



An aerial photograph of a coastline. A winding river with yellowish water flows from the top left towards the bottom left, meeting a dark sand beach. The ocean is a vibrant turquoise color with white foam from waves breaking along the shore. The sky is a pale blue with some light clouds.

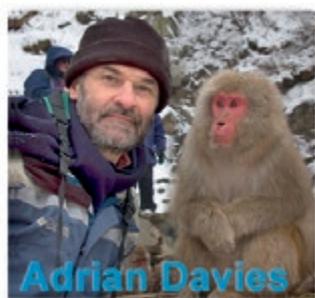
THE **RPS**
ROYAL
PHOTOGRAPHIC
SOCIETY

DIGIT

THE MAGAZINE OF THE ROYAL PHOTOGRAPHIC SOCIETY
DIGITAL IMAGING GROUP NO. 68: 2016 Issue 1

UPCOMING DI GROUP EVENTS

Details of all DIG events are available on the Group's website at:
www.rps.org/special-interest-groups/digital-imaging/events



**CLOSE-UP, MACRO
 PATTERN, DESIGN &
 COLOUR IN NATURE**

Digital Imaging Group
 Western Centre

22 May 2016

Ilton Village Hall, TA19 9HG



Adrian Lines ARPS, MPAGB,
 TDP, EFAP
& Jane Lines LRPS, CPAGB,
 CPAGB, MPAGB, RPS*
**Altered Reality.....better
 than the real thing**



Digital Imaging Group
 Thames Valley Centre

13 March 2016

Woosehill Community Hall, RG41 3DA



Tigz Rice
**Boudoir Photography
 and Post Production**

Digital Imaging Group
 Thames Valley Centre

17 April 2016

Woosehill Community Hall, RG41 3DA



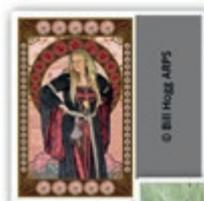
Bernie Raffe
**Off Camera Flash
 Practical Workshop**
plus our PDI Competition



Digital Imaging Group
 Thames Valley Centre

15 May 2016

Woosehill Community Hall, RG41 3DA



**April 17th Meeting
 Bridge of Allan
 Details TBA**

Digital Imaging Group
 Scotland Centre

Meetings venue Bridge of Allan Parish Church, Keir Street, BoA 1:30 - 4:30 pm

17 April 2016

Bridge of Allan Parish Church, FK9 4NW



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DIGIT

No 68: (2016 ISSUE 1)

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COVER IMAGE: **River Hólsá, Southern Iceland** by
Veronica Barrett FRPS

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EDITORIAL



In this issue, I have introduced a more modern design style to complement our decision to take DIGIT online.

In addition, there is a variety of features covering a broad spectrum of photographic interests and technical guidance.

On the creative side, there are stunning photos taken from the air over many trips to Iceland and spanning different seasons.

At the forefront of digital manipulation used to the greatest artistic extremes, Russian photographer, Mikhail Bondar shares his techniques and philosophy. His work has deservedly received multiple awards internationally and his manipulated images must inspire awe in even the most staunchly traditional of photographers.



FROM THE CHAIR

At the time of reading this issue of DIGIT, the AGM will be over and you should have had some information in the March DIG News as to how it all went.

We know that not everyone reads DIG News, but we can be sure that you all get your copies of DIGIT. So this is an opportunity to say that if we do not have your email address then you are possibly missing out on monthly Group communications.

Please check your RPS Account and update your details. You can do this when logged in to the RPS web site or, if necessary, phone Bath HQ and speak to the membership department to amend your records.

The Committee reports and AGM minutes will be on the Forum section of our web pages for all to read. That is more a retrospective look at the past year but right now I would like to look forward to the next and give you a few insights into what we are planning.

As the world goes ever more 'online' and with many of us now owning tablets and smartphones, it feels as if DIG must embrace these changes. Already DIG news is being

Drone photography has frequently had a bad press, primarily due to careless misuse by amateur enthusiasts. Our feature presents a very different side to the use, applications and regulations concerning this interesting and developing field of photography..

A major stumbling block for photographers is the frequent disappointment at how images turn out when printed -- whether done on a machine at home or using a professional printer.

To help clarify how to get the best results from displaying your images, no matter what the medium, we have two features. The first concentrates on those who want to print their images and the second covers preparation for multi-media display.

offered to you via easy-to-read page turning software. This aligns with the iBook or Kindle experience and so we want to give you the same chance to read DIGIT on your devices as well. To that end, the past 2 years' DIGITs are now on our web site but to see the hidden page where we have posted them you need to be logged in to the big blue button at the top RH corner of the RPS web screen. Additionally the complete DIGIT archive can be found and issues downloaded from the DIG Forum.

Taking 'online' one stage further we will be emailing you all, at the time of sending out future printed copies of DIGIT, with a link to the online publication. This is the first step to possibly introducing an online DIG Membership in addition to the full membership you now all enjoy. But first we want to trial the idea, then find out how you all felt about it, before possibly introducing it around the end of 2016.

Another thing that the DIG Committee wanted to do is give all UK members the opportunity to enjoy some special 'top notch' presenters at the DIG Centres around the country. So, to that end we are sponsoring some big names and great

Whether you are a pro-Adobe fan or firmly against, a study of the new challenge to Photoshop by Affinity Photo from Serif will prompt you to take a closer look at your own software choices.

As mentioned by our Chair below, the next issue of DIGIT will be an anniversary celebration. It will give us plenty of opportunity to not only reflect on the past 20 years but a look at what we might expect in the future.

DIGIT is keeping its fingers firmly on the pulse of developments and I am looking forward to editing an exciting variety of features as we look through the digital 'crystal ball'.

Margaret Preston
digiteditor@rps.org

learning opportunities in the Centres' programmes throughout the year. Each Centre will choose their own sponsored speaker, so we hope that you will be able to take advantage of going along to your nearest Centre. Watch their web sites for more information.

Finally, by popular demand of those who attended and following on from the very successful DI Expo 2015, your committee have already begun scoping out a follow-on DI Expo for 2017.

Summer 2016 will be our 20th Anniversary DIGIT. We are planning a bumper production with as wide a spectrum of our photographic interests as possible.

We have come a long way in 20 years, but despite digital imaging now being the norm, DI Group still has a philosophy and energy to reinvent itself and continue for many years to come.

Regards
Janet Haines ARPS digchair@rps.org



Over 1000 colour patches

COLOUR PERFECTION

IN THE FIRST OF TWO ARTICLES ON COLOUR MANAGEMENT IN THIS ISSUE, ROB GRIFFITH EXPLAINS HOW TO GET THE BEST COLOUR REPRODUCTION OF YOUR PRINT IMAGES.

A printer profile is a computer file that contains precise data on how a printer reproduces colour on a particular paper. Without a profile, you won't get the best colour gradation, saturation, neutral greys, or shadow and highlight detail.

You can download profiles for common printer models from the website of a particular paper company. Downloaded profiles are good enough for initial tests but there can be small differences between the printer the company profiled and your own.

A profile is measured from a special chart of colour patches printed on the paper stock. They are created from a print containing at least 1000 different colour patches and will be valid only for the exact printer driver settings that were used to print the colour patches. So, if you are downloading a profile, you need to know what those settings were. Most companies will have that information on their website.

Many companies offer a free custom profiling service for your own printer and paper combination. You typically download a tiff file of colour patches and a PDF of instructions. You read the instructions and print out the file which you post to the company which will email you a profile.

There are also custom profile services for which you pay a small fee. Such specialist services often have a little more experience of profiling and can offer better support and extra features.

The equipment used by a profiling service is usually more accurate than purchased entry-level printer profiling solutions.

One thing to consider when assessing print quality is the lighting that you are viewing the print under. Good, bright daylight is

the best lighting under which to examine a print, unless you have a specialist viewing booth. 'Daylight' bulbs are bluer than other bulbs but are not necessarily good for viewing prints.

The paper that you choose will have a huge impact on print quality. Matte papers typically have a smaller colour gamut (range of possible colours) than a semi-gloss or a gloss paper. Colourful subjects may look better on gloss papers while subjects with more muted tones may well suit matte or art papers. So, consider the look you are hoping to achieve and the colours and tones in your image when you choose your paper.

Printer profiles need to be applied in the software that you are printing from. In Photoshop's 'Print' dialogue there is a colour management section where you need to set 'Photoshop Manages Colour' and then select your printer profile. In Lightroom's 'Print' module there is also a colour management section.

When you use a printer profile, you need to use the same settings in your print driver that were used when the colour patches were printed, the same media type selection and quality setting. Importantly, you need to disable colour management in the printer driver. Because the colour management is being done by Photoshop or Lightroom you need the printer driver to leave the colour unchanged. All Epson drivers have a 'No Colour Adjustment' option. Canon printers can be set to 'Colour Correction: None' and HP drivers to 'Application Managed Colours'. It is a good idea to save your settings with the name of the paper.

A rendering intent is an algorithm for converting colours from one profile to another. There are four rendering intents but only three that you should use for photo printing.

Perceptual rendering scales all the colours down from the larger colour gamut of working space profiles, such as Adobe RGB, into your smaller printer profile gamut. Out of gamut colours are brought into gamut but colours that are within gamut are also changed to maintain the relationship between colours, so that you get a pleasing reproduction of the image. Perceptual

rendering often gives better shadow and highlight detail.

Relative colorimetric rendering is slightly different. If a colour in the image is printable it is left nearly unchanged but colours out of gamut are converted to the closest printable colour. This can result in colours that were different in the image printing almost the same. You can lose some of the variation of colours. There is an option called 'black point compensation' that should always be used with relative colorimetric. It's on by default in Lightroom and is an option in Photoshop. Relative colorimetric is a good choice if your image doesn't contain high saturation or contrast colours.

In Photoshop, you also have the option of using saturation rendering. This is very similar to perceptual but can deliver a subtle increase in colour saturation.

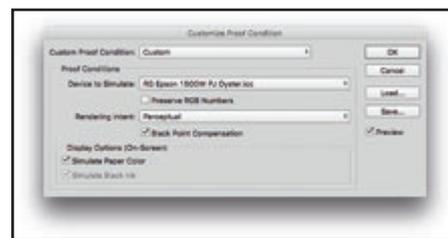
There is no right or wrong rendering intent to use. It depends entirely on the image and the gamut of the paper. The differences between them can be subtle but can make the difference between a good print and a great print.

You can use a printer profile to preview how your image will print by using the soft proofing options in Photoshop or Lightroom. In Photoshop go to View/Proof setup/custom and select your printer profile under 'Device to Simulate.' With 'Preview' checked, the image on screen should change to reflect how the image will print. You obviously need an accurate monitor profile for this to work but you can even see the difference that swapping to another rendering intent might make. Lightroom has a similar function.

You can read more articles by Rob Griffith, independent colour management consultant at www.colourspace.xyz.



Applying a profile in Photoshop



Soft-proofing shows how an image will print



THE NATURAL WORLD

ENHANCED BY DIGITAL TECHNIQUES

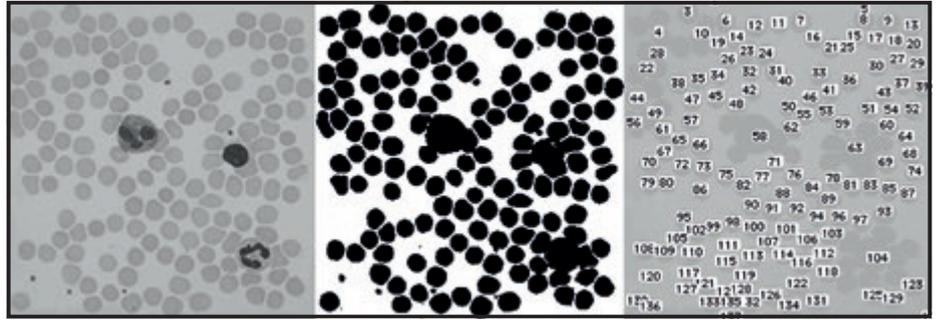
Adrian Davies ARPS, is a wildlife and natural history photographer, author and highly experienced lecturer. He was one of the first people in the UK to use a digital camera over 20 years ago (the Kodak DCS100!) and has been an advocate of digital imaging ever since.



Ash pollen. High speed



Nepenthes time lapse sequence



NIH Image, used here to count and label blood cells in a photomicrograph

superseded by Image J. Photoshop too has some (limited) scientific analysis capabilities, for counting and measuring objects. Digital technology has given photographers the ability to create successful images which

would have been thought impossible in the days of film. A good example is HDR, which I use, not necessarily for creative purposes, but merely to enable me to record detail in all areas of high contrast images. The image

I am primarily a naturalist and have long used a camera as a tool for recording all aspects of the natural world, and hopefully conveying its beauty to others.

The advantages of digital cameras will be well known to all readers but it is the instant result on the rear screen of the camera which revolutionised photography for me. I vividly remember setting up a complex high-speed shot of a leaping frog, shooting 4 rolls of Kodachrome, only to find, three days later, that I had accidentally altered the flash setting and all the images were underexposed by 3 stops!

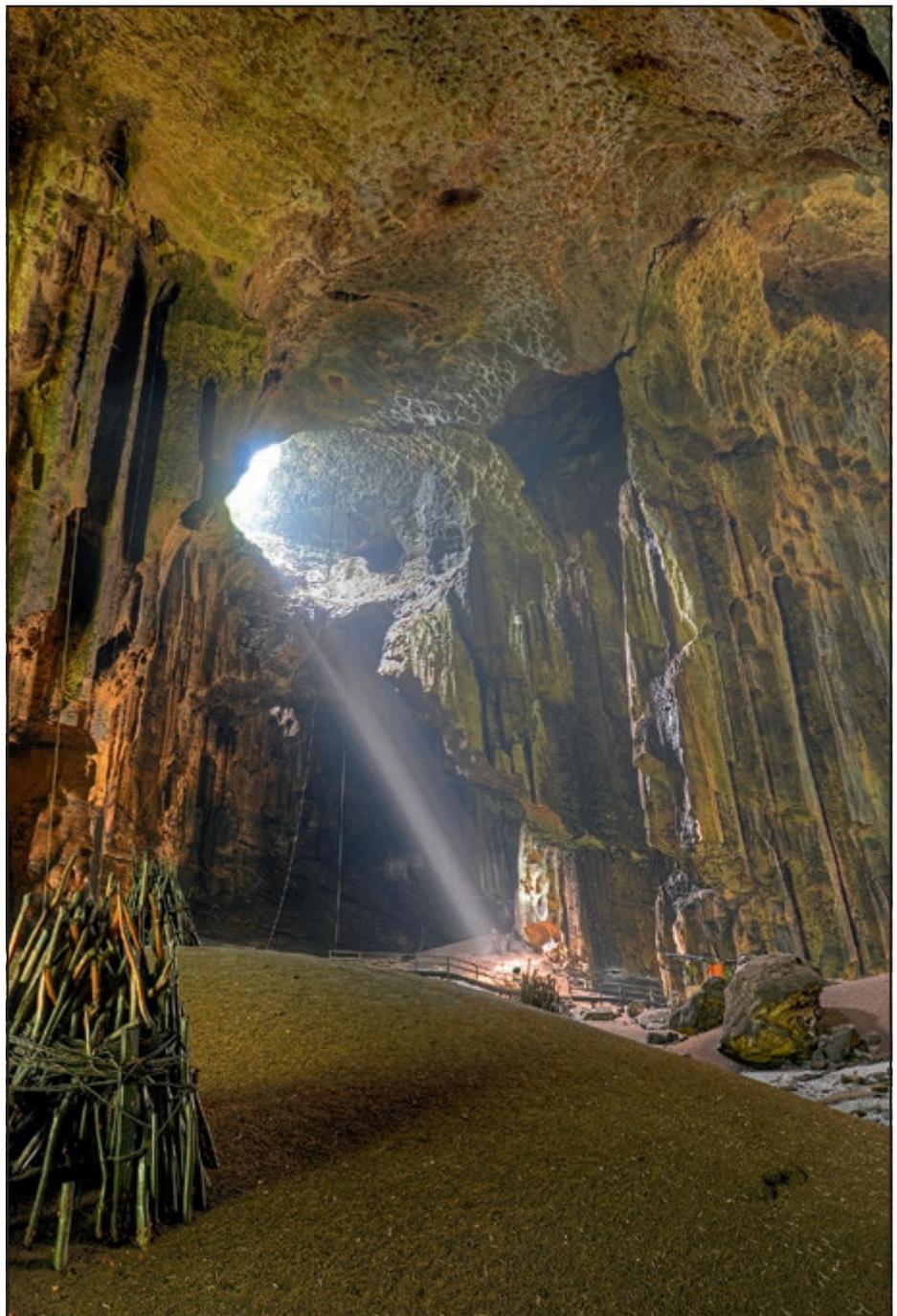
Today, I can shoot such subjects, often with complex lighting arrangements, and get an instant result, with no material cost.

The ability too, to use high ISO values, with minimal loss of quality, has revolutionised many areas of photography, such as wildlife and sport.

Time-lapse too is now much easier than ever, with many cameras, such as the Nikon D800 having built-in intervalometers, and even compiling the sequence into a finished video for you!

One of the very first pieces of software I used when teaching digital imaging in the early '90s (other than Photoshop) was NIH Image (Scion Image for Windows). This was a free scientific version of Photoshop, which could be used for counting, measuring and analysing objects within a frame. I have successfully used it for counting seabirds on a clifftop nest site for example.

It was excellent too for helping explain to students how digital images were formed, and how filters in programs like Photoshop work. Today, these two programs have been



Gomantong Cave

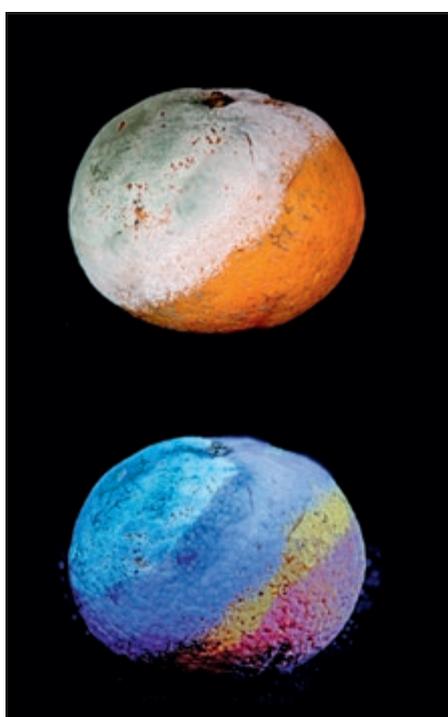


Infrared - the River Mole



of Gomantong Cave in Borneo is a good example. This is composed of three images, taken at 2 stop intervals, and blended together in PhotoMatix Pro.

Photoshop, for me, is primarily an enhancement tool, but occasionally gets used to produce image composites, such as the Sycamore seed falling from a tree. I spent many hours trying to work out



Fluorescence: Satsuma

how this image could be achieved in one shot. In the end, I came to the conclusion that it would need three separate images composited together.

This is a contentious area, particularly in the field of natural history photography competitions, where this would be seen as "cheating". I never send such images out for publication without being very explicit how they were achieved. I prefer to call them photo-illustrations.

I have always been fascinated by the "invisible" world of ultraviolet (UV) and infrared (IR) photography and always assumed that these two areas would be much easier to record with digital cameras.

However, after spending several years investigating the topic, it was perhaps surprising to find that they were easier to record with film rather than a digital camera. The main problem is that digital camera manufacturers put filters over the front of the camera sensor to absorb both UV and IR. Black and white film is highly sensitive to UV, and infrared film was readily available.

So, with a few notable exceptions (for some reason the Nikon D70 is excellent at recording UV for example), digital cameras need to be modified to record UV, IR or both, by having these filters removed. I have a full spectrum Nikon D300 which can record both UV and IR very successfully. For infrared photography, with a converted

camera, all that is then needed is a filter which absorbs all visible light, and transmits infrared. I use the Hoya R72, but cheaper ones are available, as well as filters transmitting different IR wavelengths.

There are two types of ultraviolet photography, reflectance and fluorescence. For fluorescence imaging, you will need a UV light source and there is a good range of UV torches on sale on eBay. Turn off all the lights, and illuminate the subject with the torch. I tend to use two for most subjects.

If the subject fluoresces it will glow, which can be photographed in the conventional way.

Note: Take care when using IUV lights, and never point them at eyes. It is possible to buy protective glasses to protect your eyes.

Typical subjects for fluorescence are some minerals, bank notes and passports, some flowers (e.g. Gazanias), blood (think Silent Witness!) and tonic water (the quinine component fluoresces).

UV reflectance is a very different proposition. You will need a lens that transmits UV (I use an elderly 105mm EI Nikkor enlarging lens); a camera sensitive to UV (either a converted one, or something like a Nikon D70); a filter which absorbs daylight and infrared, and only transmits UV (the standard today is the "Venus" filter sold by astronomy shops – the Baader U),



Sycamore seed



Yellow Iris UV and daylight

and a light source rich in UV (I use two Metz hammerhead flash guns with the plastic windows removed). As to the future – who knows! We have come so far in the last twenty years it is impossible to make

sensible predictions, but, sure enough, it will be an exciting time!

Adrian Davies increasingly, is covering environmental issues such as the effects of

global warming, and the effect of alien species in the British countryside. He has earned a living for the past 40 years teaching, writing and photographing the natural world. Contact: www.adriandaviesimaging.com



Honey Bee high speed

RICH NIGHT LIFE

IN COSTA RICA



Green Crowned Brilliant Hummingbird

I was excited and slightly apprehensive at the prospect of my trip to Costa Rica but my hopes of capturing the wonderful hummingbirds and frogs in that country were more than surpassed. I was in a group and taken to all the right places so I had no difficulty in getting enough subject matter.

My first experience of taking photographs of all the colourful birds was at a Rainforest Lodge near Boca Tapada, Northern Costa Rica. I set up the tripod and used my new Better Beamer flash extender on my flashgun, using either my 70-300 mm or 400 mm lens, depending on the size of the bird.

COSTA RICA HAS A WEALTH OF OPPORTUNITIES FOR THE NATURE PHOTOGRAPHER BUT A WELL-ORGANISED TRIP IS ESSENTIAL AS SHEILA HAYCOX ARPS EXPLAINS.

This flash beamer extender, increases the reach of your flash when using a telephoto lens and was particularly useful when fill-in flash was required due to the strong sun casting shadows on the birds.

Boca Tipada has over 300 species of birds. I particularly liked the Brown-Hooded Parrots and Toucans, loved the colours of some of

the smaller birds, like the Blue-Gray Tanager and the Red-Legged Honeycreepers.

My favourites were the Hummingbirds but I soon found out that these needed a different technique to photograph. I hadn't realised how small they were but they were encouraged to fly to an area where four synchronised flash guns had been set up so that we could photograph them without



Ghost Glass Frog



Orange-kneed tarantula, with torch



Iguana

recording a complete blur. I used my 400mm lens and was delighted to get some fantastic shots of Violet Sabrewings, Long-Billed Hermits, Green Crowned Brilliant and many others. Most of the shots were taken with an ISO of 400 to 500, f/11 and 1/200.

A similar technique was used to take photographs of the Long-Tongued Bats at night in the forest, with more synchronised flash guns because it was pitch black. Focusing was set when a torch was shone on the area where the bats were likely to feed before switching to manual focus.

The bats were encouraged to fly to flowers and I could hear and feel them passing my head while slightly scared that they would fly into my hair.

I used my 70-300mm lens at 300mm for all the shots, with exposures between 2 to 5 seconds at around f/11. I had quite a few misses in my attempt to capture either their long tongues feeding or two together.

One of our group came across an Orange-Kneed Tarantula Spider in the middle of a pathway which proved docile. For my first shot, I borrowed a 100-400mm lens

mounted on a tripod opened out flat to the ground and used flash. However, I wanted to try to use the 100mm macro lens I had with me so I got someone to shine a torch on the spider. The result is not quite as detailed as with the flash but certainly acceptable.

It was tricky to get a good shot of small frogs on my night walk in the forest as one hand held the camera with my 100mm macro attached while the other hand held a flash gun on a remote cord. A long bendy arm which could adjust the flash how you wanted it would have been useful. I did



Long-Tongued Bats



Violet Sabrewing

tongue out. Occasionally I used the macro lens -- in particular for the Lemur Leaf Frog on the berries and the Ghost Glass Frog.

On the way to the next Lodge we stopped at a farm near Angeles. I couldn't believe how many macaws were flying all over the place. My efforts to capture their beautiful wings whilst flying weren't very successful but I got some lovely portraits. I also had a great time photographing white-faced Capuchin Monkeys that were jumping among the trees and running across the grounds.

The last part of the journey was back down to a wonderful nature reserve in the Atlantic Slope Cloud Forest near Bajos del Toro, where we had another opportunity to see other species of Hummingbirds.

Equipment

My main camera, a Canon 5D Mark III, was the one I used most of the time although I did take my Fuji XT1 as a back up. I had acquired a second hand 400mm 5.6 lens as I knew I would want a longer lens than I usually use plus other items for flash photography. I had hardly ever used my flash gun and macro lens so using flash was a new experience for me.

The trip was organised by Guy Edwardes Photography.



Lemur Leaf Frog

eventually get a shot I liked of an Emerald Glass Frog sitting on the edge of a leaf, but it was not easy.

For the next part of the trip, we moved northwest to the Atlantic Middle Elevation Wet Forest in the Arenal volcanic area. When we stopped for lunch, I saw some massive iguanas basking in the sun amongst the vegetation. It was amazing to see them in the wild and I spent a happy hour taking shots but wished they would open their eyes more often.

I was hoping to get some good shots of the volcano and valleys in the mist but the weather didn't cooperate. I needn't have worried because my favourites of the trip, an army of frogs of all sorts and sizes were to come. Then I managed to photograph some snakes, which I didn't think I would be able to do as they are not my favourite creatures.

It took a long time to get a reasonably sharp image of a Strawberry Poison-Dart

Frog using a macro lens and flash gun on a remote cord as it is very small and quick. I set my ISO at 3200 due to poor light, with a speed of 1/200 at f/5.0. The other frogs and snakes were much easier, so most of the time I used my flash gun with the flash beamer attached. However, I was told that flash couldn't be used on some frogs because it would endanger their eyes and I kept to this rule.

The Red-Eyed Tree Frogs were the best ever, walking up branches, with their legs either in the air or below the branches.

I got a great shot of a Masked Tree Frog with its leg hanging down in a zig-zag shape and was pleased to get some of the snakes with their mouths open and an Eyelash Pit Viper with its



Short-Nosed Vine Snake



Masked Tree Frog

ICELAND FROM THE



A mysterious place of earthquakes, lava flows, fire and ice, Iceland has an abundance of black sand beaches, rivers and waterfalls. Veronica Barrett FRPS took to the skies to record its brooding beauty.



Shallow water and sandbanks south of the Snaefellsness Peninsula



E AIR



Silt laden waters of the River Hólsá



Snow clad mountains on the west coast

The photographic opportunities in Iceland are endless. The scenery is compelling, from the ancient, black, moss-covered lava humps on the coast, reminders of previous eruptions from the still-active volcanoes; the waterfalls and steaming thermal areas that provide most of Iceland's power; to the icy sheets of the glaciers in the centre and east.

My husband and I have travelled around Iceland in late summer, winter and late spring. Each season has provided us with both great photo opportunities and different challenges, but the one constant is the unpredictability of the weather, and the wind which always blows horizontally.

We have both discovered, however, that some of the most fascinating and beautiful scenes and views of Iceland are to be seen from the air. We have flown a few times and the scenery has been markedly different in each of the seasons. I think my favourite time has to be the late summer/early autumn, when there is less snow-covering in the highlands and more colour on the ground. The winter trip, although very interesting, can be something of a whiteout, with the density of the snow making the landscape featureless. In the spring, there is still a fair amount of ice and snow around, hiding some interesting features, but the melting ice on the lakes and rivers has its own beauty.

We flew from the domestic airport in Reykjavik and, on all occasions except two, headed southeast to the coast. On the other two, we flew north to the Snaefellsnes Peninsula. Only from above can one really appreciate the beautiful gradations of colour in the sea, from

VERONICA BARRETT FRPS

purple to blue to aqua, and the delicate lace-like crests of the waves as they approach the shore. This was particularly apparent at the end of the Snaefellsnes Peninsula and on the coastline south of the peninsula when flying back to Reykjavik.

One of the most fascinating sights from the air is the braiding of the glacial waters in the river estuaries, where they flow in between mounds of silt and sediment to mix with the blue of the sea. The colour is particularly vivid in the early autumn, when the waters are lower and there is no ice covering the silt mounds. Then they take on an almost surreal, abstract appearance. Some of these, such as the River Þjórsá, can be seen along the south coast but the most dramatic were to be found near the smaller glaciers in the west of the Central Highlands, where rivers flow into lakes below. Hvítárvatn, at the foot of Langjökull, is the most notable.

At that time of year, the lowland hills are covered in splashes of red from the wildflowers and berry bushes on the hillsides and yellow mosses and lichens on the rocks, all making a beautiful patchwork below the white of the ice caps and glaciers.

On two of our trips heading out of Reykjavik, we flew along the south coast looking for braided rivers until we reached Vik, after which we turned north towards the Mýrdalsjökull glacier, and into the Central Highlands. There is a feeling of awe when looking down at the vast landscape of snow and ice with protrusions of black jagged lava rocks from the mountains below – accompanied by a feeling of privilege to be looking down on so much land that, because of its sheer inaccessibility, is unlikely to have been trodden by man.



Clouds reflected in the shallow sea and sandbanks south of the Snaefellsnes Peninsula



Glacial lakes and rivers in the Arnarvatnsheidi, a huge moorland stretching from the Highlands down to the west coast

The geothermal hot springs of Landmannalauger in the Fjallabak Nature Reserve are best seen in summer and early autumn. The blues, reds and yellows in these mountains of volcanic rock (rhyolite) are like an artist's palette. The hot springs alter the mineral content of many of these rocks, causing this spectrum of colour. Steam pours out of the hillsides from the thermals beneath the surface. This is a beautiful place but difficult to access by road except in a four-wheel drive vehicle which can also ford the the river at the end.

From Landmannalauger, we flew on to Kerlingarfjall, the vast mountain massif south of the Hofsjökull glacier. The previous week we had driven there in a superjeep and walked down into the thermal area. It had been cold, very windy and muddy, making the steep steps down into the valley very slippery. It was much easier to view from the air, although the photography was better from the ground, where it was possible to see the sides of the mountains and take images of the colourful vents with steam wreathing around them.

From Kerlingarfjall we flew further west, over the Lakeland area, down over Þingvellir (Thingvellir), where the first parliament was held, over the thundering waters of Gullfoss and the geyser at Geysir, then back to Reykjavik.

Photographing from a plane window may sound a little tricky but generally it is fairly straightforward.

The first thing to do when booking a flight is to emphasise the fact that you are a photographer and that you will need



Steaming vents in the Fjallabak Nature Reserve



Blue glacial river water forms a braid pattern over volcanic rock



Colourful mountain sides in the Landmannalaugar thermal area

the windows to be as clean as possible. Eagle Air are used to this request. On one trip, the young lad who was detailed to do this, was so enthusiastic that he cleaned and polished them twice over!.

The second thing to do is to turn up the day before to confirm your booking and discuss flight times. These cannot be set in advance

because the weather is unpredictable. Usually a provisional time will be set and confirmed on the day itself. The pilot will ask what areas you are keen to photograph so that he can file a flight plan. The Eagle Air pilots have some very good ideas of their own as to how to maximise time in the air.

The next consideration is to decide which lens to use. It is a good idea not to change lenses if at all possible.

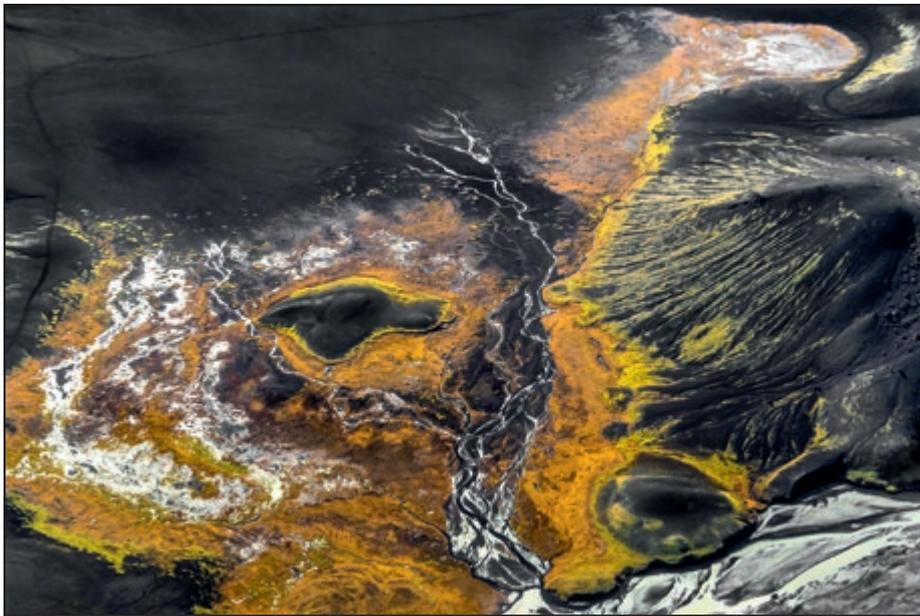
Although the pilot will fly over a particular area several times if you ask him to, the plane is flying fairly fast so it is better to be able to keep shooting than to



White streams flow over silt and sand



Glacial lakes and rivers in the Arnarvatnsheidi



River Þjórsá (Thorsa) near its source



River Þjórsá (Thorsa)

waste valuable time changing lenses. A wide to long telephoto lens is ideal.

We both use mirrorless cameras. Alan has a Panasonic Lumix GH3 and I have an Olympus OMD EM-1. The lenses we take for aerial photography are a Panasonic 14-140mm for the Lumix and a Zuiko 14-150mm for the Olympus. These enable us to change focal length quickly, depending on how much detail we want to photograph.

Depth of field is not a consideration because we are shooting at infinity. Therefore we set our cameras to Aperture Priority, at maximum aperture (wide open) and, if necessary, set our ISO to ensure that we can get a minimum speed of 1/500s. The ideal day is overcast with cloud high enough to produce enough brightness to dispel any signs of dullness or gloom.

For all our flights we were provided with a Cessna 207 which gave each of us a window seat without too much obstruction from the wings and struts.

Once up in the air, there are just fractions of seconds to compose a scene, so it becomes instinctive. Sometimes the answer is to keep shooting. If the scenery is particularly beautiful and the plane is flying low, then I find using bursts of continuous shooting produces some very good sharp images.

A sunny day can be dire for photography. The first pitfall to avoid is reflection on the window. I get over this by putting my arm up and my hand over the top of my lens.

Because the windows are fairly small, this often solves that problem. Another problem is the sun reflecting on water, or producing flare.

Because it is best to shoot as close to the glass as possible, it is impossible to use a lens hood. The only answer is to get the pilot to find a different angle away from the sun which will avoid flare and the black and silver effect that the sun shining on water gives – although that can be quite lovely at times.

There is a magic about being up in the sky and looking down from 1000ft. It is something I can thoroughly recommend.

Bird watchers, too, come here to see the myriad variety of birds that migrate to the shoreline and lakes for the spring and summer months, the Atlantic Puffin being a favourite. The Arctic Tern and the Golden Plover are also greatly welcomed as they herald the spring after the endless dark nights of winter. All told, there are about seventy different species of birds that breed annually in Iceland, both migratory and non-migratory.



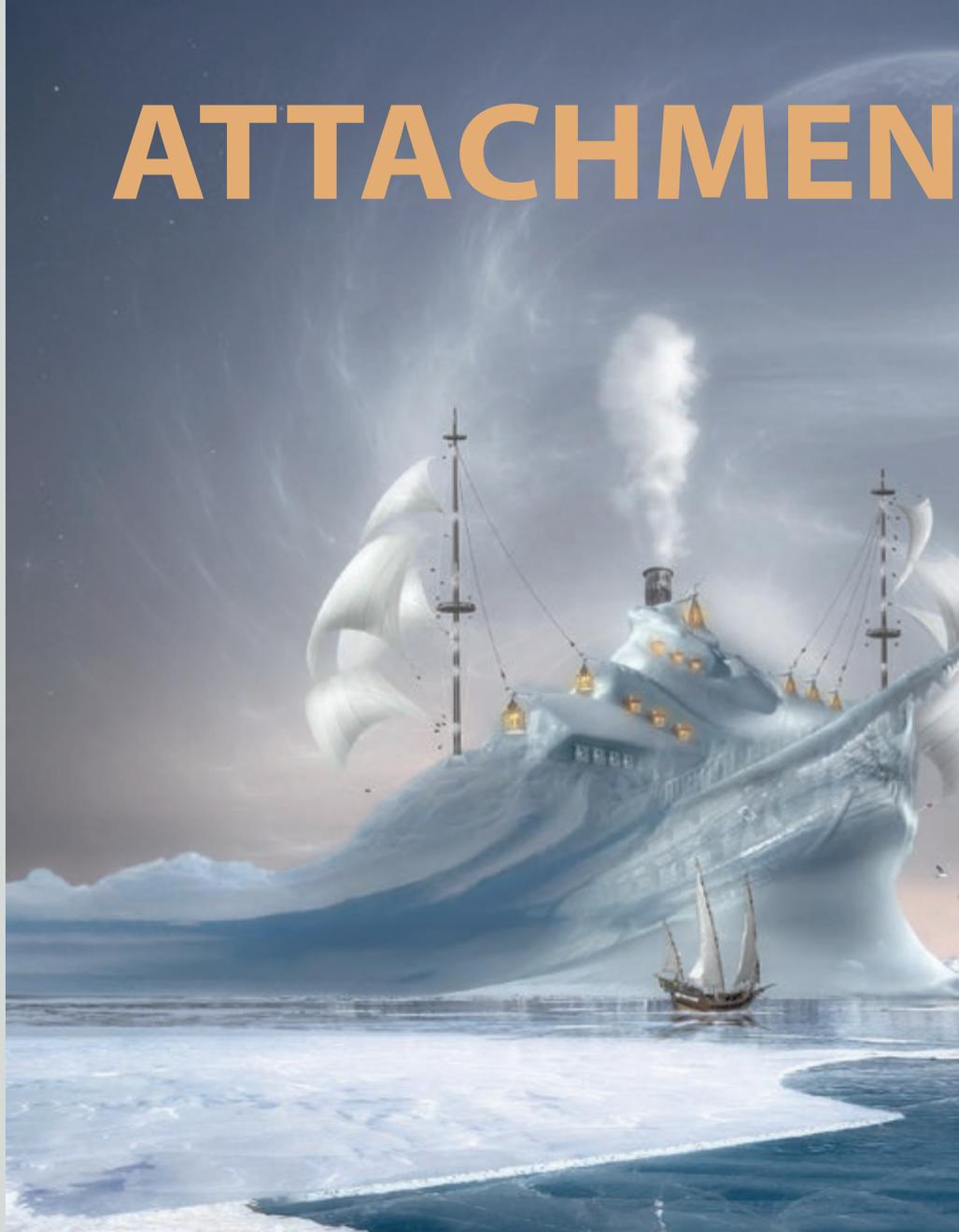
Steam from fumaroles in the Landmannalaugar thermal area



Glacial lakes and rivers in the Arnarvatnsheiði

ATTACHMEN

MIKHAIL BONDAR WAS BORN IN 1956 IN ZAPOROZHYE, UKRAINE. HE HAS PARTICIPATED IN OVER 833 INTERNATIONAL EXHIBITIONS AND RECEIVED MORE THAN 557 MEDALS AND OTHER AWARDS. HE IS PARTICULARLY DRAWN TO THE SEA AND IS AN ARDENT EXPONENT OF THE USE OF DIGITAL ENHANCEMENT TO CONVEY THE SENTIMENTS OF THE PHOTOGRAPHER. THIS SERIES *ATTACHMENT TO THE SEA*, DEVELOPED FROM A ROMANTIC IDEA OF SHIPS LOST IN SPACE. MIKHAIL SHARES WITH *DIGIT* HIS POETIC VISION AND ARTISTIC TECHNIQUES



Attachment to the Sea 7

One of the distinguishing features of a photographer is that he remains alone with the object of his artistic interest.

His most important consideration is to remember that the main work is in the preparation and is entirely the product of his imagination.

For me, the creative process consists of five stages: 1) observation; 2) creative selection; 3) generation of ideas; 4) imagination and 5) creative intuition.

As soon as the photographer realises what exactly made him experience a particular feeling, he has an idea for a future image. Photos may have a specific association, such as the play of light and shadow; the harmony of form; color combination; disruption of rhythm; an unusual lack of something or someone; distortions of all kinds; instant harmony; good or

T TO THE SEA



Attachment to the Sea 15

bad weather; the tonal and temporal perspective, a riot of colours; matching a scene to an earlier vision; space; identity or comparing and contrasting dynamics.

Such concepts imbue a visual image with some specific sensations.

His choice of pictorial adjustments, such as composition, light or colour will emphasise and highlight this very image. If he is successful, then the viewer of the photo will have the same, or similar, sensations when viewing the image.

The seed of an idea is inextricably linked with the creator, with his emotional and mental state at the time and particularly with his spiritual experience and inspiration.

Inspiration is everywhere: in nature; in people; in different forms of art; in the sun and wind. Over time, I wanted to create

something special, with a recognizable, unique style.

I always start with an idea that sets the tone for the entire project.

“The important thing is to transfer to the viewer by any means, the feelings, sentiments and emotions, of the creator”

I collect new pieces, or use some that already complement an existing vision for the image but simply need to be altered slightly in order to change the whole concept. So, of course, I very often refer to historical encyclopaedias, reference books and other such literature, so as to retain

credibility. In addition, I try to take as many photos as possible when I travel.

However, I also take pictures in the area where I live, as you never know what might come in handy.

From time to time, these photos inspire the composition, or help to develop stories that are the starting point for creating realistic, fictional illustrations.

The camera I use is a Canon 5D Mark II, with lenses Canon 24-105 L and 100-400 L.

I use fill-in flash to reduce the contrast in landscapes and people.

Before proceeding with the substantial work of creating a collage, I look through dozens of different magazines for a suitable means of expression, techniques, shooting angles, or processing techniques that will enrich my photographic ideas and inspire the creation of completely new images.

The technical approach to the creation of photographic images is multifaceted and diverse. The personal computer and appropriate software makes creating digital images accessible to a wide range of users.

I resort to the help of graphic editors and combine different layers and textures, so as to create a unique illusory image. In recent years, fantastic digital photopainting has become much more realistic.

For image processing, and graphics I use Photoshop CS5, which contains a number of tools that speed up the work. Choosing the right colour takes a matter of seconds and the selection of the correct brush / tool is almost instant. The ability to undo actions, and save the images at any time and return to it later, makes the work of a professional photographer several times faster.

CS5 allows you not only to adjust the photographic image, but also to create a range of effects, with a host of special filters and additional plug-ins that allow you to create an image in virtually any artistic style.

It is certainly true that image processing on the computer reduces the element of “Photo”, but increases the element of “Art”.

Photography is an art, if it has a form of art that corresponds to the formal language of art.

The important thing is to transfer to the viewer by any means, the feelings, sentiments and emotions, of the creator. When the product affects the state of mind



Attachment to the Sea 11

of the most sophisticated and highbrow foodie, then it is art. As for Photoshop, it's just a tool.

What is important is not the genre, not the tool, but the ratio of the master to his work. It's simple.

Despite its apparent simplicity, a modern photo collage is a serious and complex work.

In addition to vocational skills, it requires a special knowledge of composition and the

theory of lighting and a skill to combine artistically compatible and simple colours.

Each digital collage can be very time-consuming depending on the complexity of the scene. For example, on some collages I worked for one year. I might take photos of



Attachment to the Sea 22

a boat and turn it into a magical sailing ship floating in the sky. It's not easy.

Most of all, I like to work on the background. Some backgrounds might require up to 200 shots. But I like it because it is often important in the collage. The background creates a feeling of space. So, sometimes, the difference between the original image and the final image is very striking as the resulting photos become mystical and mysterious.

My incredible fantastic digital collages are a kind of retro-future, full of stars and unexplored space in an illusory scene.

I created the project "Attachment to the Sea" with the help of photographic technology, in addition to all sorts of photographic experiments and experiences.

The series of spatial photocompositions was interesting from a technical point of view, as well as the discovery of a wonderful world of the senses. The wonderful is always present in us.

The idea in this series of photos was born out of the romantic images of ships lost in space. Earth's gravity works on all objects



Attachment to the Sea 24

but the sea attracts only the romantic soul. The ever-present sea is something mystical.

The grounded ship, firmly tied with chains to the bank, is clearly at ease both on land and in the sea.

There is no greater solitude than the loneliness of the ship, forgotten in the moonlit night away from his team. He looks to the sea and no one can help him. He can not even cry. Only the stars shine in the heaven.

A lone ship, rushing at full sail or a ghost ship at sea, devoid of the crew, is a lonely ship lost in the world, following a vague prophecy.

He is looking for, but cannot find, an answer to the question of who crucified him on the wings of the sail's masts? Who made the ship fly up to the height of the mountains in the sparkling sky, a scary ride between blocks of ice.



Attachment to the Sea 14



Attachment to the Sea 19

In order to go into outer space, the aircraft must overcome gravity. Man has learned to overcome this attraction, burning a first, a second and then a third-stage rocket. Mysterious ships have ridden the waves for decades and legends about them live on for centuries.

However, they are not limited to ocean sailing. There is also an endless sky and the dark depths of space. My project, to varying degrees - is the creation of beautiful stories about flying ships, as they all try to overcome the attraction of heading for the retro-future, full of stars, unexplored outer

space. How they do it - is for you to judge, my dear readers

Note: this article was translated from the original Russian.



Attachment to the Sea 3



RISE OF THE DRONE

Over the last two years, drones have exploded into the public's consciousness, with new companies being set up by the day, as David Hogg LRPS, Director of Horizon Imaging, explains

St Michaels on the Mount, Cornwall

I have been dabbling with drones since 2006, when they started appearing on model aircraft forums on the internet. In those days, you had to build drones yourself!

The latest off-the-shelf drones are extremely high-tech – using GPS and a wide array of sensors to keep themselves stable and easy to fly, self-levelling camera gimbals to remove all unwanted movement and vibration from the photographs / video footage, and using a smartphone to display a live video feed from the drone.

APPLICATIONS

While there are dozens of applications for drone technology, what I know most about is aerial photography using drones. This can be broken down into many sub-applications, including:

Marketing photography: Photographing a building or site to show what it looks like from an aerial perspective and how it sits within the surrounding landscape.

Composite marketing photography: Using an aerial photograph as the background for a computer-generated model of a development, which has yet to be built.

Simulated-view marketing photography: Taking photographs from a set height to simulate the view from, for example, the roof terrace of a new tower block.

Surveying: Capturing plan-view or oblique aerial imagery to be used in the planning process for new developments, to support border disputes, or illustrate property boundaries.

Inspection: Photographing inaccessible parts of buildings or structures

While many people think that the advent of drones means that no-one will want to hire a full-size aircraft or helicopter to take aerial photographs any more, this is not the case.

Generally, full-sized aircraft are not allowed to fly below 1,000, or sometimes 500 feet above ground level – essentially to give them enough height to look for somewhere to land if their engines fail. By contrast, drones are legally not allowed to fly higher than 400 feet above ground level – partly to avoid the risk of colliding with full-sized aircraft, but mostly because the drone has to stay within 'line of sight' of the operator at all times. At 400 feet a drone looks very small, believe me!



Private Home, Lake District



Worthing Beach, West Sussex



St Catherine's Chapel, Surrey



So in reality, drones and full-sized aircraft are serving two totally different markets. Photographs taken from full-size aircraft are great for capturing very large areas of land at a time, and full-sized aircraft can safely fly over built-up areas, large crowds of people, busy roads and railway lines. Their downside is that imagery captured from so high up often looks very 2-dimensional, particularly if you have zoomed into a building of interest with a long focal length lens.

By contrast, drones can fly much closer to your subject and capture the subject, the surrounding countryside and the horizon all in one photograph. For this reason, in my opinion, drone aerial photographs have a much greater sense of depth, perspective and intimacy with their subjects than photographs taken from full-sized aircraft.

However, and it's a big 'however', there are strict regulations which govern where drones can and cannot be flown.

DRONE DESIGN

Many of the more advanced drones now use GPS position-hold technology to make them easier to fly. This means that if you don't touch the control sticks while the drone is in the air, it will hover there by itself, maintaining the same height and position until you tell it to do otherwise! This feature has been expanded by some manufacturers, who have implemented waypoint following features, which allow you to use a Google Maps' style interface on a smartphone or tablet to tell the drone exactly where to fly. You simply tap on a location on the map and the drone will fly there by itself! Some drones also have a return-to-home button on their control handset!

Most drones are designed to carry a particular range of payloads or cameras.

The heavier the payload, the more batteries you have to carry to give a reasonable flight time and the larger the frame, motors and propellers need to be to handle the additional weight.

If you need to carry a bigger camera, the multi-rotor drone design allows you to scale everything up so the mechanics and aerodynamics still work.

Typically, the batteries weigh between 20 to 30% of the total weight of the drone, based on achieving a flight time of about 10 to 20 minutes. While this might sound quite short, it is plenty for taking aerial photographs from a number of different angles.

When one battery is depleted you can simply land, fit a fresh battery and take-off again immediately. Adding a second battery will give you only 60% more flight time. So it pays to plan ahead as much as possible while the drone is still on the ground.

Drones can generally fly in winds of no more than 15-20 mph as, above this speed, the

flight control and gimbal electronics will start to struggle to keep the drone stable. That said, the heavier the drone the better it will cope with strong winds.

I use a Sony Alpha A5100 compact system camera. I love this camera. It has a high resolution 24 megapixel 1.5x crop sensor (so, 1.5 times smaller than a full-frame 35mm sensor), no mirror or penta-prism to add unnecessary weight, a fast 6 frames-per-second burst mode, RAW image capture, and supports a wide array of interchangeable lenses.

CAMERA OF CHOICE

I use Sony's 10-18mm f/4 ultra wide-angle zoom lens (15-27mm equivalent on a 35mm sensor) which resolves detail onto the 24 megapixel sensor extremely well. Together with the camera body, it weighs just 555g.

I find the following camera settings yield the best aerial photographs: manual focus set to infinity (I always manually focus the lens on a distant object rather than relying on the lens' interpretation of infinity focus); shutter



Cissbury Ring, West Sussex



Jill Windmill, West Sussex



Leith Hill Tower, Surrey

priority mode set to 1/400s or so; ISO manually set to make the lens stop down to around f/5.6 or f/6.3.

I switch off image stabilisation, as stabilised lenses are designed to correct for low frequency vibrations caused by handshake and the mechanics cannot handle the high frequency vibrations on board a drone. Leaving it switched on can cause motion blur.

I also tend to use a circular polariser as it helps to deepen the blue of the sky, {provided you are not looking directly towards, or away from, the sun where it has no effect} and reduces the reflections from grass and leaves, making them appear more deeply coloured.

The down side is that the polariser reduces the amount of light that reaches the sensor, so I often need to shoot at around ISO 320 or 400 to maintain a fast shutter speed.

Once I've taken the photographs, I will firstly sift through them and mark the sharpest images in Adobe Bridge before taking them into Adobe Lightroom to do the processing.

My processing is quite straightforward and generally involves; levelling the horizon; applying graduated filters to the images to even up the brightness (particularly if the sun was off to one side of an image); reducing the highlights; boosting the shadows and reducing the saturation of the greens and blues which often get overcooked as a result of the rest of the processing adjustments. I

f I need to make more specific adjustments (advanced cloning, healing and colour adjustments) then I will take the images into Adobe Photoshop.

HAVING A GO YOURSELF

There are hundreds of different drones available and you can spend from as little as £30 to several thousand pounds. The manufacturer that has been around the longest and has some of the most advanced platforms on the market is DJI. Their White Phantom drone is probably the most well-known consumer drone. The latest mark-3 Phantom starts at about £650, features a fully-stabilised 12 megapixel camera which can take 2.7K HD video and connects directly to a smartphone or tablet via WiFi to provide you with a live video feed.

If you are not keen to spend too much money on your first drone, it's best to seek the advice of other radio-control modellers on a forum like RCGroups.com to see which of the cheaper drones are worth trying www.rcgroups.com/aerial-photography-128/

LEGALITIES AND REGULATIONS

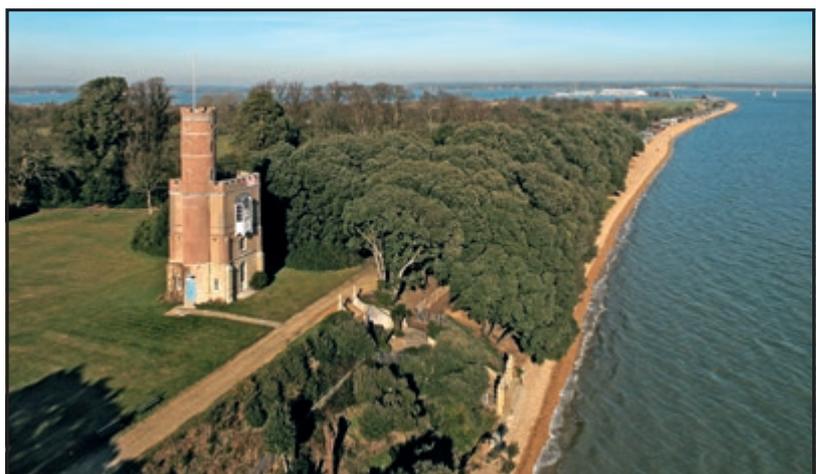
The Air Navigation Order (CAP 393), written by the UK Civil Aviation Authority (CAA), lists clear regulations governing how model

aircraft are to be flown. Sections 138, 166 and 167 are particularly pertinent for small models like the Phantom which are fitted with a camera – turning them into 'Small Unmanned Surveillance Aircraft'.

Common sense should prevail when flying any type of model aircraft. It would take only a propeller to come loose, or a motor to fail, for a model to fall straight down on whatever, or whoever is beneath them, potentially causing serious injury.

Some countries, like France, Spain and the USA, have enforced an outright ban on flying any type of model aircraft with a camera fitted to it, although in Spain and the USA it is only illegal if you use the platforms for commercial gain.

Fortunately, the UK CAA have taken a pragmatic approach to regulating the use of drones and, provided you abide by the regulations in CAP 393, commercial operators and hobbyists alike can continue to enjoy all the applications of these incredible pieces of technology. For the most



Luttrell's Tower, Southampton, Hampshire



Rape Fields, Surrey

up-to-date information, it's best to go to the CAA direct via their website: www.caa.co.uk/uas. There are different regulations to follow if you use drone for commercial work. As soon as a drone is used for commercial gain, you have to hold a 'Permission for

Aerial Work' from the CAA. To apply for this permission you need to provide evidence of pilot competence, (which can be achieved through attending a training course provided by companies such as Resource UAS), adequate Public Liability Insurance

cover (at least £5M) and an operations manual, including maintenance schedules and a sample risk assessment.

Contact: David Hogg, Director
www.horizonimaging.co.uk



Claremont Fan Court School, Surrey

GET WELL PREPARED FOR MULTI-MEDIA DISPLAY

Whether you intend your images to be viewed online, on a curved cinema TV, in-app or in print, you will need to have a colour-correct screen to display your images and retouch on where required. In the second colour management article in this issue, Richard West details colour management tools and techniques for getting your colours correct today and tomorrow.

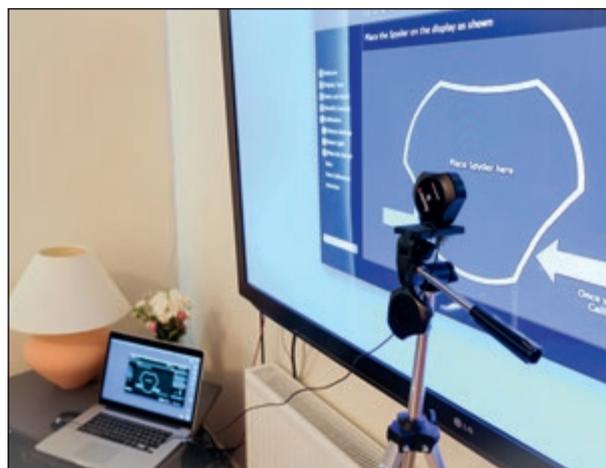
Sitting on a train, I am trying to place images on an InDesign page that I can hardly see, let alone get the colours right on. I am not alone, This is indicative of how most of us need and even like to work nowadays i.e. mobile.

While the correct way to work is in a colour- accurate environment in a darkened room and sitting square on to the display amongst other elements, this is frequently not practical.

I make presentations at a large number of photo, video and graphics shows every year and the recurring feedback I get from attendees at these events is that the days of the average photographer or videographer

working on a nice desktop machine in a controlled studio environment are rare at best and a distant memory, or even a never-experienced fable for most. But this is progress!

I can now mock up designs and manage basic retouching while on trains, planes, ferries and far too frequently, in well-known coffee shop chains. Perhaps a colour-managed printer next to the cutlery and napkins stand wouldn't be such a bad idea Mr Nero!



Positioning for large TVs



Lens Cap

Taking this change in working practices into account, Datacolor's research departments have updated their range of Spyder screen calibration devices to the version 5 model. The major redesign of the physical unit aims to make it a mobile tool.

With an upgraded sensor array for more accurate colour fidelity on screen, the Spyder5 has a protective casing built to withstand the knocks and bashes of photographers on the move.

There's a new lens cap to protect the optics when not in use. This also acts as the counter balance on the USB cable for positioning the Spyder in the correct place while calibrating the screen.

A tripod mount has been added to allow the device to be positioned easily when calibrating the displays on large TV screens and projectors if the standard hanging of the device via its USB cable isn't possible.

The shape of the new Spyder is aimed at optimising its use in calibrating the emerging array of curved displays from various manufacturers.

The Optics array has been upgraded to enable calibration of 4K and 5K screens and features a new honeycomb filter to aid calibration of lower-quality displays susceptible to light scatter and leaks, which can seriously lower colour accuracy.

Even the graphic designers stalwart, the Apple iMac can fall foul of these issues, as the thick glass front found on certain models can allow large amounts of light to creep into the display from its sides if not used in the recommended, colour-controlled environment of a darkened studio.

The honeycomb filter on the sensor, originally designed for the Spyder4 to alleviate this problem, has been improved to reduce these issues.

Consisting of a mesh of parallel tubes, fixed at 90 degrees to the sensor array, this honeycomb has now been made deeper and finer in its layout to focus light more accurately onto the sensor array and further cut down stray light from falling on the sensor.

Datacolor claims it is now seeing improvements of up to 55% in calibration compared to other devices, particularly on older or less colour accurate displays.

In order to calibrate a display with the Spyder, you download and run the accompanying software (Mac or Windows) on the relevant computer that is driving the screen to be calibrated. Once started, this software runs a range of known colour swatches in front of the sensor array on the Spyder.

The Spyder then reads how these swatches are displayed by the screen and compares the readings with the software's look-up tables to see what colour range the screen is capable of (i.e. its gamut or, effectively, its colour profile) and how far out from the International Colour Consortium (ICC) standard the display is.

The ICC, a body consisting of most computer hardware and software manufacturers, produced this standard allowing displays, printers and other colour outputs, to be measured against a uniform 'yardstick' of how colours should appear and be corrected if not displaying correctly.

If you want to print out your still images or display stills or video via a different medium (e.g. a projector or TV), how can you check, how they will appear? We are all aware that the same image in a glossy magazine can look vastly different in a poor quality newspaper, but how do we get to see this and check the end result prior to output?

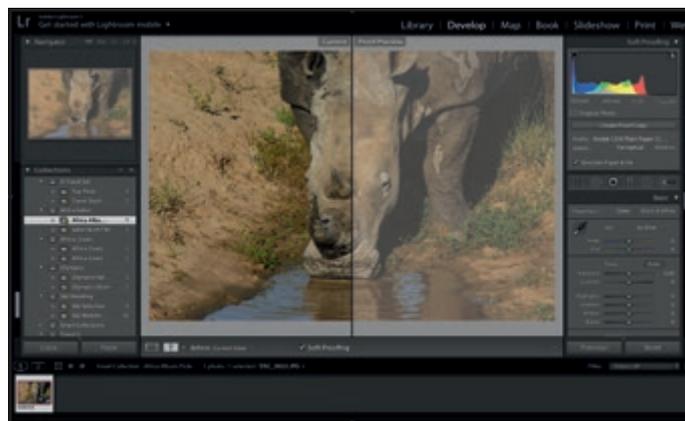
Software, such as Adobe Lightroom enables this with a button in the Develop module. Once ticked, if you have the relevant output profile for your intended output (the ICC description file for what colours the printer or output device can produce) you can simply apply this and softproof the images for the relevant output.

Once you see how the images will appear on a particular output, you can make adjustments in the develop module tools pallet. Generic profiles for most print devices, paper and other types of output are widely available and some come with most operating systems.

Of course a prerequisite here is to make sure that the screen you are softproofing on is calibrated to the ICC standard, or you might be correcting a fault of the screen, rather than the true representation of what effect the output will have.

When it comes to softproofing your various outputs, if using generic profiles for the different outputs aren't good enough for you - for instance if this is your living or you enter competitions, then you can create your own output profiles for whatever medium you want to show your work on.

However, if you are simply showing your images or video via a different display style device (e.g. a TV or projector), the Spyder5 can generate the specific profile for your intended output.



Lightroom Develop module

If you are going to print your images though, where a different type of paper or ink on the same printer can cause a major difference in appearance, let alone if you have multiple printers, the sister device to the Spyder5, the SpyderPRINT can calibrate different printers and papers and enable accurate softproofing of print devices.

However important this last stage is to you, the key thing throughout is to get your images onto a calibrated screen.

Richard West is Director of InnovationApplications EMEA Ltd



SpyderPRINT



The Honeycomb baffle on the Optics' array helps to focus light and remove stray unwanted light

CORRECTIONS

We apologise for some errors in the captions of the Accepted Images' section of DIGIT 67. The correct captions should read as follows:

Page 30 - And God Bless Mummy and Daddy by John Boyd LRPS

Page 32 - Charging Ahead by Malcolm Rapier ARPS

Page 40 - Osprey With Brown Trout by John Boyd LRPS

Page 40 - Pollen Face by Suzanne Parsons LRPS

Page 42 - Sharing A Joke by Marion Rapier ARPS

Page 46 - The King of Fishers by John Boyd LRPS

Page 49 - Yellowstone Canyon Falls by Sandra Barrett ARPS

Page 50 - Edwardian Style by Clifford Brown LRPS

CAN AFFINITY PHOTO DELIVER A KNOCKOUT TO ADOBE PHOTOSHOP?

THERE HAVE BEEN MANY ATTEMPTS TO WIN USERS AWAY FROM PHOTOSHOP BUT ALL HAVE FAILED -- UNTIL NOW, SAYS ROGER NORTON ARPS. HE PUTS THE LATEST SERIF PRODUCT THROUGH A FULL 15 ROUNDS WITH THE REIGNING HEAVYWEIGHT.

There are several good alternatives to Lightroom, such as DxO Optics Pro and Capture One but few that are a real alternatives to Adobe Photoshop, other than the simpler (though still powerful) Photoshop Elements.

I have tried various programs as trial versions but always returned to Photoshop. Until now. Serif have just released the (currently) Mac-only *Affinity Photo* on the App Store at a price of £39.99. This is a price that would suggest cheap, rather than inexpensive. But in my view, that's what it is - inexpensive - or, in other words, good value for money.

Serif make bold claims about this software:

"Affinity Photo is a professional photography tool to the very core", and again: "Affinity Photo redefines the boundaries for professional photo editing software for the Mac". Bold claims indeed. Does it match up to them?

Affinity Photo is a software package incorporating a

browser and raw development, together with image editing modules, which Serif call "personas". It does not have image management and cataloguing capabilities. It is more like working with Adobe Bridge, Camera Raw and Photoshop. It has ICC colour management and 16 bit per channel editing and fully supports PSD as well as the usual image formats.

But let's not dwell on specification; how does it perform? On my Mac Pro (12 GB memory and SSD) it boots within 7 seconds, and in about 12 seconds on my Macbook Pro (4GB and SATA HD), to reveal the workspace which is shown with the browser (figure 1). The browser can be dragged to fill the full workspace.

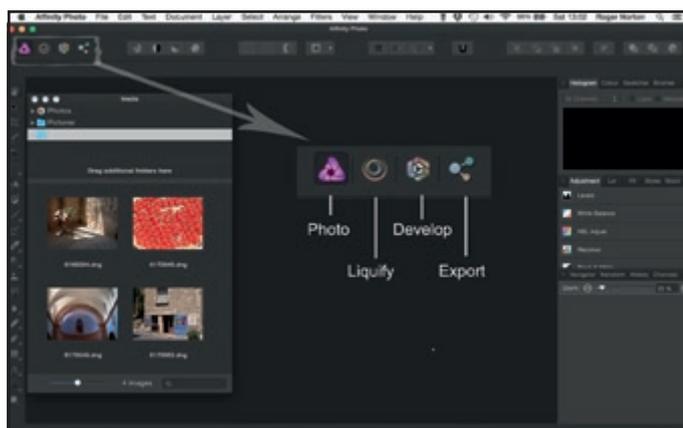


Figure 1. Workspace with browser showing personas

Under the *Affinity Photo* tab is the preferences dialogue, where various working parameters can be set, such as working colour space, interface characteristics, plug-in management, tool features, etc. In the top left corner of the screen are the icons for the various "personas" or modules. An image is selected by dragging it to the workspace.

Raw image files will open in the "Develop" persona (Figure 2). Files in other formats (jpeg, tiff, psd, etc.) will open in the "Photo" persona. The Develop persona is analogous to Adobe Camera Raw or the Lightroom Develop module. Clipped highlights or shadows are indicated with red and blue overlays. On the left hand side of the image is a tool-well, with white balance, cropping, blemish removal and other tools.

On the right-hand side of the screen are the adjustment panels, arranged with tabs labelled basic, lens, details, tones and overlays. These tabs can be unlocked and moved or closed. All the normal adjustments are here, including white balance, exposure, contrast, highlights and shadows, lens correction and so on. The overlays facility permits local adjustment by applying a brush of gradient overlay.

Once you are happy with the image, the raw adjustments have to be implemented by selecting the "Develop" button (top left). This applies the adjustments to the file and

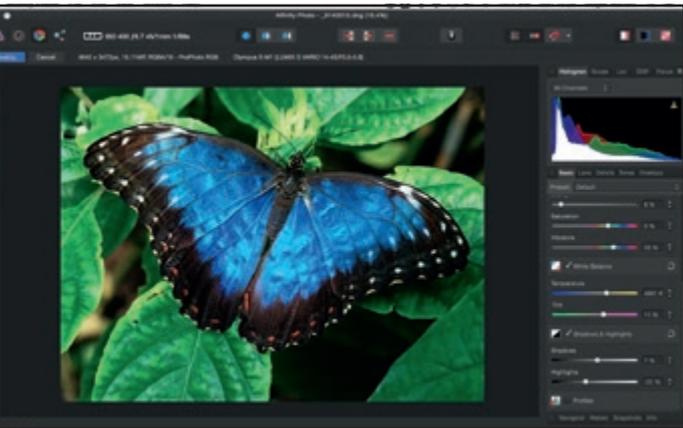


Figure 2: Develop Persona

opens it in the Photo persona for further editing.

The layout of the Photo persona (Figure 3) is similar to that of the Develop persona and may feel somewhat familiar to those using Photoshop. This is where you edit “developed” raw files or images in formats such as tiff, jpeg and psd. The layout is similar to the develop persona with the tool-well on the left and various panels

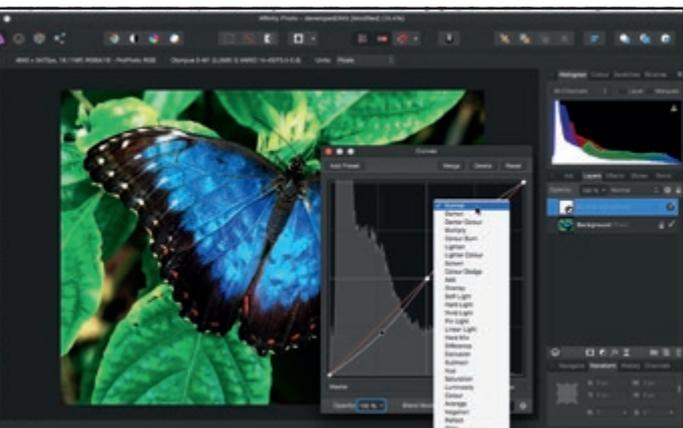


Figure 3: Photo Persona

on the right. These include Adjustment, Layer, Effects, Styles, Navigator, History and Channels (Figure 3). The adjustments are applied as a re-editable adjustment layer and a full range of blend modes are provided, as are the layer effects (known as layer styles in Photoshop). Blend Options also permits two layers to be blended with a high level of control. Under the Select menu, it is possible to select mid-tones, highlights and shadows as well as select by colour (RGB). It is also possible to create luminosity masks in the channels palette but this has not been investigated.

One feature that portrait photographers may find very useful is “Frequency Separation”. This option separates the high

frequency information (fine detail, such as hair and eyes) from the low frequencies (areas of colour and tone). This makes it a simple task to sharpen, for example, the eyes and reduce or eliminate skin blemishes. The concept is not new. It is possible to do this in Photoshop but the method is more complicated as it requires more steps.

The export persona permits export in a wide range of formats with embedded ICC profiles. The usual re-sampling methods are provided, together with Lanczos 3. Printing with Affinity Photo, managing colour via the Colorsync engine, provides access to colour profiles, while Epson’s Advanced Black and White drivers are available for monochrome printing.

It would not be practicable to describe all the features in *Affinity Photo*. Suffice it to say that it has most of the tools that a serious photographer needs. The glaring omission is a macro option (i.e. “actions”) but this is listed in the roadmap for future addition. But what is more important are the results. The same raw image was processed through similar workflows, on separate days, in *Affinity Photo* 1.3.4 and *Adobe Photoshop CC 2015.0.0* and printed on the same paper.

The two prints (Figures 4 and 5) showed minor differences in colour and tone but this is to be expected and could be easily corrected with small adjustments to the relevant sliders.

With no sharpening applied, the image processed in *Affinity Photo* appeared to be slightly softer. Also, highlight recovery did not appear to be quite so effective. On the other hand, it gave somewhat more saturated colours. These observations should be treated with caution, however, as this is new software with a new learning curve.

Before reaching any final conclusions, it should be emphasised that *Affinity Photo* is for photographers. In that context, it does most of what photographers require.

It is fast and, moreover, it is inexpensive. There are a number of useful features that are missing, such as macros. However, these, plus many other additions and

improvements are planned for future releases. At the time of going to press, the program has been updated to version 1.4.1 which provides over twenty improved or additional features. For example, it is now possible to choose between two raw engines, *Affinity Photo* or *Mac Core Image*.

From time to time, new raw converters and image editors appear and sometimes disappear from the software catalogues. In the author’s opinion, *Affinity Photo* is here to stay.

Footnote.: The opinions expressed are those of the author and do not necessarily reflect those of the RPS Digital Imaging Group. The author has no connection with Serif Software.



Figure 4. Affinity Photo



Figure 5. Adobe Photoshop CC 2015

Susan Hendrick FRPS, says the wallpaper she had as a child created images in her mind before she fell asleep. She believes this sparked her enthusiasm for macro photography and led to the RPS top distinction.



MACRO IN FOCUS

In the pink

Living near the sea, I have always found time to go beachcombing, looking for interesting still life objects to photograph. At times I would go hoping to capture a coastal landscape in good light. However, as soon as I was on the beach, my attention was drawn to seaweed and interesting flotsam.

Our garden is full of flowers and I love to photograph them in their many different stages from bud to disintegration. I like the idea of still life, constructing a composition of objects of various shapes, colour and textures confined to a frame.

I have always been interested in photography and art, even before the advent of the digital camera. Like so many people, the digital age opened up so many possibilities for the camera user.

I became more serious about my approach to photography after being introduced to the Royal Photographic Society in 2008 by my local photography club.

Macro became the format I needed to create a unique style of my own, using just a camera. I wanted to bring together my love

of still life and macro. With macro when you look through the lens for the first time at a subject, you always see the unexpected.

For me photography is not just a medium which produces beautiful images but an opportunity to be creative. Firstly by finding a subject, then interpreting the subject as a visual concept. This does not always lend itself to mass appeal or prize winning images.

In my ARPS panel I tried to capture the colour, texture and form of flowers in their process of decay. The panel brought together my interests in still life, form and colour and an artistic approach. Sometimes I put flowers into a microwave for a second to soften them and make them more pliable. This is done to enhance the shape to fit the frame.

I rarely crop an image. I like to think that what I see and am happy with through the lens, will be replicated on the computer screen. It is then that I make my first judgment. Does it work in the frame and does it fulfill my visual objective?

My objective is to produce a successful

composition, which is a balance of design, simplicity and colours that complement each other in the single image. I do very little to an image with software as most of my work is carried out in front of the lens.

Lightroom is used for raw conversion, tweaking of colour,

spot removal and a little sharpening. Some images do not work well as a single image but can make a contribution to a larger theme. While working on my panel I was always jumping ahead of myself, but in



Skull and lily



Tide beach 1



Dried Rudbeckia



Movement of fish on surface of the sea



Reflecting light on the seabed



Tide beach 4

a way revisiting the wall paper from my childhood as I worked with images. There were other ideas passing through my mind trying to widen my imagination for the future.

After obtaining my ARPS I needed another challenge and decided to explore the possibilities of using macro with an innovative concept. I had already started thinking about producing a panel about a visual representation of one element of the coastal landscape. I thought the most obvious was a combination of sand, water, seaweed and beach flora.

The results were rather contrived and never came up to my expectations. Frustration began to set in. It was while visiting the local harbours and fish markets I was drawn to the different colours and textures of fish. I thought those elements reflected their environment and that inspired me to use small parts of the surface of a variety of fish to convey that environment in a project.

At first I planned a project of a small number of images to convey the beach and tide, while unsure of how best to present them in a visual presentation. At this stage I had not considered the daunting task of submitting for a Fellowship. However the challenge and discipline necessary to produce a panel of 21 macro images appealed to me. I thought it might give me the opportunity to create an imaginative conceptual style, exploring different ways of seeing land and seascapes.

My project now gradually evolved into a panel of images conveying the eroding cliffs as they interacted with the sea; the movement of fish on the surface of the sea and the reflection of light and the movement of marine flora and organisms on the seabed.

I found it quite exciting looking through the lens, searching for areas of interest that would help represented the images that I needed. The constant bending did not do a lot for my back though. In some of the images it was important to give an enhanced sense of movement and depth. This was achieved with the use of tiny sections of the fish surface used as a montage to give the appearance of small

fish and organisms. Montage can convey many illusory elements in a composition when used with the play of light. Water and ice were also used to give a sense of movement as light was displayed on the surface. After a time as the panel started to develop, it seemed natural to try to progress, if possible, to a Fellowship.

The panel took a period of two years to evolve. It has been quite challenging trying to create the illusion of reality looking through a lens onto a 5cm composition. A lot of time was also devoted to the printing process as the success of an image is very dependent on the quality of the print. I used a D7100 and a 50mm with extension tubes or a dedicated 105mm macro lens.

My working space is the corner of our conservatory, which has plenty of daylight. Sunny days that are overcast with small clouds were necessary so that the light was not too harsh. Lighting on the composition is then managed with the aid of black and white cards.

Making adjustments to the cards to reduce and increase light created tonal depth or highlights. If there were long periods of cloud with small pops of sunlight, as there so often are, I used a large reflector in the hope of catching the smallest amount of light. Creating a montage very close to the lens requires some practice and good breathing. While the camera was on a tripod

I held my breath as I pressed the shutter, so as not to disturb the montage. With close macro, the slightest movement is multiplied which tends to make me tense. When I produce a successful image, I know that the effort has been worth it. What I learnt from this experience is that you have to be patient. I now know that if you search hard enough and use your imagination, you will always find a subject to photograph.



Ballerina Tulipa



Dried clematis

SPOTLIGHT ON DURDLE DOOR



Durdle Door, Night of Heritage Light

Lit up for one night only as part of the International Year of Light celebrations, this famous limestone arch on the Jurassic Coast became even more spectacular. Dorset photographer, Stephen Banks was there.

Landscape photographers flock to Durdle Door for its famous dramatic sunsets and sunrise, but this Dorset landmark is equally, if not even more spectacular at night.

Durdle Door falls within some of the darkest night skies of Dorset. There are no motorways or cities, so the quality of the night skies is exceptionally good.

At Durdle Door, you're facing south to see it, so the next points of light pollution come from passing boats, or France!

In late September 2015, I was contacted by Michael Grubb Studio in Bournemouth, a lighting studio tasked with lighting up Durdle Door as part of the 'Night of Heritage Light', in a number of locations across the UK on 2nd October. On the night, the lights were due to be switched on at 6:45pm, just before the sun set. I knew from experience that it would still be very light at that time

and as it turned out that the lights were only really visible about an hour later.

Once the darkness of night took over, the results were pretty spectacular and thousands of people were treated to a very different view of Durdle Door.

For my shot, I used my Nikon D800, with Nikkor 14/2.8. 24mm focal length, 90s exposure at f/8, ISO 50. This was certainly different to what I'm used to, both in terms of the lighting and the shooting settings.

Part of me wishes that the event was pushed back an hour so that the night sky would be darker, but I know I would not have been able to capture much detail in the Milky Way with the bright lights on the beach.

This was by no means my first visit to the site. I've lost count of how many times I have photographed the iconic limestone arch,

gracefully protruding out into the ocean like a dragon taking a drink of water. At least, that's what people have told me it looks like! I'm not too sure.

I made my first venture down there in the summer of 2012, when I was in the process of filming my second time-lapse piece, Dorset by Night.

I captured frames of the dying embers of light in the east and over to Weymouth and Portland.

Once Dorset by Night was completed, I began to focus more on still images, rather than videos. With a new wideangle lens (Nikkor AF-D 20mm f/2.8. , I returned to Durdle Door the following winter, managing to capture the stars in some detail:

One cold night in March, I drove through about five miles of fog near Dorchester on my way to the coast, thinking to myself "why

am I bothering? I'm not going to see any stars when I get there!"

As I descended the path down to the beach, the mist began to clear, and there was a distinct yellow glow on the horizon, presumably from the light cast out from a passing boat.

Once on the beach, I ran along the shoreline to line up this light with the opening in the rock face. Time was of the essence, as the light was moving along the horizon quite quickly, so there was only a short window of opportunity to get the shot I wanted.

Through trial and improvement, I used the focused beam of my LED torch to light up the rock face and gradually worked my way down the beach as the light moved away from the centre of the opening.

I describe this image as a lesson in perseverance! No matter what the conditions (mist or even fog), it's still worth going out and seeing what you might get.

My next visit to Durdle Door was arguably my most productive. It was at the height of summer, in the early hours of 5th June 2015. Starting up on the cliff, I got a shot of the landmark from the South West Coast Path above.

I then made my way down to the beach, and captured what I consider my most successful image to date of Durdle Door, 'Archway to Heaven'.



Moonlit Steps to Durdle Door. Nikon D800, Samyang 14/2.8, 30s exposure at f/5.6, ISO 1,600.

The best time to view the Milky Way in the UK is in the height of summer, as this is the only time when the galactic core rises above the horizon. During the winter, we get longer, darker nights, but the Northern Hemisphere is facing away from the galactic core, so we only see the less dense areas of stars in the outer spirals of the Milky Way.

More photos from Stephen Banks can be seen at: <https://www.flickr.com/photos/dorsetscouser/>

The International Year of Light and Light-Based Technologies 2015, was a global initiative adopted by the United Nations to raise awareness of how optical technologies promote sustainable development and provide solutions to worldwide challenges in energy, education, agriculture, communications and health.



Archway to Heaven. Nikon D800, Samyang 14/2.8, 30s exposure at f/2.8, ISO 6,400

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