might be worth checking your insurance cover to see if it is in tune. If I can be of any



Leica Elcan seen on eBay at the time of writing – <https://www.ebay.com/itm/Leica-Leica-65mm-f0-75-2521080-Very-Rare-/372610738476> for US \$2,400.

help then only too happy to have a chat with you.

As I write this Jessops have applied to appoint administrators. I feel for the staff and wish them well. Other dealer news is that the London Camera Exchange group has been sold to its staff, which is brilliant – I wish them every success. As a sub note I think Diane was not expecting an article about unseen parts of the spectrum when we chatted about rainbows... but vive la différence!



[www.commercialcameras.co.uk](http://www.commercialcameras.co.uk)

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# DANNY



## CLIFFORD

First, thank you George Harrison for that wonderful song, summing up life for me right now. The lyrics couldn't be more appropriate. Most of us have been resigned to shooting things around the house or nearby for the past year or so, barely keeping the dust off our cameras. The good news is that it feels like the Covid pandemic, at least for us in the UK, is looking a little better and I am, as usual, quite optimistic.

Over the past year, I have been thinking about many events,



# Here Comes the Sun... little darling, it's been a long cold lonely winter!

things that I have done in the past. Recently I was recalling that long, very hot summer of 1976. I know, many of you weren't even born then, but don't bother emailing me to make me feel old – I already do! In 1976 I was a teenager and very busy photographing some memorable events during that heat wave. The Who played at Charlton Football Ground in May (*photo below*) – apparently the loudest gig in history. Weirdly it did rain heavily that day at the end of May!

I arrived with Keith Moon who had a woman on each arm



Danny Clifford has a lifetime of music photography under his belt and is now a popular speaker inspiring new generations. See: <https://www.dannyclifford.com>

as we got out of the limo. Keith was filmed pouring a bottle of vodka over the head of Australian TV comedian, Norman Gunston. I photographed it all happening. However, funnier than that was whilst the band were on stage, I



was shooting from behind Keith's drum kit, and could clearly see the fans down below. In those days, if anyone needed a pee during a gig, often you would see people peeing in the pocket of the person in front. Ladies were far more dignified and would no doubt have headed to one of the few toilets available.

I witnessed many pee fuelled altercations, usually culminating with a punch or three – unlike the modern fan, who is far more refined. At the Download Festival a few years ago, they would pee in a plastic open top bottle and launch it in the direction of the stage, often landing on us in the photo pit. Oh, what joy, the life of a music photographer!

Also in 1976 The Rolling Stones played Earls Court (*below*), Elton John was in full flight (*above*) and Queen played an open-air concert in Hyde Park, the gig where I first met Freddie Mercury. I have photographed a lot of bands and artists in Hyde Park, including Queen again

in 2005, sadly without Freddie but with the incredible Paul Rogers (formerly of Bad Company and Free). I also shot Live 8, Nelson Mandela's 90th birthday concert, Bob Dylan, Neil Young, Carol King, Stevie Wonder and many other amazing artists in Hyde Park.

When I look at the crowd shots now and see people standing next to each other it looks odd. I instinctively think, 'Stop, where's your mask? You are too close' then quickly realise *that's not now*, so stop worrying! It is amazing how quickly I have become used to wearing a mask and keeping my distance from everyone. I have dug out a couple of photos from that summer in 1976. I really. Look forward to photographing in those lazy hazy days of summer again, very soon and as that great song goes, 'Here Comes the Sun'. Stay happy and healthy and remember, please be kind.







Photo Philip Ruopp: 70-180mm | 70mm | F/2.8 | 1/500 | ISO 800

# The Tamron Trinity for Sony E-mount

The award winning Tamron Trinity for Sony E-mount includes the 17-28mm F/2.8 Di III RXD, 28-75mm F/2.8 Di III RXD and 70-180mm F/2.8 Di III VXD. Each lens has similar innovative features such as a constant F/2.8 aperture, fast and precise autofocus, 67mm filter diameter, compatibility with Sony cameras key AF features, weather sealing, and they are very affordable. Being suitable for photo and video, they will unleash your professional creativity and maximize your potential.



## TAMRON

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## #CameraCraftScale

**AFTER** the last issue, Iain used the Guild of Photographers' member Facebook group to challenge all comers to create great miniature or scale photoscenes. "Well, this was my first competition with the Guild and I have to say I was blown away with the quality of the entries", he says.

"Before I name the winner I need some special mentions... Simon Sweetman – amazing sets and beautiful lighting, I have followed your progress for quite sometime and do love seeing your work appear.

"Rita Morley – loved your use of practical effects. James Magill – loved your racing images.

"The winner is Martin Stokes with his amazing image of the lifeboat. I felt this was a brilliant creation, and worthy winner, and we will be in touch to send over your prize."



*Top: the chosen winner in the hashtagged Facebook competition #CameraCraftScale, by Martin Stokes.*

*Above – mini set and film-like lighting from Simon Sweetman. Centre right – by Rita Morley. Bottom – by James Magill.*

*Iain K Poole is a semi-professional photographer specialising in cosplay and landscape, and has won many awards over the last few years and is a Master Craftsman of the Guild of Photographers. Iain is based in the seaside town of Hornsea in rural East Yorkshire. <https://www.iainpoole.com>*





# Trust does not come with a refill



**T**here is always that one guy who you see in the back of the room, who is quietly just drinking their coffee and just taking it all in. They are not bothered about being the centre of attention; they have turned up and are just going to get on with it.

Well, this is Andy Wright.

I met Andy through a local Facebook group for models and photographers. This group had arranged a group shoot in the centre of Leeds. Basically it was coffee, cake and taking pictures.

We instantly clicked as he was a no nonsense straight taking Yorkshire lad who was raised 'proper'.

Over the years I have watched him just silently get on with the business of taking pictures, for both himself and for clients. I have watched him through one of his projects empower women through his anonymous nude books, but more of this later.

His journey into photography is quite unique. He spent eight years in a violent relationship, a period of his life he does not like to dwell on it at all. When questioned he

## Iain Poole meets 'Anonymous Nude' photobook creator Andy Wright



has been quite candid about as it was indirectly linked to his current photography path.

As we all know men are just expected to 'grin and bear it' or 'just get on with it' and as such they do not talk about abuse in relationships although it does happen more than it is talked about. Andy had the strength to leave the situation.

He knew that he wanted photography to play a part in his next chapter. Due to photography indirectly having a negative impact on his life, he wanted to turn this into a positive and while he was studying electrical engineering at Sheffield Hallam, he then also decided to teach himself photography.

He wanted to photograph beautiful people, enabling others to feel good about themselves.

Andy has always been internally motivated to do better, he had the same ethos when he bought his first camera, a Nikon D700 with a kit lens which after 500,000 actuations he stills owns today.

He knew what he needed to do, which was find his feet, so he



joined a few model sites. Then tried to navigate the industry, which is not easy. After a while he did what we all did and dived in taking pictures, which did not turn out the best. And in his words, these images will never ever see the light of day. After a while he realised, if he wanted to create better images he needed to understand more. Andy hit the books and learned more about light. During this time he made good friends with a local studio owner who helped Andy further understand lighting and different techniques, he was introduced to some amazing models and between them all they helped with his journey. The studio became a kind of second home. Even if he had not booked the studio he would turn up and help the owner with the running of the studio. Andy thrived on being around fellow creatives.

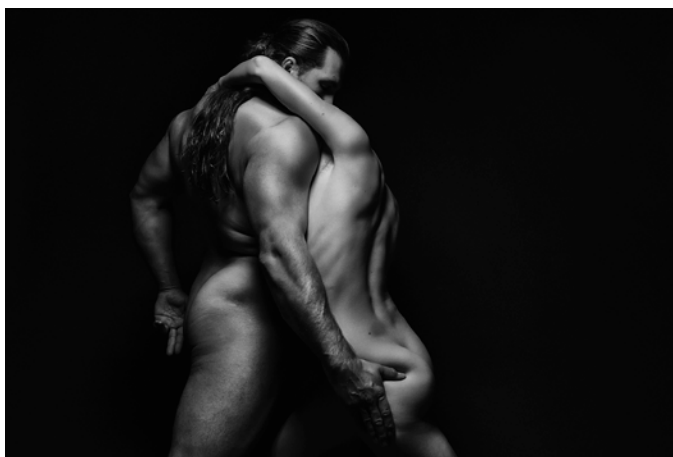
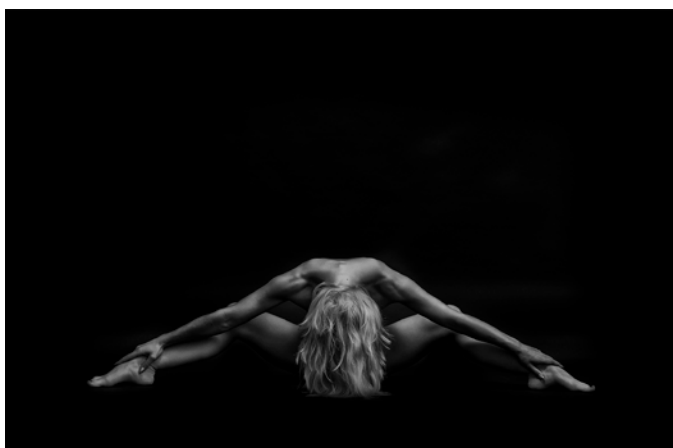
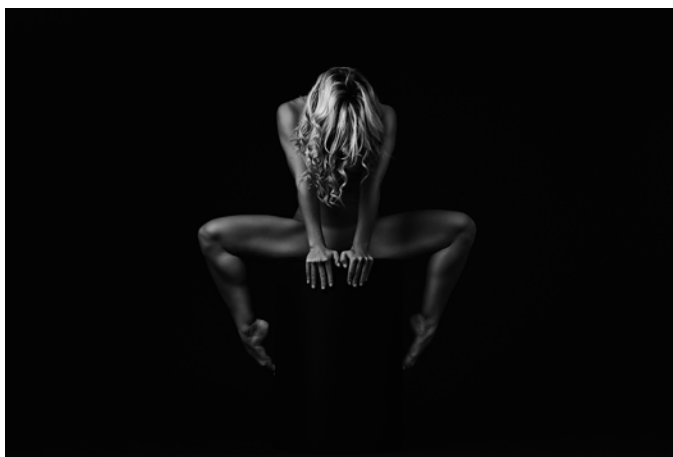
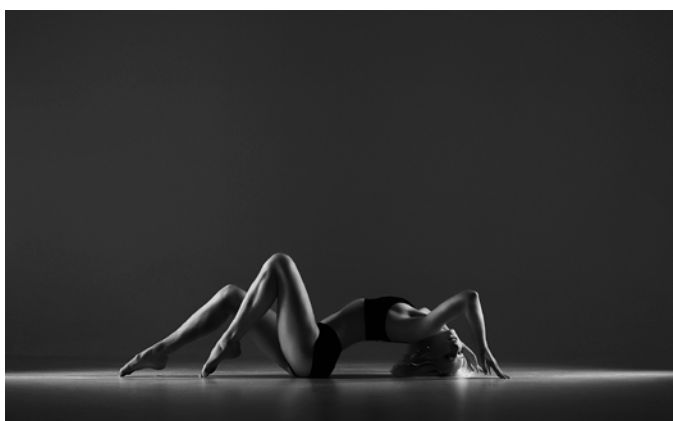
Over the years he has been influenced by two amazing photographers – Peter Coulson (<https://www.peter-coulson.com.au>), and Igor Amelkovich (<https://www.amelkovich.com>), who Andy describes as a ‘god with a black box’. Yet he does not spend ages following or looking at others – when you look at others and what they shoot, it inevitably ends up coming out in your work, and where is the fun in that?

He does not like to copy people, but show me a photographer who does not do so! We all want to know how an image is put together, and as such we end up recreating images to understand techniques.

We will all copy something in our time as photographers... it’s inherent in the learning process.

It is not about getting it all right in the camera. He is a firm believer in editing an image to get the desired effect. Try to take an image in his style and get right in camera and you will fail. Believe me, I’ve tried!

A lot of people will ask ‘what is Andy’s style?’ – he gave the most amazing answer. “I like shooting naked people, you can call it Art Nude or Nude, but understanding the difference is a fine line.” Basically he loves shooting people in their most self-conscious and vulnerable state and making them look amazing. He has shot people



from size 6 to 20, from 18 to 54 from all walks of life. They give him confidence that makes him want to shoot more

From this in 2013 the

Anonymous Nude was born, a self-published series of three books all shot and published by Andy. Over a period three years with Andy at the helm, it

empowered over 2,500 women. All the women who took part in the project were not models but their bodies suited Andy’s idea of Art Nude. The issue with most participants was they would or could not do the shoot due to fear of recognition, but with Andy taking away that fear by making it anonymous they felt empowered by the images. At the launch party not one person was recognised, but the comments from the women still bring Andy to tears to this day.

Now based on all this you would think that Andy oozes confidence and he is striving for fame and glory – well, he simply is not. He suffers from quite bad anxiety and in his own words Andy describes asking someone to shoot nude, someone who you do not know, as a truly terrifying experience. Having a person put all their trust in you as a photographer to capture them at their most intimate stage outside of the bedroom, knowing they are placing their trust in you as a photographer, is what drives Andy to succeed. I have seen and experienced just how much people trust him and I can confidently say that level of trust can not be earned overnight. You need to be confident in what you are creating, you need to be professional and you need to have a strong moral compass. If you make one mistake then social media will not let you go until it utterly destroys you.

Having people trust you to this level is very humbling and keeps you grounded.

Finally, equipment. No article would be complete without discussing kit. Again Andy has a no-nonsense approach to this – give him something with a lens on and he will make it work. He is a firm believer if you understand light then the equipment is secondary, he continues to work with and understand light and different techniques (which he keeps very close to his chest). He is determined to “learn something new every day” and strives to evolve his work on that basis.

Andy’s work is truly amazing and while I can only show you a small selection here, I urge you to check his work out on Instagram.



Web – <https://www.andywphotographer.co.uk>

Instagram – [andywphotographer](https://www.instagram.com/andywphotographer)





## Drone flight – the final hurdle, your A2CofC and GVC licence exam



*With a thirty-five year history in photography, from a schoolboy freelance for local newspapers all the way to covering international sports for media and picture agencies. His photographic areas of expertise focus on news, sports and events.  
robgrayphotographer.co.uk*

Over the past few months, I have been studying and learning to operate drones safely – not that I have not flown before or that I was reckless and ignored the sensible precautions. Working during the current covid situation has freed up a few hours, probably more than I needed, and has enabled me to study online.

After the UK regulation changes A2CofC and GVC licences replace the previous PFCO, the so-called gold standard if you wanted to use drones for commercial operations. It was an expensive and intensive process with ongoing annual costs. Since January 1st, new guidelines and levels of competency have produced a flurry of companies setting up training programmes and services online, including virtual teaching and training via presentations and video, to accommodate the casual flyer wanting to fly any UAV (drone) above 250gms.

The first problem, who would I choose, after many emails and searching, I chose a company

called Pigs Can Fly – they were first to respond to my email enquiries, always a good start. I had contacted four different businesses that provided the services I was looking for, an online only route to study and learn, then to take my exam which would give me the A2CofC qualification. Some companies with big flashy websites, lots of online presence and plenty of advertising, but it was a small friendly company with an unusual name that offered me the course I was after. Of the other three companies two failed to reply and one advised me that they



were updating the training and it would change in 2021. I was nearly finished my study by the time they sent me the links to the course.

The costs started at £199 in 2020 but given the spike in this area of training and competition between business to get custom it was falling rapidly – £149, then special offer £99 if you complete soon, all the usual ploys to get you to click the buy button. One offers an online learning facility with a secured monitored online exam – that was a weird experience, more at the end. Some trainers provide a complete video-based lecture and learning experience with access to mock exams, others a PowerPoint style interactive online presentation with accompanying PDF training manual to read on screen or print out.

### Getting the licence

After choosing Pigs Can Fly I completed the easy to follow online registration, and started by downloading the training documents and logged in to access the online materials. The presentation was easy to follow and despite an initial bug rectified very swiftly by the staff. The modules, ease of use and clarity suited my personal learning style. If you like to watch videos and listen to people talk instead there are very many looking to give away all those skills and knowledge via the wonders of YouTube.

Because it's online and you can learn and study at your own pace, you can drop in and out, read when you have a few minutes and make sure all the information is covered. It is easy to go over the course and

revisit parts that you are unsure of, and when used alongside the manual it was straightforward and pleasant learning process.

At exam time, once ready and with the mock exam completed, all that was needed was one email to the company and I was set – 0900 the next morning, scary since no one likes exams and this one was to be in a virtual classroom. After logging in via a secure link, it was time to show the invigilator the room I was sitting in, the desk and all around on my webcam, pretty straight forward. This camera will monitor where you look and watches for any possible infringement – pick up your mobile phone during the exam and it's an instant failure. Once you complete the exam you will receive a call back from the invigilator to advise you of the pass or fail. I achieved 96%, that's a pass. You can review the answers – a silly error made me doubt one answer and change it to an incorrect choice in relation to distances. I won't do that when I'm flying that's for sure.

Within a few minutes you receive an email confirming your pass and a copy of the certificate, valid for five years.

Now I'm permitted by the CAA to fly any drone in the A2 Open Category, and weighing greater than 250gm... must get one as my little DJI Mini 2 is under that as we saw in the last issue. Commercial insurance cover sorted, a must-do before I can fly and sell my services and images. This has been a journey but now gives me access to a few more potential clients and work opportunities..





# TIME TO GO OVER THE RAINBOW

by David Kilpatrick

**It's brighter, it's lighter and life is opening again after more than a year of repeated setbacks. There's supposed to be a rainbow after the deluge and this could be the summer for colour to return to fashion and photography. Say goodbye to those muted LUTs and graded greys!**

**W**e all seem to be locked into palettes drawn from old films, hand-tinting and toning, smoke-yellowed oil paintings, period TV drama and an aversion to colour itself. It's been suggested that the exit from Covid restrictions may see a sudden burst of revived desire for bright colour. If so, photography has almost never been better placed to provide it.

Our smartphones, tablets, laptops, desk screens and televisions all have intense pure gamuts. Despite the problems many have translating the screen image to print, most render sRGB impressively.

In the early 1980s a new generation of textiles and dyes brought vivid colour into fashions, especially swimwear, dance and sports gear. The late 1970s had been muted in the wake of photographers like David Hamilton and Sarah Moon, with trends to soft contrast films and enhanced grain combined with softening and vignetting filters. Just as new saturated fabric and plastics colours arrived, Fuji created a new colour slide film which captured these far better than the colder, neutral flatness of Kodachrome and Ektachrome. Fujichrome, at first an amateur material, became Fujichrome RDP (Professional) 100 and the world changed.

I was one of the first to switch my commercial studios entirely to Fujichrome. Combined with multicoated lenses and new flash lighting from Multiblitz and Elinchrom, the results jumped off the light box when agencies and clients saw the test shots. We were asked to shoot identical briefs to well-established studios and took the work off them with ease. Companies like Boots (for the colours of their packaging) and Pedigree Toys (with new pure colours in their plastics) loved the Fujichrome we delivered. One competing studio still using 1950s

single-coated lenses and older Bowens flash (with blue and UV content desaturating already fairly cold Ektachrome) was hit with loss of contracts until they updated their whole setup.

In 1986, Amateur Photographer ran my four-page article 'Turbocharge Your Colour' by which time Ektachrome 64 Professional and new lab chemistry had pulled Kodak closer to Fuji. It was mostly about how to fill the images with colour, using contrasting pure colour in the studio and out.

Some suggestions were obvious, like using filter gels to light

*A token rainbow from a place they can be seen regularly – the cliffs of Los Gigantes, Tenerife. Below, horses chase through buttercups in Northumberland – spotted from the road with a rapid dash to get parked and catch some frames before the moment ended.*







To find colour locate places which use it – locations to dye for! Top left, Muscle Beach at Venice Beach (SK); top right, middle and bottom right, Kinsale in County Cork (DK); bottom left, Burano, Venice, Italy (SK).

like with like (red light on a red subject) or using coloured acrylic sheets with light through them instead of paper backgrounds. Some surprised me reading it again, like spraying fruit with gloss car paint. Then I remember we had cans of primary colour gloss spray paint in the studio and regularly used them alongside matt dulling spray, matt black, stone texture, bright white and neutral grey.

However those pictures were of their time, and many from 1982 onwards had been aimed at an AV show of mine called Hypercolour. With twin dissolve projection at first, and later a very fast slide-change Leitz projector with black-out shutter, the effect of changing from one combination of primary hues to another was theatrical. AP did reproduce some of the slide show setups though I sent them all vertical shots to keep it different. I won't revive any here!

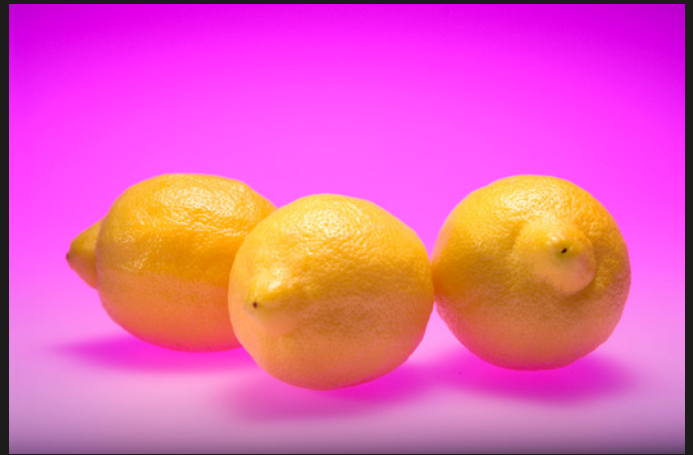
For some reason, their designer put all the images on a solid cyan background. They must have wanted to make it colourful. In practice, bright colour always looks best against black, and may even look dull on a white page. This is why when editing digital work I do not use the Lightroom or Bridge dark themes. I work on light grey or white to ensure my final versions print correctly. What looks great against a black or dark grey interface can simply look much too dark on paper. Back then, I made Cibachrome prints and mounted them on matt black paper – usually, A4 or slightly larger prints on A3, shown to art directors or editors in clear sleeve leaves of portfolio folders.

Having edited against light colours, it pays to show off high colour work either full screen or with a dark interface. Don't let bright white pixels interfere. This is also how many people will see them on phones or small devices.

Into the digital era, I never lost a love of colour – that was helped by Shirley, who had a 'perfect pitch' memory for colours and







*Left, Yves Klein blue in the Majorelle Gardens (SK). Light table and filter gelled lemons, above, and yellow craft paper asparagus using yellow gelled lighting with correction from raw (DK).*



loved working with dyes and fabrics. She gained her MSc in Colour Science in 1995 as our studio added digital scanning photography to film scanning.

We very quickly learned that the first professional digital cameras hardly captured any colour at all. It was extracted from the raw files with much amplification and adjustment, and some cameras needed extra Infrared-Cut filters to get any kind of purity or acceptable skin tones. Early 8-bit consumer digital cameras often produced better colour but with blocked shadows and burned out highlights.

In 2004, cameras with Sony's new 6 megapixel sensor arrived. By far the purest colour came from the Konica Minolta 7D and 5D at the expense of sensitivity – the Nikon D70 was similar. From then on the shortcomings of digital were cured. Early pro users, especially of Canon, were converting entire wedding and portrait shoots to black and white or muted desaturated colour because the variation in fabric and skin colours from shot to shot was

a problem. This became a trend and the public liked the results, but it started as a solution to the inconsistent and sometimes unpleasant colour of the pro camera preferences of 1999-2006. To get really good colour, digital backs on Hasselblad or high end DSLRs like Kodak's full frame DCS 760 (6 megapixels!) were called for.

Today, almost all higher end consumer and pro DSLR or mirrorless cameras can produce superb pure colours. There's still a lot of hidden reconstruction of the colour from the raw data but the noise, crosstalk and RGB calibration issues are invisibly dealt with. A good digital file today is better than the best slide film scans of

the 1980s – they were, after all, just 6-bit colour with dithering and now we have 16-bit colour. But this printed page is still no better than 6-bit.

When creating images with saturated or contrasting colours, remember the rule graphic designers learn. There must be a luminance difference not just a







colour difference, especially with colours like orange and green which are subject to degrees of colour blindness in many more people than those who are known to be colour-blind. Yellow and blue make one of the best contrasts.

You may have read about a new blue recently created which

didn't exist before, or about cultures which had no word for blue because they didn't see it. Today we have names for colours which once did not exist – orange is one. If you can manage to visit The Majorelle gardens in Marrakesh, the intense blue colour which Yves Klein discovered there was a shade which film and printing

could not reproduce – now it comes over well on computer screens, though on this page it will lose something. Colourful places like Venice's Burano island (don't confuse with the glass making island of Murano which lacks this), Tobermory on Mull, Kinsale in Ireland and various famous barrios and districts worldwide all

beckon when travel resumes.

I would have to recommend some of the places in the USA which Shirley wanted to visit for their colours like the red rocks of Sedona, the Colorado river, Grand Canyon, Mount Zion and the Painted Desert. But we also found remarkable colours in the ochre-bearing rocks of Roussillon (near Avignon) and the hydro-thermal alterations of the Canary Islands.

Some of the colours in rocks and landscapes demand the use of a polariser, with care as wrong orientation can have the opposite effect. Slight underexposure in raw, at low ISO, is acceptable but it's worth bracketing to get maximum colour.

Bring our rainbow world back to life this year – make your photography colourful again!



*Top left – Fuente de los Azulejos, hydrothermal alteration in Gran Canaria; top right, the Nuns, red rock pinnacles in Sedona (SK). Far left, Shirley walks on the Ochre Trail, Roussillon. Left, benches stored beneath the city walls of Girona.*

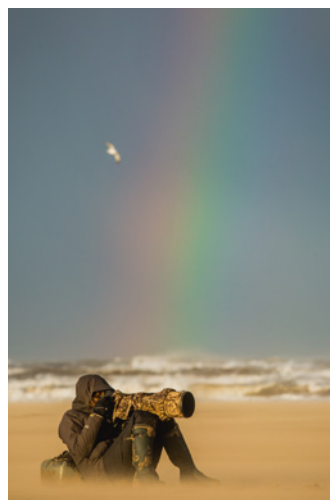




## There's a world of colour out there to be discovered

"I'm continually inspired by nature, and the rainbow is one of nature's greatest optical phenomenon. The sighting of a rainbow never fails to bring a smile to people's faces. They signify optimism and positivity: with them comes the sunshine after the rain."

— *Matthew Williamson*



Jayne sitting at the end of the rainbow! © Sean Weekly

<https://www.studiomlino.co.uk>  
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Mist Trail, Vernal Fall and Nevada Fall, Yosemite National Park. Canon 5D Mk III, Canon EF 16-35mm.

Matthew Williamson is an interior designer who gathers much of his inspiration from nature, and the colours within. It's a fabulous quote and so relevant as we all look to the future with a little more optimism and positivity.

Nature's colours are so wonderful. Have you ever noticed how vibrant the colours are after the rain and the sight of a rainbow is always just so awe inspiring.

As a nature photographer, and a retired art teacher, I'm fascinated by the psychology of colour. It would take a much more detailed article to cover all aspects so forgive me for just skimming the surface. Art, and this includes photography, seeks to express emotion and we use colour to do this. Of course, colour perception is subjective, but there is no doubt that colour does have an impact on the mood you wish to convey and how the viewer perceives the image.

Think about the Colour Wheel – the most basic being made up of three primary colours, red, yellow and blue, and three secondary colours, each made by mixing two primary colours. Added to this are tertiary colours (a combination of one primary and one secondary).

Opposite colours complement each other creating high contrast and vibrancy. Analogous colours, those that are next to each other on the colour wheel, blend well together and create harmony.



Dalmatian pelicans are the most amazing birds I've ever had the privilege to photograph. They remain classified as 'vulnerable', but Lake Kerkini in northern Greece provides a haven for the pelicans where they continue to thrive. During the breeding season their bill is a dull yellow, but the lower mandible and pouch turns a bright orange/red, complementing the gorgeous blue sea and sky. Along with this the pelican's blue eye surrounded by orange skin really creates a vibrant contrast drawing the viewer in.

The tiger image, taken at Bandhavgarh National Park, India, draws upon an analogous colour palette. The orange of the tiger

with hints of yellow and deep russets on either side of the colour circle creates a more harmonious colour palette for this magnificent creature.

Of course, nature doesn't always provide perfect examples and we can't change what nature presents to us, however, nature does offer many examples of pleasing colour palettes: you just have to find them! The seasons, the weather, the time of day will all impact on the colours you see before you, but there is no doubt, including colour in your compositional planning and selecting colours that work within the frame will have a huge impact on the final image.





*Pelican with Canon 5D MkIII, tiger with 1Dx MkII – both with Canon 500mm lens.*

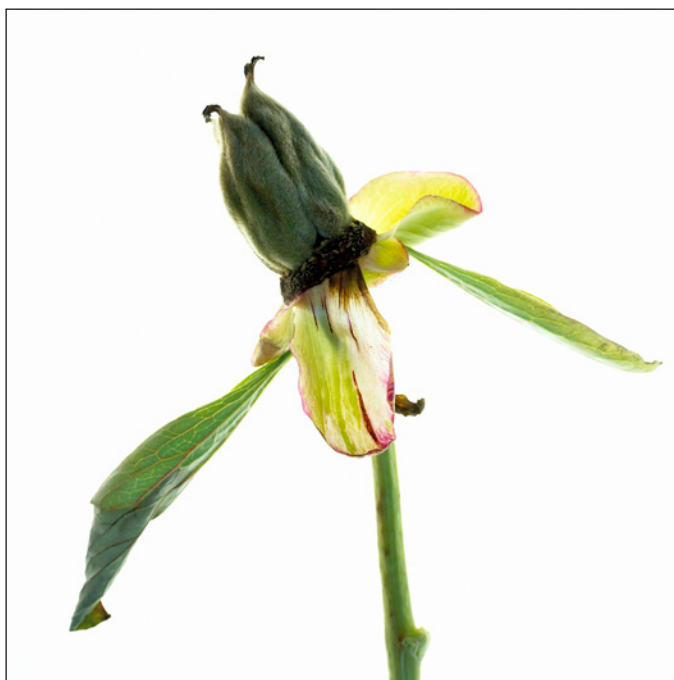




## The beauty of flowers and leaves – turn to botanicals to see your art blossom

*Kenny is currently one of the most successful One 2 One Business Consultants and has lectured on both photography and business matters in over 16 countries.*  
 Photography Website:  
[kennethmartinphotography.com](http://kennethmartinphotography.com)  
 Training Website:  
[thestudiadoctor.co.uk](http://thestudiadoctor.co.uk)

*If anyone would like to find out more about Kenny's TCMP program please pop an email to [info@kennethmartinphotography.com](mailto:info@kennethmartinphotography.com) to arrange a no obligation totally confidential chat!*



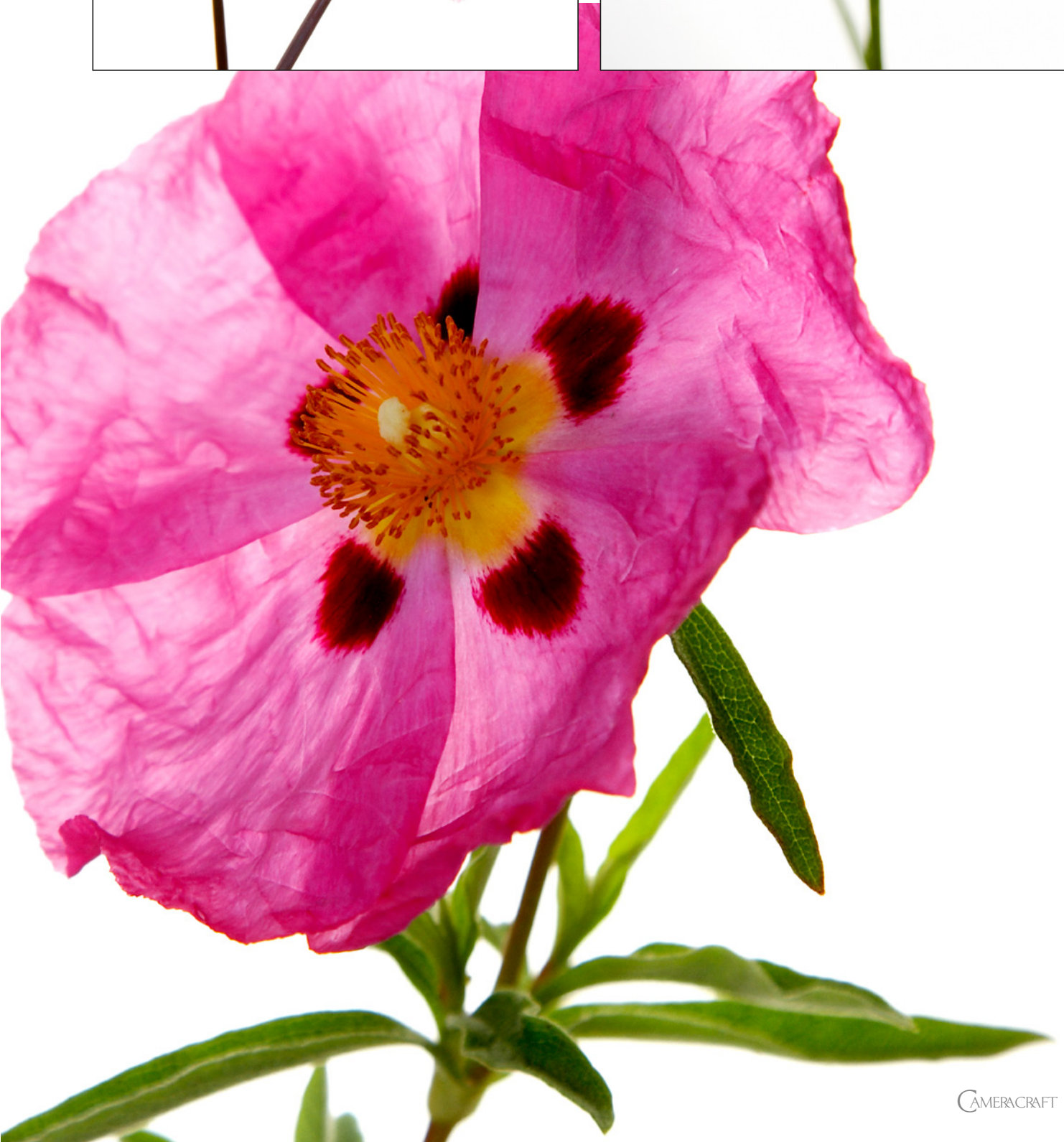
Flower and nature photography is of course one of the most popular genres in the world of photography. The beauty of nature can create some wonderful images and if shot in a creative and interesting manner can produce incredible works of art for the home or business.

These images are especially suited to contemporary presentations such as the Loxley Colour Alumi or Acrylic Gallery. A high gloss finish is essential, bringing out incredible detail in the image. They always look best printed as large as possible. Impact is immediate and a real talking point when displayed properly.

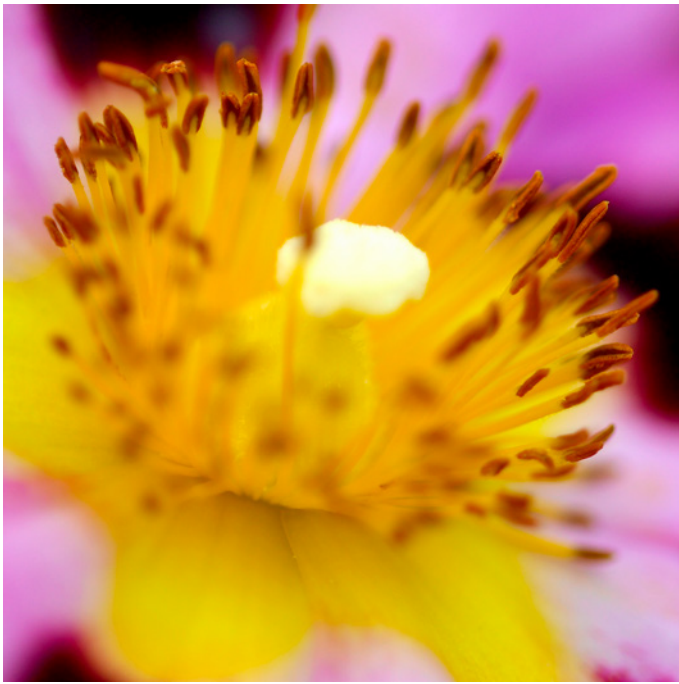
As a GP photographer I am happiest when shooting for myself and I can assure you that there are photographic opportunities everywhere, there is never any excuse not to be shooting – if you are on a walk and find some interesting leaves, flowers, stones or bits of wood, stick them in your pocket















and have some fun once you get home. This is a bit like therapy for the soul – slow and precise setting up and shooting resulting in beautiful images. What could be better?

I like bright, bouncy, in-your-face pictures – I think white backgrounds, especially, bring out the colours wonderfully. When shot against a big softbox or light-box, the light brings out the translucent fragile petals and leaves. I particularly love the close-up images of the leaves which when printed large bring out all the incredible details hidden deep within the leaf itself.

In most of these images I simply place the object on to or in front of the softbox, and take the meter reading directly from the subject using the spot meter setting on the camera or of course an independent spotmeter should you prefer. This over-exposes the background to pure white and sometimes gives a natural soft blown out edge to the flower or leaf depending on the colour. Lighter colours will bleed more and darker less so – however the bleed does not worry me too much.

I tend to always shoot these images with medium format. These examples are from a collection I shot some years ago on a Phase One camera with a P20 Back with a 120mm macro lens. A tripod is of course essential... and I used my trusty grey card for consistent white balance.







# ART ARRANGEMENTS

**M**y partner Cammy had been a member of our local camera club for a number of years, and I started going along with him. I was a visitor to the CC for a couple of years and remember never thinking photography was something I would venture into – I was comfortable being an avid but passive observer.

One weekend in 2013 Cammy came home with a package saying “I bought you a wee present” – he had bought me my first camera, a Canon 1100D. I held it in my

## Gaille Gray creates painterly still life of flower vases using carefully controlled colour palettes and subtle overlays

hands thinking this is quite heavy and looks very professional, oh dear... exactly what am I supposed to do with this?

Cammy spent ages with me going through the instruction manual page by page, section by section but nothing made any real sense to me at that stage. So I continued to study the manual and begin to

understand how it all worked. We started going out and about with our cameras. My first image was of a Common Blue Butterfly in July 2013 so I am just over seven years into my photography adventure. I recall feeling very excited that I had managed to capture the butterfly with its yellow spots on blue wings on a yellow dandelion

as I had visualised in my mind on seeing the colours.

On returning home the next stage in the photography adventure began... post-processing. I used *Photoshop Elements 11* for the first couple of years and realised how much I enjoyed this side of photography. Then I became a member of the club, and I started competing to advanced through the ‘leagues’ within the first year.

A couple of years later I was fortunate to go along to one of Joan Blease’s tantalising textures





<https://www.instagram.com/gaillegray/>

<https://www.gaillegrayphotography.co.uk/>

Facebook – Gaille Gray

workshops. She is and will continue to be my inspiration to push on and continue my learning. That workshop had me hooked within minutes and I decided that I wanted to learn all I could about applying textures.

About his time my health took a real downturn, and I suffered two TIAs (mini strokes). My partner was also diagnosed with heart problems, and that dreaded disease cancer also paid us a visit. Our ability to freely roam the country taking photographs was now severely curtailed. I thought that my photography adventure had come to an end, but instead it was actually the beginning of a new adventure. Cammy floated the

idea of having a small studio in our garage, so I could continue to do photography in comfort. With various bits bought on ebay, small inexpensive studio lights were the next addition and that was the birth of my studio work.

I have always had flowers in vases scattered around the house, so it seemed a natural transition to begin doing flower photography and apply my new-found joy of adding textures. My modest studio is my 'go-to place', my wee escape from the ills of the world – a place where my ideas and creativity can roam free. It became my sanity at a time when life had been very unkind and I found some solace in my flower work.

Finally, after a lot of hard work and endless effort, I now consider myself to be fairly competent with PS. I appreciate that there is so much more to learn and I know I will continue to develop my skills. I am spending time on my still life work as this gives me so much joy and pleasure.

I am sure that there are some who think this is an easy genre, but when you have to work on an image blown up to 600% and paint in backgrounds pixel by pixel, end up with images with over +20 layers, I don't consider it easy! Colour harmony and balance is especially important to me alongside the use of textures. Applying these to enhance the flowers and

not overpower them is a skill in itself – I try to ensure my flower images give a sense of gentleness and balance. I want the viewers of my images to get that same sense of peace and harmony I get from making them.

I have created my own recipe in my flower work and spend time honing and refining this. I try to create images which are fresh and different, always staying true to myself.

So from being almost forced into it, flower photography has become my most loved genre – the satisfaction I get from my work will never leave me, my studio has become my sanctuary.





# Cutting the cost of colour film processing the D-I-Y way

Since the end of 2019, my photography has taken something of an unusual twist, flinging me into what feels like a bizarre photography related episode of the popular TV show, 'Breaking Bad'. The past 12 months have seen me convert our utility room into a makeshift chemistry lab, make deals for chemicals with strangers in Germany, and, I'm sure, put me on the watch list of some terrorist unit at GCHQ.

Covid-19 restrictions have seen many of us struggle to find the desire to make images. In my last article I talked about my camera donation project, collecting unused or unwanted cameras for local schools in my region. Making sure all of the film cameras work properly has taken over my own practice and has led to a lot of test rolls being exposed, and gallons of developer being used up.

This led me to explore the economics of making my own developers from raw chemicals. Was it even possible? After all, we no longer have 'proper' chemists on the high street. A few online search inquiries revealed that there is a burgeoning interest in home developing, with recipes for most if not all of the classic black and white developers of yesteryear. A handful of UK based suppliers sell the raw chemistry needed, alongside a plethora of eBay listings for most of the common chemicals used.

But what about colour developing?

Some time ago I was gifted a Jobo CPE2 processing machine, which was a godsend when all of my local one hour developing outlets disappeared. I was able to buy in the required C41 chemicals easily, but at a price. To make sure I got the best out of the chemicals I had to wait until I had 10 to 20 films to develop. There had to be a way to do the same as with the black and white chemistry, and make my own colour developer from scratch? Well, it wasn't that easy.

Rob Halliburton's home-brewed C41 (with PPE!) has produced great results, working from a 40-year-old formula found in a BJP annual. It's a route many vintage film camera enthusiasts are taking.



I know I'm not the only one who can't resist a photography related book. After all, that's what charity shops were made for, isn't it? Along with lots of monographs, I have been lucky enough to acquire a few *British Journal of Photography* annuals from the 80s and 90s. In the back of each of these annuals are pages of technical gold-dust; recipes for black and white, and colour chemistry. One in particular, the 1980 annual, contained a recipe for a C41 concentrate – a mix that would provide 10 litres of working developer. That's a potential 100 rolls of 35mm colour film!

So began the hunt for colour chemistry. The majority of the chemicals can be sourced in the UK, apart from two, 4-(N-Ethyl-N-2-hydroxyethyl)-2-methylphenylenediamine sulfate (conveniently shortened to CD4), and Hydroxylamine Sulphate. There are suppliers who sell these products, but not to individuals, and not to domestic addresses; something to do with the law?

This is where social media comes into its own. I am a member of a number of Facebook groups and through one, the UK Film Photography and Darkroom, I made a contact who knew a man in Germany who could help. After a few introductory emails, I scored my deal on the elusive CD4 and Hydroxylamine Sulphate. Now for the home developing Lab.

At the end of 2019 I was diagnosed with kidney cancer, which was sorted by a short stay in hospital and keyhole surgery. There is no doubt that being told you have cancer changes your attitude to safety rules & regulations. These chemicals are dangerous, if not handled properly. So, I was determined to make sure I had the required safety precautions in place. It does require some investment, but trust me, it's worth the peace of mind.

My basic kit (see my new portrait) comprises a particulate



proof face mask, eye protectors, thick rubber gloves and a lab coat. Our utility room, which has a good extractor fan and the ability to open the back door to allow added ventilation, has become my laboratory. To assist with mixing the chemicals, I bought a magnetic stirrer with a built-in heated plate, and a kettle which has the facility to set the temperature of the water from 40°C to 100°C. I already owned two sets of digital scales for my black & white chemistry, one to weigh small amounts down to 100th of a gram, which is crucial in this game.

The scene set, the equipment and chemistry bought, the recipe to follow, it was time to cook!

It's important, I think, at this point, to mention I got an unclassified in my Chemistry O-Level, and I am sure my high school teachers would be astonished at what I am doing forty years later.

That being said, my first batch of home brewed C41 developer concentrate is made. It wasn't perfect, and had an unusual, and unexpected white sludge in the bottom after I added the Potassium Carbonate but guess what? IT WORKS!

The colour images you see with this article have been produced from film developed in my chemicals, and taking into account only the costs of the chemicals, it works out at £14.24 a litre of concentrate, which is 10 litres of working C41 developer, which is enough to develop at least one hundred 35mm films! The next stage is to look at the economics of home-made C41 bleach and fixer.

Early calculations indicate that it will cost less than £1 to process one roll of 36 exposure 35mm colour film. That's a third of the price of the cheapest commercial lab in the UK that I have been able to find (not including postage).

For those who want to have a go at home developing C41 film, there are other, easier options; I strongly advise you give them a go first, before you try mixing from scratch.

Two kits I recommend in particular: for those who only shoot a few rolls the Bellini C41 kit is by far the most convenient. For those that do a lot of colour film photography, I recommend



Above, left and centre of page – fresh Kodak Ektar 100 film produces colours and a dynamic range which digital still can't match.

the Fujihunt C41 X-Press 5ltr kit, which will develop between 60 to 80 films, and can be split down to 5x 1 litre kits.

Storage is important. 1ltr brown glass bottles are ideal for protecting your chemicals, especially if combined with vacuum seal bottle tops such as the ones in the Vacu-vin range. However, any plastic bottle with the PET mark on the base will work well, as it doesn't affect the chemicals. I use the Tesco pure fruit juice bottles.

If you don't have the benefit of owning a Jobo CPE processor, a standard sous-vide heater (normally used in cooking) and a large plastic storage box in which you warm the chemicals will do just as well, and at a fraction of the cost. New Jobo processors are in the region of £3,000; second hand, you can expect to pay between £300 - £400. A sous-vide and a box big enough to hold water to warm your developing tanks can cost as little as £20 to £30.

In closing, I'd like to thank my high school chemistry teachers – you were right. There does come a time when you can use what you taught, in real life!

– Rob Halliburton



<https://www.halliburton.photos>

Expired films can still be perfectly usable. Left, expired Kodak Portra 160, below expired Portra 160.





# Maxing the megapixels – from 16-shot pixel shift to Adobe's Enhance + Super Resolution

All any camera needs for a sharp double page spread in this magazine is 12 megapixels. It's better to have 16 to allow full bleed and adjusting the crop from a 2:3 ratio image. If you shoot 24mp, good prints to A2/20x16 need nothing more. So why do we now see a trend to 50mp and upwards along with innovations like Adobe's *Enhance* with *Super Resolution* processing from raw which turns 50 into 200?

If you use a camera like Sony's 61 megapixel A7RIV one good reason is clear – the option to crop the frame from 24 x 36mm to 15.7 x 23.6mm produces a useful image size, higher resolution than the maker's APS-C bodies at 28mp. For many applications this is an ideal image size. You can carry APS-C lenses for travel and get a huge working range from three relatively compact ones at 10-18mm, 16-70mm and 70-350mm.

However, having stepped up from 42mp to 61mp we see a much greater difference in the full frame files than expected. It's useful to have the higher resolution when testing lenses. It does reveal more about performance – but it also makes depth of field become surprisingly critical.

It's been good practice to set midrange zooms between  $f8$  and  $f11$ , and moving from 24 to 36 and even 42 megapixels didn't change that optimum. With the 61mp sensor, using an aperture like  $f9$  means that even at 28mm only a shallow zone is in perfect focus. With a subject like a park with flower beds closer and a building further away, both will not be sharp at 100% when from years of using lower resolution sensors they should have been fine. Using a higher resolution sensor is almost like using a larger sensor in an MF system.

To deal with this, you need to be shooting at  $f11$  to  $f16$ . The higher megapixel count means a



*The Sony A7RIV can take 16 61 megapixel raw files and create an .ARQ of around 880MB size, which opens in LR/ACR 19,008 pixels wide. Below, a 300dpi section of a file like this shot using the Laowa 100mm apo at  $f11$ .*



finer pixel pitch so you then get diffraction-limited sharpness. 24 megapixel full frame sensors only start to lose fine detail contrast at  $f16$ . The 61mp sensor shows a loss even at  $f11$  and seems to be optimal at apertures of  $f8$  or wider where differences in sharpness from depth of field are going to be visible at 100% even within a group portrait. They are going to bug you when you edit and retouch.

Despite this, the depth of field for A4, A3, A2 or any other given print (or screen display) size will be exactly the same regardless of pixel count. It's just the 100% view which will dig too deep. For this reason, 61mp images are often scaled down to half size. Stock shots only need 2400 x 3600 pixels, 4000 x 6000 is not overkill but 6336 x 9504 (the A7RIV image size) is way over the top. It's not really an issue of disk storage space or processing speed, as the compressed raws are efficient and for whatever reason the latest versions of Adobe programs are running fast even on Intel processor machines. It's simply a larger image than needed.



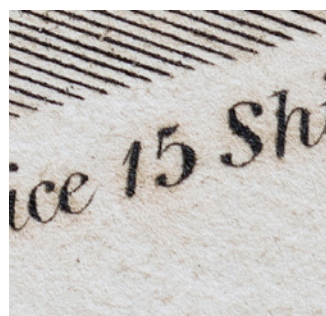
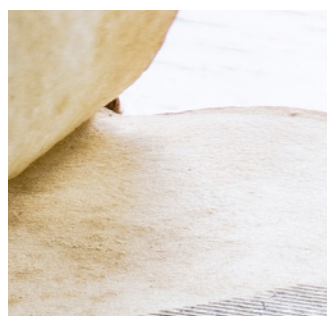
See the panel about Retina type screens and 100% view in simulated 'Low Resolution' screen mode on page 28 – if you normally resize or export at 50% of the raw size, you may want to leave the editing program at default and not opt for the Low Res setting.

## Pixel shift multi shot

With Sony, Pentax, Fujifilm, Olympus and Panasonic cameras multi-shot high resolution capture can create even larger files or improve pixel level detail. Multi-shot always demands a very good tripod, heavy enough to damp any hint of vibration from the ground or wind. The type which superimposes pixels to create a true RGB image without a Bayer pattern does not increase the image size and normally involves four exposures. The type which interpolates with 16 exposures creates a Bayer pattern image twice the linear dimensions of the normal raw. For the Sony A7RIV, this takes the highest current full frame pixel count and are turns it into 240 megapixels – 12,672 x 19,008 pixels.

We've tested both pixel shift methods. The true RGB one improves the image detail and quality with most lenses. The 16-shot one hits the limits of optical resolution and very few lenses can match it. The depth of field problem is greater, it's like working with 5 x 4" film and critical focusing is not enough as to achieve the best MTF balance a fairly wide aperture is called for. The peak resolution of a top grade 50mm f1.4 prime lens may be around f4 but the depth of field you want demands f22 which degrades that resolution in a big way.

With medium format sensors like Fujifilm's GF 50 or 100 megapixel choice, expert commercial users are now using focus stacking for subjects like architecture, landscape and still life products. This demands many shots. If you need to take 20 focus stack shots each with 16 sub-frame exposures and the raw data is 100MB every picture will need 24GB of card space before you even transfer that to the computer and start a long day processing the result.



On a sensor like Sony's 61 megapixel full frame, a tilt lens may be the only way to get critical sharpness in depth in a single shot. Top, full image taken with a Pentax SMC Takumar 50mm f4 macro at f8 with maximum tilt on a Russian-made adaptor; top and bottom 100% sections, above left and right. Below, upper image shows the result from a 50mm f2 Zenitar as originally fitted to the adaptor – it's just not sharp enough for such a high resolution image. Bottom, the Pentax macro from around 1969 certainly is and using four-shot high resolution (no increase in image size) revealed every detail of the paper texture. Focused at highest magnification.



A tilt or tilt-shift lens (shift alone will make no difference) can improve sharp detail in shots where an angled focus plane coincides with the 3D form of the subject. An Arca-Swiss body with movements and a Phase One IQ4 150 megapixel back may be the ultimate solution to quality for commercial use.

You may ask yourself where this ends and who is ever going to notice! Perhaps a simpler and older solution for 'gigapixel' images can be found from Domingo Leiva (see page 34) stitching together multiple shots. *Photoshop Automation*, *Adobe Camera Raw* or *Lightroom* and many other programs now do this so well and so fast.

## Adobe's Enhance process

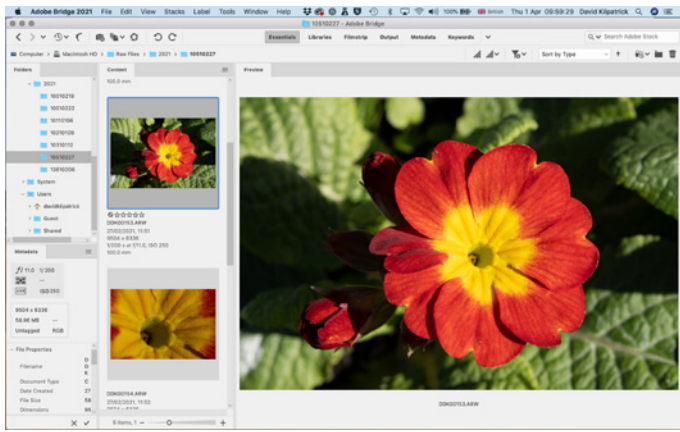
It's been possible for years to use special programs to upscale images with better detail than a straight 'Bicubic' size change. *Genuine Fractals*, *SizeFixer*, *Topaz* have been tools enabling larger prints from inferior JPEGs. The new *Adobe Camera Raw* 'Enhance' Super Resolution' process is different because it works directly from the raw file.

We've always been able to export to a larger size than the original with *ACR* and *Lightroom* but this has only been a little better (if at all) than enlarging in *Photoshop*.

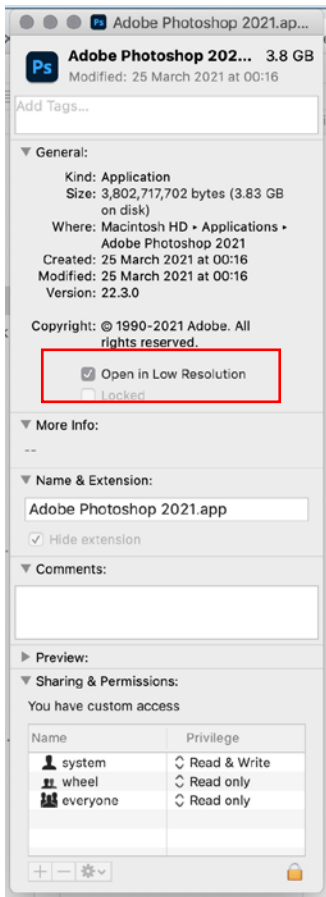
The new process rolled out in *ACR* and due to arrive in *LR* has two functions – **Enhance Detail**, which can be applied to a Bayer raw file without changing the image size, and **Super Resolution** which doubles the pixel dimensions of any type of image but *only adds Enhance Detail for Bayer raws*. It takes a minute or two to create and save a new .DNG file which is your 2X resolution raw, five minutes if you're processing a very large raw on a slower system.

I've run the process many times and found that it can make major improvements to older files shot on DSLRs from 10 to 24 megapixels. If you're using something like an earlier Canon EOS 5D or a Nikon D2X or D3X, any of the 10 to 16 megapixel Canon 1Ds or 1D series, Sony A900 or A99 low ISO raws can be seriously improved by this





Above: Bridge browsing with thumbnail left, and preview right. This view is unaffected by the Open in Low Resolution option.



## Retina resolution – the fix to restore 100% photo viewing on high resolution screens

Monitor screens once used to be 60 or 72 dots per inch, with the Apple Macintosh neatly matching the print industry point measurement at 72. This is also why pocket cameras tagged JPEG images to be 72dpi. Today's screens are usually 96 to 120dpi (standard) or finer than 200dpi like Mac Retina and other fine pixel pitch types. By default, applications like Bridge, Photoshop, Lightroom and Affinity treat 100% view as pixel for pixel meaning on a 240dpi Retina screen you see the image half the size (a quarter of the area) as on a 120dpi screen like an older 27" iMac or an external HD 2560 pixel wide display. This means a client, or a judge in photo contests, may examine your picture at 100% twice as large – and twice as soft – as you do. This can be fixed by selecting the App icon in Mac finder, pressing Command-I for Info, and clicking 'Open in Low Resolution' (screen shot, left). The program will then use 2 x 2 (4) pixels for each image pixel and it becomes much easier to assess sharpness and do retouching work.

This only shows how Bridge 100% rapid checking is improved by the Low Resolution checkbox. The same happens with Lightroom. With Photoshop itself, you can choose whether to just use a 200% view to be able to see pixels clearly, or set the Low Resolution option (it is only present if your system has a high resolution screen like Mac Retina and won't show at all if your screen is already a normal or older 120dpi type). Setting the Low Res option in Photoshop also gives the larger true 100% in Camera Raw when the 'Fit > 100%' magnifier toggle is used

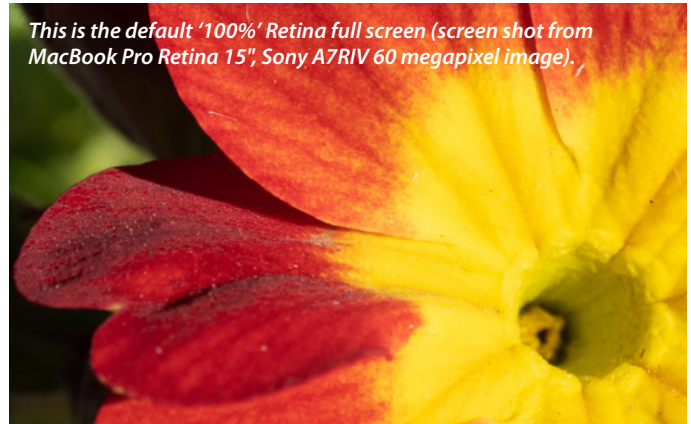
process – you don't just get a larger image you also get more visible detail. Reducing the super-res image back down really shows the enhancement, even if larger than the original size. So a 2004 Konica Minolta Dynax 7D raw, if shot with a high quality lens, opens as a 24 megapixel .DNG into ACR/LR, and looks excellent at 12 megapixels. Old camera raws which work well include the Sony A100 (first with a very weak AA filter) and the Kodak DCS full frame models with 13.5MP sensors (no AA filter). With Nikon D3 or D700 raws the details

just snap into focus when you use the preview function to compare before and after. The very low noise keeps the enlarged image clean. You turn a 12 megapixel classic DSLR into a 48 megapixel one able to match today's image sizes.

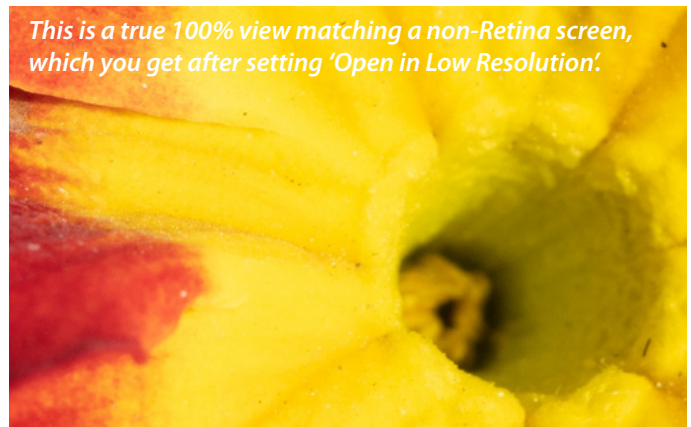
As for modern higher resolution raw files, those with AA filtering are improved and the process can also cure a bit of lens softness or poor focusing. When the raw is perfectly focused with no AA filter (often cameras with 'R' added to their model number) there is not much to be gained from the Enhance



Press the Space Bar, and you switch to full screen preview, above. This is also unaffected – but the 100% view when you click on the image is.



Click where you want to zoom in, and be sure to wait for sharpness to build.



Detail stage and it can make slightly out of focus textures like earth or stone look oversharpened or altered. 240 megapixel raw .DNG files created from Sony A7RIV 61MP .ARW files are impressive... but at normal viewing distances for such a huge print size they also are not needed.

The process is good for blowing up a heavily cropped image. The crop is remembered with the DNG file but there's no disk space saving. Save a 16-bit TIFF, cropped, instead, if you want a compact version of the enhanced and enlarged crop

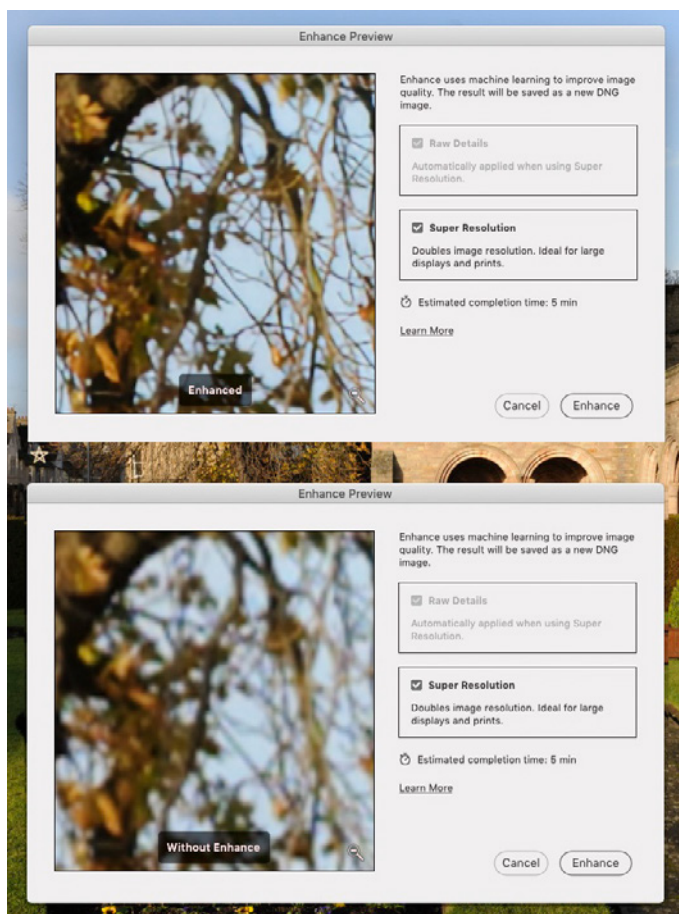
suitable to work on in future.

It is also possible to use the Enhance Detail function without enlargement but with most new mirrorless cameras and recent lenses the original is so good you would never bother – there's no visible effect. The best use is to improve detail from older raw files where a strong AA filter has softened the rendering.

We appreciate that this whole subject is a bit intense and geeky but these are the tools you have available – use them!







From a Nikon D3 raw file with very good original sharpness from the 24-70mm at 29mm and f9 at ISO 100, the difference between blowing up to 48 megapixels without Enhance+Super Resolution and with it should be clearly visible here. The lower clip has the preview set to 'Without'. Below, from a 24 megapixel Sony A900 raw – top, original, bottom, enhanced to 96 megapixels then reduced back to 24.



Free to read online – Creative Light bi-monthly e-magazine – <https://tinyurl.com/guildCL>

## Commercial Cameras

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# PASTEL PETALS

ETHEREAL CLOSE-UPS BY MOLLY HOLLMAN



Whilst I have always loved nature I only began specialising as a flower photographer about two years ago, around the same time that I joined the Guild of Photographers. Previously I had been interested in most genres of photography, especially landscape, portraiture and street photography, and these genres still inspire me, even though I don't shoot them as much (especially since lockdown!).

Growing up as the daughter of artists and potters I have visited

galleries all my life and have always enjoyed all the visual arts and found real inspiration there. When my children were born I switched from drawing and painting to photography to capture them as they grew and bought a Pentax DSLR as I had previously had a Pentax film camera.

The pivotal moment for my switch to flower photography however was probably when I won a Sony RX10 MkIII bridge camera from Amateur Photographer magazine three years ago. This showed me the real potential of shooting

with a long lens – prior to this I'd had nothing more than 100mm but now had the equivalent of 600mm to play with (the Sony has a zoom of 220mm but this is equivalent to 600mm at its crop factor of 2.73).

Starting with birds, I then moved to insects and butterflies, and then to the flowers that my subjects were to be found on. I discovered that I loved to sit, often for an hour, quietly in a garden, observing the small details of nature and how the light fell upon them. Shooting small subjects at 600mm from a distance meant

that whilst the background was beautifully blurred, I could still preserve the detail of most of the flower or insect, unlike when using a macro lens where the depth of field is much more narrow.

In fact, the RX10 III at full reach and  $f4$  gives an equivalent aperture similar to using  $f11$  on a 24 x 36mm sensor. One of my favourite flower photos of a blue Nigella flower is taken in exactly this way, at full zoom, retaining enough detail to preserve the petals and flower bracts whilst giving an ethereal light with its blurred





background. Light and colour are so important to my style, and I'll study how the great artists and photographers use them at length as part of my photographic development.

One and a half years ago I bought a Sony A7III and 55mm Sony Zeiss lens, then set about finding flowers that worked well at its maximum aperture of  $f1.8$ . From my days with Pentax I had always loved shooting wide open in an 'Impressionist' style and in fact have kept some of my vintage Pentax lenses so that I can use them with the Sony A7III with an adapter. This means I don't have access to autofocus, but when you're shooting flowers close up, manual focus is usually preferable as you can place the point of focus exactly where you want it to be (which is often the centre of the flower). Given the choice, the camera will often focus on the nearest petal instead. My vintage lenses give beautiful bokeh if the light is good and not too harsh – and I'm learning more and more which

flowers work well with particular lenses.

Depth of field is sometimes hard to preview on the rearview screen and to counter this I'll often shoot the same image at different apertures, only deciding later when viewing on the computer

which one works best. Often isn't the aperture you would have started out with. I always shoot in raw as flower photography works so well in the beautiful light of the golden hours, and raw means that I can adjust the highlights in post production if I need to.

In 2020 Molly was a finalist in the Royal Horticultural Society Photography Competition for a portfolio of hydrangea photographs (results pending) and placed 2nd in the Close Up Photographer of the Year (Colour Challenge) competition. She was a finalist and received Highly Commended and Commended awards in the 'Square Crop' and 'Beauty of Plants' categories of International Garden Photographer of the Year Competition and was a Garden Photographer of the Year finalist (with the Professional Garden Photographers Association and Garden Media Guild). She was also a finalist in the Beauty of Plants and Social Media Categories of the RHS Photography Competition 2021 (results pending) and was shortlisted in the macro category of the British Photography Awards. With The Guild of Photographers she won Image of The Year in the 'Flora and Insects' category and was Runner Up in the overall Image of the Year 2020 - Judges' Choice, besides achieving 3 golds, 9 silvers and 18 bronzes.

You can see her work at:

[mollyhollman.myportfolio.com](https://mollyhollman.myportfolio.com)  
[www.instagram.com/mollyhollmanphotography](https://www.instagram.com/mollyhollmanphotography)  
[www.facebook.com/mollyhollmanphotography](https://www.facebook.com/mollyhollmanphotography)  
[www.twitter.com/HollmanMolly](https://www.twitter.com/HollmanMolly)

About a year ago a routine emerged. The day job (I'm head of music in a secondary school) was Monday to Thursday, and every Friday I'd visit a local garden and photograph it. I started writing two books – one about photographing flowers, and one on the gardens of Kent (where I live). Writing about method and ideas actually helps my understanding of the photographic process better and I find that I refine my ideas more effectively and even think outside the box more.

Then Covid happened, and lockdown meant working hard on my own garden to make sure I had enough to photograph! During this time I began shooting more with a macro lens (a vintage Vivitar 55m Pentax fit which I love) but also explored the still life genre as it was something that I could do indoors.

My incredibly helpful Guild Buddy Group have really assisted me with the editing side of things. Coming from an art background meant that I had always tried to

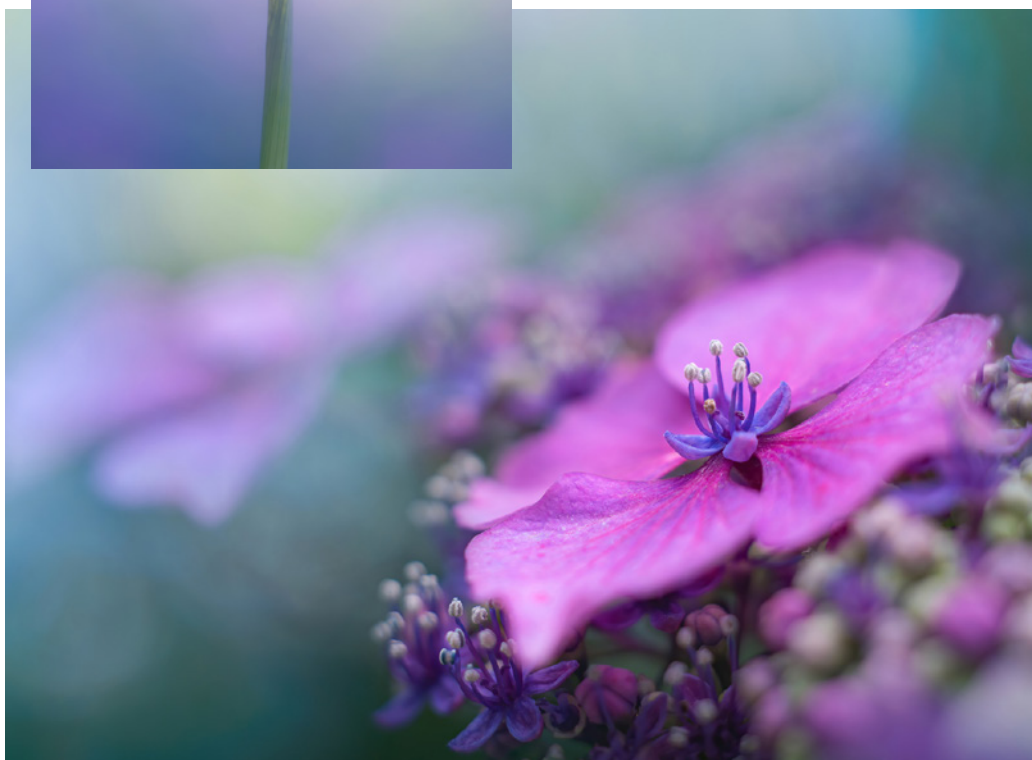




do as much as possible in camera but entering competitions on a regular basis meant that I needed to know how to clone out dust spots and check for highlights and so on. The Guild's webinars and Photohubs have also been invaluable to my development.

Learning how to use layers to add an overlay on to my photos was also something crucial for me as it meant that I could mask out backgrounds that didn't complement the subject, and I began making my own overlays for this purpose. I now sell them through my website. I still always try to photograph my flowers 'in the field' as it were but if I shoot indoors, particularly with still life, I will invariably add an overlay or texture, as plain white or black backgrounds don't give the depth to my photos (or the interplay of light and colour) that I find preferable to my style.

I'm very lucky that I don't need to make money from my photography (and hopefully this means that I won't get stuck in a rut creatively) but I do sell prints via my website and also in the region of about 300 greetings cards each year, most of which I have professionally printed. I give flower photography lessons and workshops and have now finished my book about flower and garden photography which I hope will be published in the summer. I'm currently working on a project on pollinators and hope that I will have a busy year ahead now that we are all able to travel more widely and I can visit gardens further afield.







# Domingo Leiva's blue hour – beyond the range of light

Before any image is created, Domingo Leiva does his homework. He spends hours familiarising himself with the locations that he has decided to photograph before a trip. He thoroughly analyses the way other photographers have captured that same place. He reads about its history or about the concept that the architects who made the design wanted to capture. Once he arrives at the building, when the light is still uninteresting, he relaxes, puts the camera aside, and tries to pre-visualise the final outcome and the various angles that could be shot. “That peace of mind allows me to spend more time looking for less obvious frames”, he says.

Domingo is probably best known for his blue-hour, perfectly tone-mapped HDR panoramas, which he calls ‘Impossible Realism’. One of his biggest customers has been the tourist board for the city of Almería, Spain. “Almería is the province where I



live, when I am not traveling”, he says. “Visually it is one of the most interesting places in the Spanish Mediterranean, from a photographer's perspective.”

Once he was hired by the Almería Tourism Administration to photograph the capital city and the Cabo de Gata Natural Park, “which gave me the opportunity to take my time and carry out a job that I feel quite satisfied with. Not only have the images been used to promote the tourist destination, but its images are an essential component of the Almería interpretation museum, and are part of a permanent exhibition at the Cabo de Gata Exhibition Center and Almería Airport.

“The goal was also that the images might go viral, which would generate viral images that would give an attractive vision of this land, and I think that it has been achieved quite well.”

He has since used his techniques in cities around the world









## The Process

Typically he'll shoot on a tripod and pan to several positions, shooting 2-3 bracketed exposures per position, resulting in 15-20 raw images per scene. What happens next depends on what year you're talking about – in the early years (around 2007) he would individually develop each of the raw files, save them as TIF, convert them to HDR, with a tone mapping that would allow for later editing in *Photoshop*, and finally stitch the panorama together. This was a task that required patience, expertise and experience, to ensure an optimal image. The process then would take several days and use up to 200 adjustment layers.

"Today that same task, with even better results, can be performed by anyone with little knowledge or experience in just two or three hours", he explains. "Today's software offers excellent tools for merging HDR-panoramas from original raw files though while these tools save time the process is still complex and not easy. And best of all, the output

file is itself a digital negative, so the information is preserved in its entirety, with unlimited editing possibilities."

He uses a plug-in tool called *TK7* to generate luminosity mask layers in *Photoshop*. The actual step of Tone Mapping is done with the aid of *Luminar AI* from Skylum, and finally the *Photoshop* layers are all blended and adjusted for contrast and tone.

Domingo actually got his start as a psychology major in college. He started as a psychologist in the market research department of an advertising agency, and from there he discovered a special ability to develop strategies and create concepts. "It was an exciting activity, quite stressful and well rewarded financially. Being paid to be creative is something that people rarely prioritize in Spain, especially during the last century."

But the artistic work applied to the commercial field has an alienating character – he had to push out messages that were not always in alignment with his values. "You lend your talent to developing a brand, which is

*Previous spread, left hand page, City of Arts, Valencia. Top panorama – Rügen Island, Pomerania, German Baltic coast. Bottom right – Matthias*







*Church, Budapest. Above – Valle del Andarax, Huecija, Almería. Below – Church of Santa Maria la Mayor, Ronda, Andalus.*



totally alien to your values as an individual. I especially disliked the long periods in which I had to carry out political communication consultancy tasks, developing electoral strategies for parties with which I almost never shared any ideological affinity.”

He finally left and started his own communications company. He remained the creative director so he could keep in touch with the part that he liked. “For 25 years I had time to carry out many campaigns, and without a doubt the ones that motivated me the most, and of which I am most proud are those that played a role in helping citizens. Due to my particular training and social sensitivity, the effect on human well-being that my work carried out on these occasions had a great relevance in my scale of values.”

So what changed? And why graduate to photography? “Creative advertising management involves extensive training in all kinds of artistic activities related to your work environment. Of all of them, photography is the one that most attracted me as a personal activity.

For many years I supervised the photo shoots in the agency’s studio and especially enjoyed this part of my work. For years and privately, I would get up at dawn to go out with my camera to do personal reports. On vacation I scheduled my time to travel and take photos of the places I visited.

“When I decided to quit advertising, the goal I set for myself was to turn what I did on vacations, traveling and taking photos, into my source of income throughout the year. With hindsight, I think that having made the decision earlier would have forced me to choose between personal photography, which would hardly have allowed me to make a living, or commercial photography which I would not have been happy with but met the paying client’s needs. Making the decision at age 50 removed the economic pressure from the process, because that aspect was reasonably resolved. The 25 years of working in advertising helped me to ‘buy my freedom’ and allow me to do only the type of photography with which I felt fully satisfied.”





Above: Almeria from the Alcazaba.  
Lower right – Puente Zubizuri, Bilbao.  
Below – Guggenheim Museum, Bilbao.

Story: Gary Friedman  
All photographs © Domingo Leiva







And the timing was good too, as he made the transition at about the time digital cameras became a thing. His identity as a photographer has been closely linked to the capture and processing possibilities that digital photography offers.

“Without them my photography would be radically different from what it is. And these possibilities opened up to me at a late stage in my professional activity.”

So he walked away from a lucrative career in advertising

when he was 50. He’s now 63. In the intervening 13 years he’s been teaching at four universities in Spain and Latin America – subjects as diverse as Visual Communication and Political Marketing, with a heavy emphasis

on strategies for social media. Also photography, in areas ranging from panoramic capture and processing techniques, including HDR and advanced editing.

And of course he’s been around the world several times,





published 30 books and over 30 national magazines, and has been featured in several art gallery exhibitions. His images have even been turned into posters and official commemorative stamps. His flickr site:

**[www.flickr.com/photos/dleiva/](https://www.flickr.com/photos/dleiva/)** provides a wealth of examples of his work.

And then there's his social photography, B&W street photos done in the traditional manner, which are completely different from his HDR work. "In these types of images, the approach during the shot is radically different. In order to get closer to the subject, and at the same time contextualise it with its surroundings, I almost always use a 24mm lens. The use of wide angle and physical proximity seem to me fundamental resources to enhance the immersion of the viewer in the scene. To illustrate this idea when I teach a course, I always remind my students of Robert Capa's famous phrase 'If your pictures aren't good enough, you aren't close enough'.

"My goal is to capture the scene in the most natural way possible. To do this, I try to prevent the camera from being an intruder, which can attract the attention of the people photographed and skew the result. That forces me to be as unobtrusive as possible. Normally I use a lightweight compact, mentally calculate and shoot with the camera hanging on its strap, with no shutter sound.

"The choice of colour or black and white, for the processing of a social report, is essentially determined the lighting conditions. I go for black and white when I can't control the light, as I did in the 'on the road' report that I did in Ethiopia. These are images taken from the window of the van along the way. I decided to do it because the most interesting part of this African country is parading in front of your eyes when you are traveling inside the vehicle. I decided to work at speeds greater than 1/1000s, with the ISO set to auto and relying on the fast focus speed of the Nikon Z6. I'd shoot in burst mode for a few tenths of a second.

"Processing it in black and white was a decision based on the convenience of simplifying



*A different side of Leiva's work seen in his passing-vehicle moments from Ethiopia.*

the image, eliminating elements that were out of control, such as interference from unwanted colours or the extraordinary weight of the shadows from the vertical light of the middle hours of the day. However, they can be used as interesting compositional elements when working with grayscale."

## Equipment

Domingo cares less about camera brand and more about the dynamic range of the sensor. "When I go on a trip, I usually carry three cameras, a compact one with a 24mm focal length, which I use for

street photography. A traditional full-frame SLR, which allows me to use the lenses that I have inherited from my cameras over the years, and a Nikon Z6 with a 24-70mm lens to shoot with very high ISO and low noise in the shadows. It also has excellent speed and precision in autofocus.

"I always take a compact for street photography with me. In this case, to select it, my criteria were always the speed and precision of focus and a sensor as large as possible, without megapixel overhead, to minimise noise in the shadows."

So what's next for Domingo? "Because of the pandemic, I have

not been able to travel for a year. Although I have visited some sixty countries in recent years, I still have many, many places to discover and I hope to resume my travel schedule as soon as possible. As soon as circumstances allow, I will take up my camera to go back to what I have been doing for the last thirteen years – that continues to be my passion."



**For more information see:**  
**<https://dleiva.com>**





## Colour your subject by colouring your light with gels



Colour has great power. It is linked to our perception of the world around us and even if the main subject of an image does not change, the look and feel can be changed dramatically by simply adding or altering the colours of the image.

There are a number of ways in which the colours used within an image can be changed and the one that many people would rely upon is during digital post-processing. However appealing this option may sound, it is rarely

here, they can also be used to match flash colour with the ambient lighting conditions.

In the above example, we can see that complementary colours in the background are being used to highlight the vibrant colour of the subject. If you look closely, you can see that there are three individual areas in which the colours are being controlled separately. For each of these lights, the intensity and colour can be adjusted without affecting

other areas. The glossy surface of the glass lenses is being lit with a green light. The black arm of the frames is being lit using a white light and the background is being lit using a purple light.

The lighting setup for this image is relatively simple with a strip box with a green gel fitted on the left behind a diffuser. The main light on the right uses a grid to minimise spill and has no gel fitted. The background is over a metre behind the subject and is lit from the right with a purple gel.

Once this image is set up it is simply a case of changing the coloured gel fitted to each light to produce a dramatically different image. There are many



options for which colours to use such as similar, complementary or contrasting colours. I often use a colour wheel to help select colours that work well together.

Gels are very inexpensive and I use set of just 10 gels that can be used individually or in various combinations to produce over 50 different variations of colours and shades.

Before these, I used speedlights with *Quality Street* wrappers taped in front of the light for many years and they worked well! It was the cheapest, easiest and most effective way to start experimenting with colour to add interest and drama.



Four other examples from the set-up achieved by changing the colour of the gels on the flash heads..

the best option and will often lead to unrealistic reflections and a fake looking image.

The best way to add colour to areas of an image is to use gels on your studio lights. Gels, also known as coloured filters or lighting gels, are simply pieces of thin transparent coloured plastic that are placed in front of the light so that all light for the flash takes on the colour of the gel. In addition to the large colour changes discussed

Ian Knaggs, a UK based advertising and product photographer specialising in studio product photography, is a popular instructor in studio set-ups and lighting, digital processing and Photoshop.  
<https://www.ianknaggs.com>



# LENS REVIEW 1

## Sigma 28-70mm f2.8 DG DN C

**W**ith one rival maker's lens in well-established competition, but nothing similar from Sony, Sigma's new 28-70mm f2.8 for full frame mirrorless (including the L mount system) needed to compete on a combination of qualities. The main focus seems to have been on size and weight, followed by focus performance and features, optical quality, and finally price.

Sigma's optical quality is now equal to or better than Sony (including G and G-Master as well as Sony Zeiss lines) and the design is based on the Art series 24-70mm f2.8. The price of around £750 with a saving of £300 over the wider range and much larger and heavier (almost double) sibling seems balanced.

A 28-75mm rival launched over two years ago sells for a little less now but had a similar launch price. It does offer 5mm extra at the long end but 15mm is added to the physical size as well as 80g to the weight to achieve this. The new Sigma's close-up ability is a touch less in terms of subject scale across the range but virtually a dead heat in terms of distance. The inclusion of an AF/MF switch on the Sigma is a welcome extra (with DMF supported in AF mode). The 67mm filter thread used is now becoming almost an industry standard for mirrorless full frame lenses and is far easier to work with than the 82mm of the 24-70mm Art.

The Sigma's AF system is about as good as you can get. Just a single element, not even a group, is used for the near-silent stepping

**Cutting the size right down but keeping the fixed fast maximum aperture, Sigma offers a worthy kit lens alternative for full frame mirrorless cameras**



*The Sigma 28-70mm is much smaller than their 24-70mm. Below, it is also 15mm shorter than a 28-75mm alternative.*



motor AF which tracks action well (not that the test period gave much chance of a good example). It also handled movie AF well, though many will switch to MF. Although the lens is almost entirely made using polycarbonate, the quality of assembly and attention to the lubrication and feel of zoom and



*The Sigma focuses to 1:4.6 at 70mm (38cm) or 1:3.3 at 28mm (19cm) – above, at f22. The zoom barrel does not extend far and focus is internal.*



*The only control on the lens is an AF/MF switch. No zoom lock is needed.*

focus-by-wire rings is as smooth as any metal engineering. The lens mount itself is plated brass, and with a sealing ring gives this part of the lens (but not the entire barrel) dust and moisture proofing. The Art design offers the same for the entire mechanism. The bayonet petal hood is the same material and noticeably smoother and more positive in fit than most.

As for optics, it's a high resolution design and did not disappoint on the Sony A7RIV. Two fluoride, two super low dispersion and three aspherical glass elements are used. It's best at 28mm to 50mm, losing a touch of wide open sharpness in the outer field at 70mm. Distortion is never seen thanks to the embedded profile, and turning this off in Adobe Camera Raw had no effect. Resistant to light source and general flare is provided by nano multiccoating with added oil/moisture resistance. Some CA fringe was visible thanks to the resolution of the A7RIV sensor but just disappeared by checking the CA removal option.

The central APS-C zone is particularly high resolution with this lens and to 42-105mm equivalent range works better than you might think. This is one of the smallest zooms in its class; Sony's 28-70mm OSS kit lens wins that still, but apart from lacking the f2.8 constant aperture which makes low light AF practical it loses in every other respect too from subject scale and close focus to resolving detail. The non-stabilised Sigma is in a different class for sharpness.

The Sigma 28-70mm f2.8 is a perfect upgrade from that kit lens. It's really well balanced on the current Sony bodies whether full frame or APS-C, a great match for the tiny movie-tuned Sigma fp or fp L and will feel small on a Panasonic or Leica. It's a new lens which for once has a reason to exist. – DK



<https://www.sigma-imaging-uk.com>





Above – as an alternative to a prime 28mm or 35mm, the zoom has benefits. Exact framing was needed for this, between those two lengths.  
 Below: the profile correction eliminates any barrel distortion at 28mm as well as vignetting. Detail: at 300dpi, Sony A7RIV, 21 x 31.6" print size.





# LENS REVIEW 2

## Laowa Ultra Macro APO 100mm f2.8 2:1

There are lens brands which we don't expect to test or see advertised, because they rely on social networking and ambassadors along with a keen user base. Laowa is one of these – they are innovative, often maverick lenses which sometimes exceed any competition in specifications and performance. The brand is also known as Venus.

The Laowa 2X APO Macro 100mm f2.8 was a lens we bought with a view to writing this and then selling it or keeping it after a month of use. It comes quite beautifully packed and presented for around £469. The lens barrel is durable black anodised metal but the plastic lens hood looked years old within a couple of days.

Inconsistencies first. We wanted one to fit Sony FE. They make one. It's a dumb lens – manual aperture, no chip, no communication with the camera. They also make one for Canon EF which is manual focus but has the chip and contacts with aperture controlled by the camera. Since this model reports its focal length in EXIF, it can be used on a Sony body with an EF-to-FE AF adaptor and will do all the right things with the stabilisation and exposure control. As this Canon model was also cheaper than the dumb Sony one, it was possible to add a Jintu model II EF-to-FE AF adaptor at under £40, operating the aperture and reporting 100mm

**This manual long focus macro gets down to double life size but uses a focus system more like a zoom to achieve it**



*The Laowa is finely packed and presented as well as premium brand glass.*



*The lens hood is plastic and marks easily.*

focal length. So we now had a properly connected manual macro lens, lacking only the distance sensor and information given by the best in that class, Voigtländer's 110mm f2.5 Macro Apo Lanthar.

A 100mm macro lens which focuses to 1:1 needs to tell the camera its focus distance to get the correct stabilisation – at 1:1 it could have the same angle of view as a 200mm lens, and need the same pitch/yaw shake correction. Sony's own 90mm macro has built-in optical stabilisation matched to the focus distance which solves the problem of angle of view change.

The Laowa 100mm f2.8 2X macro seems to work well with sensor-based stabilisation. But

it doesn't focus in the same way as a 'normal' macro – more like a varifocal. A rear group moves slightly and a front group does the heavy lifting, from being 50mm recessed in the 130mm long slim barrel at infinity to being almost flush with the front 67mm filter thread at 2:1. A slim Laowa MC UV protector is provided with the lens – worth £20 or more on its own. The lens hood bayonets on and is 60mm deep.

Focusing down to 2:1 at 24.5cm uses just over a quarter of a turn and from infinity to portrait range is a mere centimetre of scale movement. The magnified manual focus on Sony A7RIV combined with the full-aperture focusing of the adaptor and lens combination



(something not given by native Sony or pure manual lenses) ensured precision focus every time but no preview of depth of field, which you get with Sony protocol lenses after the third of a second or so the lens takes to stop down with first shutter pressure.

At 2X scale, the rim of the lens without hood is 80mm from the subject. At life size, it's 100mm with the front element now recessed by 25mm. While you don't get the same working clearance as a conventional 100mm macro (around 140-150mm) or a modern hybrid internal focus AF macro (around 120-130mm) it



*The Canon fit version can be adapted to Sony enabling IS and AE control. Right: intelligent EF mount, and supplied UV filter.*





Grab yourself some Tesco Omega 3-6-9 capsules and see if you can find one in the tub which stands up to 2X... the capsule is 15mm long and at 60 megapixels would be beyond retouching – more than a clean room would be needed. Taken at  $f16$ . Note the background blur free from any LoCA colour tint. Below, full shot as taken, and 300dpi tiny section with +0.5EV correction showing neat aperture stars from the reflected sun at  $f7.1$ .



Above: at  $f11$  only a small zone of this crocus is sharp but detail is visible in the stamen (saffron) which can't be seen by eye. Below: a distant scene at  $f8$  is ultimately sharp, with single lines of wire resolved at 3km distance.



is acceptable. The 70mm barrel diameter is a little large for getting up close to some subjects. With 1:1 at 26.5cm distance, it compares to the Sigma 70mm  $f2.8$  at 25.8cm or 105mm  $f2.8$  at 29.5cm and the physical length of the Laowa never changes, at 152mm (including EF adaptor).

What really matters is optical performance. At distant range for landscapes and mid range for flowers, still life or humans it's staggeringly good. At sensible working apertures like  $f8$  to  $f11$  it matches the best, and it is only depth of field which makes  $f2.8$  any different. At macro range, it's essential to use even smaller apertures especially with a high resolution full frame sensor – even  $f22$ , its limit. Diffraction loss will set in but unless you use focus stacking  $f16$  to  $f22$  is the only way to take some three-dimensional subjects at 2X. It is very difficult to judge sharpness in macro shots because the scale influences perception. It did, however, reveal just how mucky the world is... every microscopic dust grain!

As far as corrections go, it appears to be a true apochromat

with no colour fringe or no longitudinal colour (LoCA) issues. It will produce absolutely neutral bokeh. Colour is slightly warm.

The lens has one flaw, which is flare, bright low sun just out of the shot can cast a sharply defined bright veil of reflected glare. To be absolutely sure this was not a mechanical issue, we lined the EF adaptor with telescope blackout flock. The filter was also removed but this made no difference. The flare happens in backlight where other lenses set to 100mm show none. For most subjects it will not happen and there is no sign that something like a bright sky or a studio hair light, or lights in shot, will cause it – it needs bright sun just out of shot.

If you want two times life size it's the only lens which offers this. We bought from UK Digital, including VAT, UK stock with a 5-year warranty. They also stock Sigma, Zeiss and many other brands and are the official retailer for the Laowa range.

– DK

<https://ukdigital.co.uk>





# LENS REVIEW 3

## Tamron 70-300mm *f*4.5-6.3 Di III RXD

So many new lenses are now appearing for mirrorless systems, especially Sony, that it's hard to keep up them. The Tamron 70-300mm *f*4.5-6.3 Di III seemed earlier in the year to be a completion of Tamron's FE range with the 'trinity' *f*2.8 set covering 17mm to 180mm and the all-round 28-200mm there for travel. We should not forget that for those who prefer primes, there are 20mm, 24mm and 35mm ultra close focusing lenses in the series.

But things move on and as we write this, news has been leaked with images of a 150-500mm *f*5-6.7 Di III VC – that means stabilisation is added, and with three modes as well alongside focus range limiting and other controls. Once again a very close range is possible from 60cm/1:3.1 at 150mm to 1.8m/1:3.9 at 500mm. There also a new 11-20mm *f*2.8 APS-C companion for the 17-70mm *f*2.8 we reviewed in the last issue. It looks as if Tamron will provide a complete lens system for Sony which is more consistent and considerably more affordable than the brand's own multiple levels of quality and cost.

The 70-300mm is possibly one of the plainest lenses you'll ever see. It has only two controls, the zoom ring and the rear positioned focus ring. There's no zoom lock, no AF/MF switch, no on-lens button and no tripod collar. In return you get one of the smallest and lightest 70-300mm designs made to cover 24 x 36mm and a UK legitimate import shop price which is now under £500 including VAT. Given the tripwires and pitfalls of Brexit, this is a real achievement for the new pan-European distributor Transcontinenta's UK team.

This is achieved by cutting a third of a stop off the familiar Tamron 70-300mm specification of *f*4-5.6 found over the years in generations of progressively improved SLR/DSLR lenses. It's worth remembering that the most popular of these, the non-stabilised original Di LD Macro, sold for

under £150 and gave thousands of enthusiasts a practical and versatile tele zoom which made the transition from film to digital effortlessly. It had a 1:2 macro function which was not unique but was very well implemented. After this the SP VC generation improved the optical performance and introduced fast in-lens focus motors and stabilisation while remaining affordable, even if the macro function had to be lost.

The Di III generation makes no attempt to restore that close focusing. It's all about the optical quality and the speed of AF on the Sony bodies. That is achieved using the RXD motor already familiar from the *f*2.8 trinity and it does not disappoint. As will almost any lens used on the Sony system, the best AF performance is achieved using continuous focus AF-C, and working at full aperture or just a stop down with first curtain electronic shutter. This is because Tamron uses authorised Sony mount specifications which can mean significant delays before shutter release happens if you use AF-S or smaller apertures. Work wide open and you'll catch action within 1/50s of the shutter press on some bodies, or 1/20s on others. Most moving subjects have not gone out of focus between AF and exposure in that time. Stop down to *f*16 and use AF-S with single frame shooting and the shutter will fire that critical bit later.

This makes the full aperture performance of the lens very important. With those older zooms, everyone stopped down a bit because it really cleaned up the image and covered the rather vague accuracy of DSLR AF systems. In practice, you would have used *f*6.3 on the lenses which offered *f*5.6 at 300mm, or used *f*4.5 at 70mm even though *f*4 was available. With this new FE zoom, there is simply no need to stop down a bit to improve sharpness and working wide open is so much better on the Sony E-mount system.



Unlike older zooms, this lens doesn't become softer when you hit the long end. It stays sharp at 300mm and all points between down to 70mm, with clean high resolution centrally and slight loss to the outer field at 70mm.



*The 70-300mm is a simple lens with no extra controls or functions, but minimum weight. It is supplied with a lens cap and bayonet hood.*



*At 300mm wide open – which is normally the worst performance of any 70-300mm zoom – the built-in lens profile corrects vignetting, and pincushion distortion to give perfectly straight lines. This does result in a some softness to the extreme corner (below, 100% view of top left compared to centre) which is eliminated by *f*8. Original: 42 megapixels A7RIII.*







*Mandarin duck, Sony A7RIV, at 300mm and f11 for depth of field not AF or lens sharpness reasons, ISO 3200. Crop from the eye represents a 160cm/63" print (150dpi). Kelso Races, AF-C, 1/1000s at f5.6 at 209mm with crop at normal 300dpi resolution.*

Colour fringes and distortion are detectable but eliminated by the built-in lens profile. We only had a brief time with the Sony A7RIV and most tests were done on the A7RIII and A6500.

It is a non-stabilised lens which makes it a limiting choice for models like the A6000, A6300, A7, A7R and A7S. Missing VC from the lens keeps it small and light and maximises optical performance, but it's best used with a sensor stabilised body.

As for practicality, we would like to have a bit closer focus range than 1.5m/1:9.4 at 300mm and 0.8m/1:5.1 at 70mm. It's not too bad at the short end but if you photograph small animals, pets, zoo fauna, or kids you'll know how easily some get closer than 1.5m and how hard it can be to move away – there's often someone right behind you or they think it's OK to walk in front of the lens!

The lens weighs only 545g and at 148mm long with 67mm filters in a 77mm barrel diameter is the world's smallest and lightest



such zoom (the Sony is 143.5mm x 84mm and 854g). Those earlier zooms often used smaller filters at 62mm and show more vignetting. The construction using plastics is well sealed against the elements and feels solid and smooth in use.

It's a budget lens at half the price of the Sony equivalent, an ideal companion for the compact A7C and won't disappoint even on the highest megapixel models.



See: <https://www.tamron.co.uk>





## “Richard Of York Gave Battle In Vain”<sup>\*</sup> – and I lose the fight against coloured cameras!

*Tim Goldsmith has spent much of his working life in the photographic industry. From working in a central London studio straight from school, to marketing manager at Paterson and full time camera dealer. He is currently a self-employed photographic auction consultant. Tim is a long-time member of the Photographic Collectors Club of Great Britain (PCCGB) and the Stereoscopic Society and is a trustee of The Disabled Photographers Society. You can reach him at [info@cameravalues.com](mailto:info@cameravalues.com) or on Facebook as Monark Cameras <https://www.monarkcameras.com>*

A few years after I started collecting I took a long look at my shelves and, as interesting as many of the cameras were, I noticed that they were almost all black or chrome. I decided that I should inject some colour into my collection and started with what is still one of my favourite cameras, a **RED** Kodak Brownie No 2A (Model B) box camera. Designed for 2 1/2" x 4 1/4" negatives on 116 roll film, this simple camera was one of a number of colours in the Kodak range.

Cameras in the shape of cans were my next step to add colour to my collection and there are hundreds of versions to find, some of which fetch eye-watering amounts for what are often little more than toys. The earliest can shaped models were designed for the 110 format and later 35mm versions came along, some of which even feature a built-in flash. My confusingly named "Green Spot" camera promoted fizzy **ORANGE** drinks which are rarely seen outside of Asia and particularly difficult to find.

Sirius was quite well-known for its simple film cameras back in the 1970s and produced several models, including a **YELLOW** underwater 110 format camera, but I prefer the two-tone PG-1 110 camera called 'The Puppy' with its cute image of a dog on the sliding cover. Surprisingly Sirius are still around today and even market a yellow compact digital camera.

Along with cars, **GREEN** is not a popular colour for cameras but in the 1930s, and in the middle of the Depression, the American Univex company produced a range of small metal cameras. Their most common model is usually seen in black, but I have a rarer green version. This camera took a unique design of roll film which may have sounded like a good idea at the time but, in the long-term, proved to be the company's undoing due to third-party supply problems caused by WWII.

**BLUE** seems to be a popular colour for novelty cameras like this 'Super Secret Incognito Camera' from 2001. Styled to look like a mobile phone of the time (how things have changed) if you pretended you were making a call



*A rainbow of cameras!*

when using this camera you were likely to end up with an unusual picture, as the lens is pretty much right inside your ear.

Collins Online English Dictionary defines **INDIGO** as a 'dark purplish-blue' so I think that covers my German Petie Vanity. Popular with Art Deco collectors, this attractive ensemble comprises a 16mm sub-miniature camera built into a lady's powder compact. It comes complete with mirror, powder puff and lipstick holder, plus space for a few rolls of film. Just the thing for the modern woman of the day to slip into her handbag.

**VIOLET** cameras are tricky to find but the nearest I have is this 110 Mickey Mouse Kodak/Disney tie-in. This is one of many Mickey cameras, a couple of which even have the same Mickey-Matic name. Sadly this can lead to the dedicated collector of coloured cameras trying to track down all the variants (and yes, I'm nearly there).

Away from the rainbow colours the pink 'Stereo Camera' is fun as, despite the name, it isn't a camera at all but a toy viewer. That interchangeable reel makes it look

like a View Master 3D viewer, but those reels will not fit as the viewer only accepts one of the three thick plastic picture discs that came with it. I doubt kids would notice, but the images supplied are not in stereo and half of them have been printed upside down.

Finally, the red Brownie I started this article with is doubly important to my collection as it is a special edition produced for the May Co department stores, California, USA. On one the side it features a marketing character used in some of their advertising and is called 'Tim's Official Camera'. Well obviously I just had to have it, didn't I?

*\*This mnemonic is how I was taught to remember the colours of the rainbow: Red, Orange, Yellow, Green, Blue, Indigo, Violet.*



*It's pink but not a camera... while Mickey has all the options, below.*





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# CAMERACRAFT REARVIEW

*Night Train by Tom Duffin – this was one your editor could not let pass as a solus gallery spread. It's got overtones of the great modernist photographers a century ago like Edward Steichen and Paul Strand and it sets Edinburgh's old rail and new road bridges in perfect lighting conditions. A few minutes either way and it would have been nothing, not to mention the perfect positioning of the train with its carriage interior lights on. Tom's Facebook page is 'Weephotos of Edinburgh', and he has a collection of iconic images which are not the predictable Edinburgh fare. From a published annual calendar to client brochures, copywriting and website consultancy, he's an all-round creative force. He offers photo guidance in the city and central Scotland, ranging from one-to-one tuition for beginners to what he describes as 'ad-hoc photo tours for experienced photographers'. If you are interested, email [tom@tomduffin.com](mailto:tom@tomduffin.com) and be sure to check out his website – <https://www.tomduffin.com>*

*This is a landscape slice from a vertical full frame Tom shot on Nikon D850 using the Nikon 200-500mm f5.6 set to 290mm, wide open at 1/80s, ISO 20,000.*









# SIGMA

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