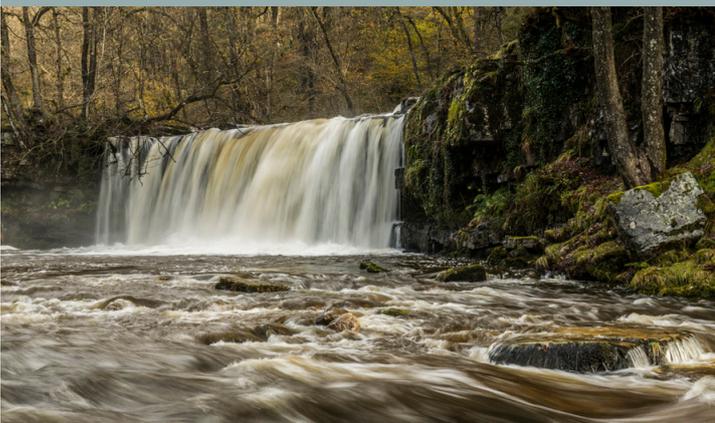
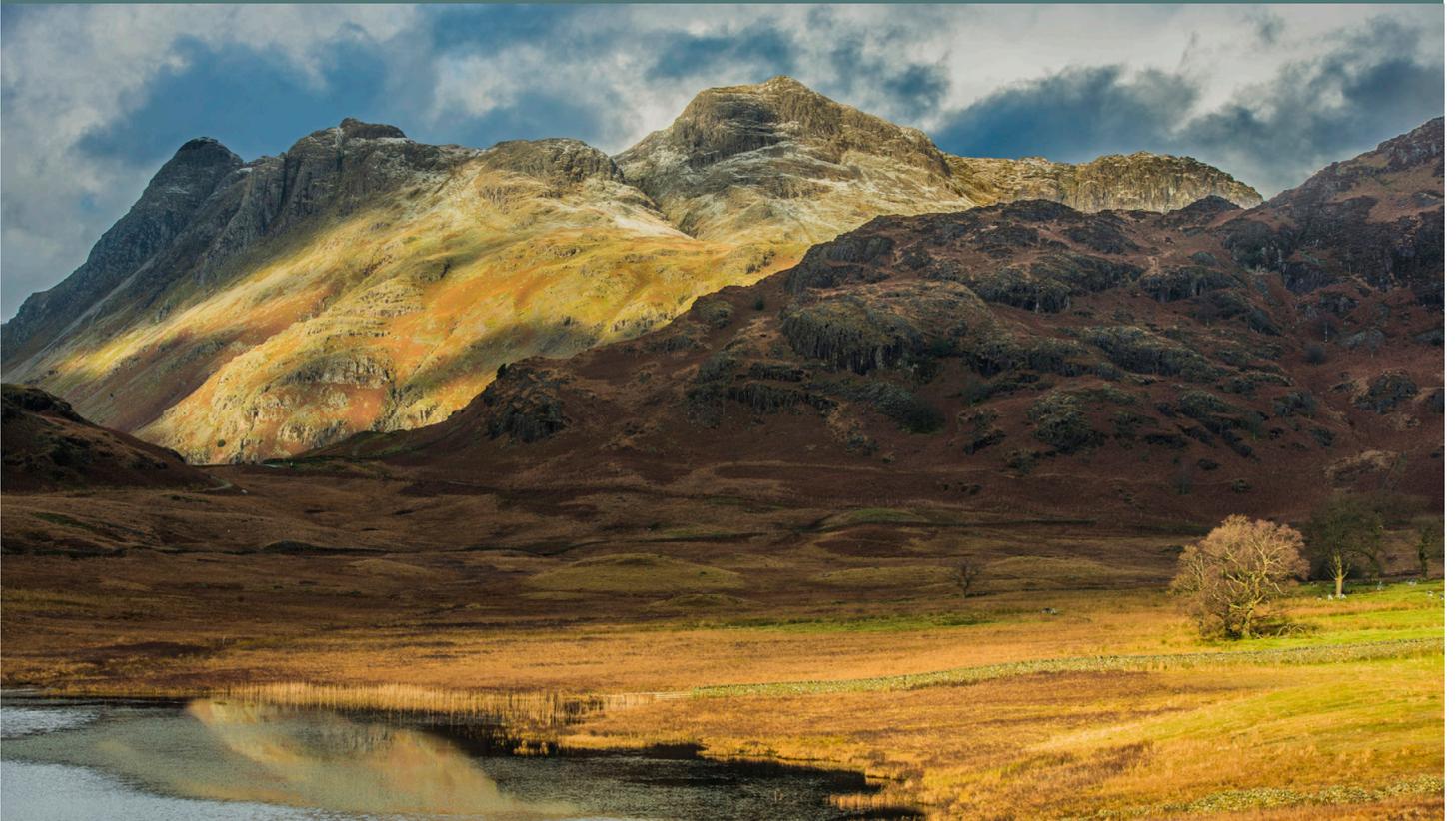




Photographing the Great Outdoors

tips, hints and thought provoking questions



These notes are intended to be an introductory guide to landscape photography. They are not, and are not meant to be, exhaustive.

Hopefully they will help you consider some of the what's, how's and why's of landscape photography and inspire you to get out there and give it a go. It is, after all, a wonderful pastime.

Most important is that you have fun. Enjoy what you do and don't be put off by any harsh criticisms along the way. We are all different and do things differently.

If you like a photo that you have taken then that is how it should be! Be guided by feedback but don't take it as necessarily right or wrong.

What is Landscape/Outdoor Photography?

There is a vast number of questions surrounding photography, and landscape photography in particular, that you may have asked yourself. You will possibly have struggled to find a definition of landscape photography.

These days photography sometimes seems to be more about technology than technique. Our focus here will be on vision and technique. I will endeavour to help you see the image more clearly and realise it successfully.

Do we photograph the obvious, what the eye cannot help but see, or the not so obvious, i.e. a part of the whole that might otherwise go unnoticed, but nevertheless contains its own beauty and mystery? If we start to think about 'making' a picture, rather than simply 'taking' a picture then we will be thinking along the right lines. The elements of an exciting shot are often there. We just need to recognize them for what they can add to our picture and so place them in their context. These elements might include a winding lane, a drystone wall, a river/stream, a tree or indeed all of these. It also involves thinking carefully about how we wish to present the final image, i.e. considered use of the lens. Having said that, be aware that if the shot is too cluttered it may just serve to confuse!

Is a landscape photograph only about the big view, an expanse of moorland for instance, or can it also be about small elements or subsets of it, like rocks and flora? We tend to think of landscapes as sky filled vistas but the genre definitely includes the close view, the intimate landscape. These



closer views can be very rewarding, especially in what might be thought of as poor light, where there are no 'dark/bright' contrast ranges to upset the camera's metering. Indeed, for this very reason detail comes out far more clearly defined. And here, just as much as in the large landscape we have to seek out those key ingredients which will 'make' our picture. Look for interesting lines, curves, patterns, shapes.

What drives us to take landscape photographs?

There are many reasons for photographing landscapes; we might want simply to record a happy memory, that we wish to share something that to us appears very special, to please ourselves, or to please (or hopefully to impress) others. We might want to earn awards/accreditation or to see our pictures published. Indeed, it could be a mix of all or any of these.

Whatever your reasons the most important thing is to be passionate about your subject. If you're not you can be sure it will show through in your work.

What equipment do we need?

There should really be no restrictions upon your choice of equipment (other than financial!). Simply take whatever equipment you are comfortable with, whether you are a beginner with a small digital compact camera or you use a Single Lens Reflex (SLR or DSLR if digital) type camera or larger.

Here is a list of possibilities and suggestions for building an "ideal" landscape photography kit.

Camera types: Digital or film 35mm SLR, medium format or large format – the choice is up to you. Remember that, as a general rule, the larger the format the higher the quality (and, inevitably the price) but the less portable and flexible your outfit will be. These days the standard of the 35mm D(Digital)SLR type camera is of such high quality that it performs very well indeed. Don't discount compact or hybrid/bridge cameras (35mm look-alikes where the zoom lens is fixed into the body).

Their quality is usually excellent also, but do not expect the flexibility and versatility of bigger cameras with the option to swap lenses. To this can also be added mirrorless cameras which offer less weight to carry. Prices will also come down as technology improves.

Range of lenses: The choice is enormous, from 8mm fisheye up to 600mm or even longer. It is good to have a range of lenses; 17mm to 300mm will cover most eventualities, the wider



lenses (generally considered to be 35mm or wider) being better suited for capturing the whole landscape and the longer lenses being ideal for 'extracting' sections out of the landscape. Remember that, as a general rule, the wider the available aperture (i.e. the lower the f-stop number) the better the lens quality will be. You may hear folk referring to fast lenses – all it means is that the wider aperture will allow faster shutter speeds. eg. a lens that will open up to f2.8 will be better than a lens that only opens up to f5.6. There will be a cost for this though! Allied to this is the ability of some lenses to be hand-held and still allow greater stability. Nikon offers VR (Vibration Reduction) lenses, Canon offer IS (Image Stabilisation) lenses and Sigma offer OS (Optical Stabilisation) lenses. Some cameras have this function built into the camera body. Check before you buy.

Lens hood: Flare is a constant problem in outdoor photography when shooting into or towards the sun. This occurs when direct (or sometimes not so direct) sunlight strikes the front of the lens, travelling down the barrel onto the sensor or film, manifesting itself as a faded patch or purple/multi-coloured octagons appearing in the picture. Lens hoods help keep these 'stray rays' at bay. You should check the fitting size of the lens before buying. Very often new lenses come with bespoke lens hoods. Be aware that there will be some challenges turning the outer ring of a circular polariser (which screws into the lens) when a lens hood is in place. Incidentally, lens hoods can also help to keep rain off lenses, especially on longer lenses where they tend to be deeper.

Tripods: Camera shake is one of the biggest problems with available light photography. As with cameras, there is a trade-off between portability and solidity, lightness and weight. Also consider using a monopod or a beanbag. But, be assured, however steady you think you are, for landscape photography a tripod will be a lot steadier. This is largely due to the fact that you will often be shooting at small apertures and/or low light levels (see later) and therefore long exposure times. Some tripods come with a hook at the base of the centre column, onto which a camera bag can be hung, to add extra weight and therefore stability, in windy weather. Also be aware that a raised tripod centre column is the least stable part and will be more prone to movement in windy weather. As a general rule only use the centre column if you really need that extra height.

Also check the weight difference between aluminium and carbon fibre bodies. The latter generally cost more but weigh less.

Remote release: Designed to minimize camera movement, or shake, when you click the shutter to make the exposure. There are many types; air, electronic, infra-red or 'screw in' cable using a plunger (not so common these days). You can, of course, use the self-timer if you have one. Also, check if your camera has a mirror lock. If so consider using it – this, too, reduces camera movement.

Tripods slow down the 'photo taking' process, helping us to better think about the landscape we are seeking to capture.

Also, tripods are excellent for 'locking in' the scene in front of you, so if you wish to experiment with different filters or camera settings the scene in front of you will be identical for each shot, making like for like comparisons much easier.



Film media: What's best for you? Print film, slide film or digital? Colour or black & White? My memory card of choice is Sandis 16Gb, although other makes are also very reliable. Try Lexar or Transcend also. (My preferred films for landscape work were Fuji Velvia 50ASA and Provia 100ASA transparency (slide) film, although these days most of my work is done digitally). To minimize risk of losing my work I tend to use a number of smaller cards rather than, say, a 32Gb or 64Gb card. Imagine if you lost a 32Gb card, or it became corrupted, with all those pictures on it! It doesn't often happen, but when it does.....!

Filters: The choice is huge; polarisers, neutral density graduated, 'big stopper' (10 stop) filters, warm-ups. Check the diameter of the lens (inside lens cap and sometimes around the lens edge - look for 52mm, 67mm, 77mm, 82mm etc) for size required if using circular 'screw in' filters. If you opt for a filter kit using a gate or holder, such as Lee or Cokin, do ensure that you have the correct diameter holding or conversion ring for the lens you intend to use the filter with. Do remember, however, that if your final shot looks filtered you have not been subtle enough in its use (unless, of course, you are seeking to deliberately create that effect). There are many makes now on the market, so choose carefully and seek advice.

Lens cleaners: Always take a lens cloth and soft brush with you - dirt on your lens reduces image quality. In the field I use a Lenspen and/or my lens/filter cleaning cloth from Lee Filters. DO NOT use your T shirt, kitchen rolls or loo paper - they will leave little bits of paper fibre or smears everywhere!

Spare/freshly charged batteries: Trust me on this - it's important, especially for digital camera users!! If using rechargeable batteries, don't forget to take the charger (and adaptor?) with you if travelling. And...don't forget to bring it home. Because it is plugged into a wall it is so often left behind. I have done it more than once! Also be very aware of how fast a camera's Live View facility can eat up battery power!

Carrying it all: Backpack or shoulder bag? There is a huge choice from Lowepro, Kata, Tamrac, Crumpler, Benro, etc. Look for a decent make that will hold at least two lenses, prices can range from around £20 to £300. My preference is for a backpack. Although you have to take it off to get to your gear it does distribute the weight more evenly across your upper body.

A framing device: Try using an old plastic slide mount for framing or gauging the shot through before using the camera. A piece of cardboard with a rectangle cut out of it will also work, but keep to a 2:3 size ratio.

Spirit Level: A simple device that slots into the hotshoe of the camera and ensures that your horizons will always be level. These days many digital cameras have a 'virtual horizon' facility on the back of the camera, activated via the menu, but I still find the spirit level handy!

Remember, too, to clean the lens in a circular motion, rather than back and fore.



Lighting - What season and time of day is best?

Photography is derived from the Greek words for painting and light.

For all Canon SLR users - EOS was the Greek goddess of dawn.

Be sensitive to seasonal variations (winter light and long shadows adding depth to your pictures vs. high summer noon with no shadows, producing a more flat and one dimensional feeling to the image).

Shoot early in the morning or late in the evening for beautiful light with a three dimensional feel. Some photographers refer to these two periods of the day as 'the golden hour' i.e. one hour before sunrise and one hour after sunset. Also often referred to is 'the blue hour' - that period after the sun has dipped below the horizon and the sky is rendered dark blue rather than dense heavy black.

Be aware of the direction of the illumination from the sun – into the light for drama (contre jour - but safeguard against flare!), over shoulder for flat lighting, to one side for good modeling lighting and pleasing shadows. Shadows add a real feeling of three dimensionality to a landscape BUT be wary of shooting a landscape with a low sun behind you - unless you really do want your shadow in the shot!

The kind of light that works best can also depend on the subject, e.g. waterfalls and woodlands generally benefit from flat, even lighting to be photographed to best effect, whereas mountain tops or side valleys might demand low raking sunlight.

Be aware that in difficult lighting conditions you might need to bracket exposures to guarantee a good image. This means tweaking the camera's selected exposure by half or third stop differences, via the +/- exposure compensation button or dial. Do remember to check/reset this before your next exposure though. The + symbol will over-expose, whilst the - symbol will under-expose. This can be in exposure steps of $\frac{1}{3}$ of a stop or $\frac{1}{2}$ of a stop, depending on the camera make and model. These days most cameras offer $\frac{1}{3}$ stop differences.

Lighting is allied to metering. Think about how best to meter your subject in the lighting conditions. Should we opt for segment/matrix, partial, centre weighted or spot metering? Think about what circumstances dictate which option. Segment or Matrix metering (depending on the make of your camera) takes many light readings from different parts of the frame and calculates an optimal average reading. Centre weighted metering generally measures the light from the middle 30% of the frame and Spot metering the middle 5% or so.



Depth of Field – or the F-stop Plan

Cameras allow light onto the film/digital sensor through a hole in the rear of the lens called the APERTURE. The size of the hole can be controlled directly by the photographer as desired. On most modern cameras this is done on the camera body itself (turn the control dial to A, or Av, and spin the black 'dial in' wheel to the required f-stop number – see later).

On some older cameras where the aperture is set on the lens and not from the camera, it is possible to set an aperture between these numbers. This is known as a half stop. If you chose an aperture between **f16** and **f22**, for instance, it would be referred to as **f16 1/2**. On newer cameras the numbers displayed may be slightly different (e.g. **f19**) but the basic principles are the same. On some digital compact cameras the range is generally smaller: from around **f8** to **f11**, but note that this does NOT compare precisely to the aperture on an SLR camera due to the smaller sensor size.

The difference between each f-number is known as a STOP – the smaller the f-stop no. the wider the APERTURE at the back of the lens will be. So, an **f-stop** of **2.8** is wider than an **f-stop** of **f22**. So, if my lens is set to **f22**, and Fred's lens is set to **f8**, then Fred's lens is said to be opened up (or STOPPED UP) 3 stops wider. The opposite of STOPPED UP is STOPPED DOWN, so in this example my lens is STOPPED DOWN to **f22**.

For every increase in f-number (eg from **f8** to **f11**) the amount of light entering the camera halves. The shutter speeds on the camera are generally designed to move in the same size steps (though not always on digital cameras!) So at a 1/8th of a second half as much light enters the camera as when the shutter is set to 1/4 of a second.

It is important to remember that, as a general rule, the narrower the APERTURE (I.E. THE HIGHER THE F-STOP NUMBER) the greater will be the front to back sharpness in the final image. Conversely, the wider the APERTURE (I.E. THE LOWER THE F-STOP NUMBER) the less front to back sharpness there will be, except for the object actually focused on. The sharpness will be on a sliding scale from DEAD SHARP throughout at **f45** (if your camera lens combination goes that high) to only the "focused on" object being sharp at **f1.4**.

BUT (and there's always a but!!) the degree of lack of DEPTH OF FIELD (the posh term for front to back sharpness) will vary depending not only on the f-stop no. selected but also on the focal length of the lens.

So, **f2-8** on a wide-angle lens of, say, 17mm will give more depth of field (front to back sharpness) than **f2.8** on a telephoto or zoom lens of 300mm, which will be utterly unsharp both in front of and behind the object focused on.

The size of the hole, or aperture, is known as the f-stop. The f-number range on 35mm cameras/lenses is generally:

f1.4

f2.8

f4.5

f5.6

f8

f11

f16

f22

f32

f45 (on some cameras/lenses; generally large format lenses or macro lenses where massive depth of field can be required).



The best way to get the results you want is to try out the combinations of lens focal lengths and f-stops, taking notes and/or referring back to the camera's metadata, if digital, as to how you expose each frame. Then when you get back your film from the lab, or your photos onto your computer for processing you will be able to see how to achieve the effect you want.

By and large, a big landscape would be on a wide angle lens at around **f16** or **f22**, and a shot of a flower in a hedge would be on a zoom or telephoto lens of around 120mm setting at about **f2.8** to **f6**. Some lenses work at their best in their mid range, between around **f5.6** and **f16**.

Exposure Compensation: after you have set your aperture for the effect you wish to achieve, the shot may be over or under exposed. Clues are the flashing areas, sometimes called 'blinkies', in the LCD screen on digital cameras and a pale, washed out look for over-exposure or too dark for under-exposure. The camera has a small knob, +/-, which can be used to under (-) or over (+) expose the shot, either in increments of $\frac{1}{2}$ or $\frac{1}{3}$ of a stop.

RAW or Jpeg?

RAW format (if your camera actually supports RAW) is a format that when set, keeps any 'in camera' editing to an absolute minimum, allowing you the ability to be more creative in post processing, whereas Jpeg does most of the editing in camera for you.

Neither is better or worse than the other but the following points may guide you as to which is best for you.

Generally the option to select one or the other in the camera is under the function of Picture Quality. This offers a series of options:

RAW

JPEG

TIFF - seldom used and not recommended for using 'in camera' - files are HUGE.

RAW and Jpeg - as a set of options - Jpeg fine (best quality), Jpeg medium (OK) or Jpeg basic (ok for web/mobile etc use).

- RAW photos, or files, will always be larger than Jpeg files. This is because Jpeg files are edited by the camera (for colour balance, exposure, etc) and part of that edit process involves deleting pixels that are considered unnecessary. Consider, therefore, that RAW files will need larger memory cards and greater photo storage facilities back home.



- As mentioned above, RAW files are only edited to a very small extent, leaving the editing/post processing to you. When they leave the camera they will tend to look flat and lifeless and will require tweaking in your RAW converter (in the post processing process) to bring them back to life as you wish them to look.
- The RAW converter has 2 sliders labelled as '**Highlights**' and '**Shadows**'. By sliding '**Highlights**' to the left and '**Shadows**' to the right you can bring out details to your satisfaction.
- In my opinion it is better to shoot in RAW so you have ultimate control over the end product but as mentioned earlier, there is no right or wrong here. You would need to consider what is most appropriate for you.

What is a histogram and why do I need to know?

A histogram is nothing more than a graphical representation of the range of tones in a scene, from jet black to snow white (no dwarves). The camera is programmed to recognise each of the 256 tones and add up the pixels falling into each tone value. It then maps these as a graph, the blackest having a value of 0 and the whitest having a value of 255 (hence 256 in total, including the 0). Most cameras can now also display separate histograms for the Red, Green and Blue channels (which, when mixed together in the correct ratios, give white).

Histograms used only to be viewable after the exposure was taken, but now, with more modern cameras, it is possible to see the histogram whilst in 'live view'. Try moving the camera in live view (maybe from pointing at the sky to pointing to the land) and the 0-255 values will constantly revise the profile of the histogram as the range of light levels vary, depending on where the camera is pointed.

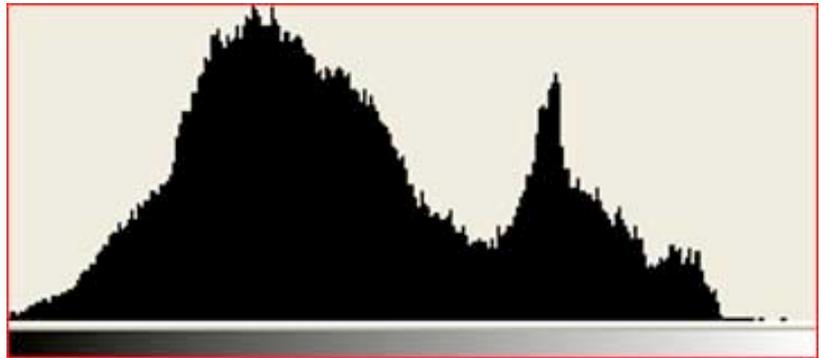
The important points to consider when checking the histogram is the numbers of pixels 'stacked' either to the left or to the right. If there is a mass of pixels on the left of the histogram then whilst there will be detail that CAN be drawn out in post-processing software there may well be digital noise in there too. If the pixels stack to the right to the point where there is a straight upward line on the right it is very likely that the highlights have been blown out, or 'clipped' This will generally mean that there is NO detail in parts of the photo (often the sky) that can be recovered, although if shooting in RAW, there can be up to 1.5 stops tolerance, so we stand a better chance of recovering blown out detail than if shooting in jpeg.



There is a school of thought that states the more pixels that fall around the middle or to the right of the histogram, the better quality data they will hold, and the more accurate will be the rendition of the shot. This is true, but don't let your creativity be stifled by this. The key point is that as long as you have NOT blown those highlights you will have an image.

How to correct too many dark pixels or blown highlights? Experiment; with your exposure compensation function (the +/- button - minus to under-expose, plus to over-expose) and/or the aperture (smaller aperture if over-exposed, wider aperture if under-exposed).

There is no such thing as a 'correct' histogram, but as long as there are no clipped highlights (stacking of pixels well to the right) you will have a photograph.



Here, the very black pixels are fairly minimal, so no problems with under-exposure. Crucially there are NO pixels stacking up on the right hand side which would indicate over-exposure and loss of detail.

Composition Guidelines

With landscapes, it often works to place key elements in the shot on one of the $\frac{1}{3}$ rd intersections of the picture (e.g. a tree, house, rock). There seems to be a hidden structure which makes this arrangement appealing. Even mathematicians have noticed it; Pythagoras and his knot 0.38 along the length of a piece of string was followed by Euclid defining it as "a harmonious proportion in tune with the universe". This is sometimes referred to now as The Golden Mean. BUT, rules not meant to be followed slavishly. It may work in one image yet fail utterly in another! Check your camera – some come with gridlines as part of the viewfinder, and/or can be set up via a menu instruction. Check your camera – some come with gridlines as part of the viewfinder, and/or can be set up via a menu instruction.

Incidentally try focussing $\frac{1}{3}$ rd of the way into the landscape to ensure front to back sharpness.

Try and keep the image simple and uncluttered – sometimes "less is more".

Look for foreground interest to 'introduce' the viewer into the scene, especially if using a wide angle lens. This might be a rock, a car, a tree; anything which helps set the scene for the viewer; it also masks a very large expanse of uninspiring foreground.

Look for 'lead in' lines to take the viewer through the picture – a river, path, railway or fence perhaps.



As a general rule avoid horizons cutting half way across the image. This really can make a picture look sterile. An exception might be where you want to show reflections in a lake when it may be compositionally preferable to show both the mountains and their reflections in a 'half and half' mode (see below).

Avoid competing elements in the picture – they will dilute what you want the viewer to see and appreciate. An example might be two trees, either side of the photograph.

Crop, in camera using the zoom lens or a longer length lens, or on the computer if post processing your work digitally, to remove excessive, uninteresting skies, trees, and any clutter generally around the edges. Think carefully about what you actually want to show. Also be aware that by cropping via the lens you will end up with a larger file size than if you crop it in the post processing software, giving the ability to produce a larger print .

ALWAYS check carefully round the viewfinder before committing to the button – look out in particular for a blundering red anorak, empty coke bottles, crisp packets, someone pulling silly faces – it does happen/has happened! Also, be aware that on most cameras you only get to see, through your viewfinder, up to about 97% of what the final picture will show – so raise your head for a last minute 'look around' too!

Interpretation/Understanding – will THE VIEWER be able to understand WHY you took THAT particular shot? Indeed, do YOU understand WHY you took THAT particular shot? If you don't, be sure your audience won't either.

Careful use of diagonal lines and triangle shapes (e.g. three trees) in a shot makes it more dynamic; keep the interest in the area within the triangle.

Look for patterns, and repeating patterns too. They will catch the viewer's eye and not only draw them INTO the shot, but also make it very clear what YOU saw and why you took that particular picture (that word WHY again!).

Use reflections; in lakes on ponds on windows. Reflections can be a very powerful tool and, in essence, give the viewer twice the value! Lakes, ponds, reservoirs, puddles. Try them all, both in landscape and or portrait format. Do remember though, that if you have a polarising filter it may be turned to remove reflections!

It often pays to do a 360 degree turn to just see what is going on behind you – you may be very surprised and presented with an even better picture. And, don't forget, a portrait picture can often look more powerful than a landscape picture, especially if seeking to emphasize height or to hide too much land if of little interest.



Low Level Lighting

If shooting in low level light there are several guidelines to help get the best out of the shot.

- Firstly, it is generally better to go for low level rather than dark night. This gives the camera a chance to pick out details. In darkness all the camera can really do is see black and light - which does not look good. Try just after the sun has gone down below the horizon and just after lighting up time (depending on where you are!). Note, however, that this is not applicable to astro photography - a different subject - where low apertures and long shutter speeds come into play.
- Use a tripod for best results. Set the camera for around f8 and the lowest ISO you can. If you DO have to handhold the camera you really must keep it as steady as you can. Image Stabilising may well help - but DON'T use this function if the camera is tripod mounted. It can use up battery power unnecessarily and on older lenses with this function it CAN cause blur as the stabilising motors whirr away when not needed.
- Remember, too, that you can get a decent starburst effect from using an aperture of around f16 and smaller - i.e. up to f22/32. F8 mentioned earlier is just a good 'catch all' aperture - safety! ('F8 and be there' as the new cliché has it).
- Also remember, if you are after car head/tail light trails find a steady piece of ground! Not a bouncy overhead footbridge. Again, the longer the exposure (i.e. high f stop) you select the longer/more pronounced will be the trail effect.
- If you want to capture multiple firework bursts, try this; set the camera to BULB after composing where you think the drama will take place. Click the shutter and place a piece of dark board over the lens. Whenever you see a 'burst' remove the card then replace it after. Shoot 3, 4 or more bursts before switching off. This way you should capture multiple bursts. Try and shoot from a hilltop, top of a building to maximize the sky and minimise buildings etc.
- The key here is to experiment - and learn.



The Big View (The Vista) vs. Detail

There is a tendency to be overawed by the big scene in front of us and instinctively raise our camera and fire away. The danger is of missing the feel, flavour or essence of what the scene meant to us when first seen. It is quite possible that our first few shots will not be to our satisfaction. Expect to 'bin' the first 3 or 4 shots (easy on a digital camera!). That said, I do expect to 'bin' when I get home and have had a chance to examine the shot(s) more closely. Instead, take time out to look around and try to get the 'feel' of the landscape around you before shooting. What is it about a view that really hits home?

What emotions were stirred? – how do we convey those emotions to an audience deprived of the senses & experiences we felt when taking the picture?

Seek out images in their own right from within the big picture to "tell the story". Show the big picture, BUT also the elements that comprise it. They, too, make superb shots. Ask yourself the question "Would I want to hang this on my wall?" I tend, on location, to work the bigger vistas, then move in closer on the more intimate images as my feeling for, and knowledge of, the environments grow on me.

Edit.....

Ruthlessly! If you don't, you run the risk of being swamped with poor or only half decent images which will utterly dilute the ones that came out really well and deserve wider coverage. Hoarding every picture you have ever taken also presents unnecessary headaches with storage (be it on the memory card, storage device, computer hard drive, photo album or shoebox in the attic!) It sounds tough to bin your 'not quite so good' pics, but it really is an essential discipline! And if you don't, the chances are the WHOLE portfolio will never be looked at because the sheer size of the task is too daunting to contemplate.

I tend to ONLY delete off the camera back (if shooting digitally) if I know I have got it horribly wrong. Otherwise, my first pass back home is to weed out bad 'uns and obvious duplicates, my second pass is far more critical and gets rid of those that, for whatever reason, have a flaw in them somewhere or fail to make the mark for boring composition, bad exposure or whatever. **This cannot always be deduced from the low resolution jpeg picture on a camera back, however good it is.**



And Finally...

If and whenever you want help or advice with your photography, just don't hesitate to email me.

But above all...ENJOY!! It is a truly absorbing and rewarding hobby.

AND...finally...from time to time remember to give the camera a rest and really enjoy what it was you came to see. Many a relationship can be saved this way!



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