What I Know About Achieving Crispy Pics

A Brief Focus On Landscape Photography

BY TESSELATOR

DEDICATED TO ROBERT NICHOLS

CHAPTER 1

Good Glass

The first priority is glass. **Sharp** lenses with interesting and/or buttery smooth bokeh is or should be a photographer's first consideration. Almost all of Canon's "L" line will do nicely! You can always tell the "L" lenses by the red ring or the white body. Here's what's currently being offered but you can find used or older versions of (typically) the same optical design at auction sites and on for-sale forums:

http://www.usa.canon.com/cusa/consumer/products/cameras/ef_lens_lineup

All modern Zeiss lenses are primo! They're available in Canon EF mount designated by a ZE next to the model name, Nikon F mount designated by ZF, and Sony's Alpha A mount designated by the letters ZA. Here's what's currently available from Zeiss but you can often find used or older versions of (typically) the same optical design on auction sites and for-sale photo-forums:

http://www.zeiss.com/camera-lenses/en_us/camera_lenses.html

Both of these options are a little costly but not too bad if you're only buying one or two lenses (which might be all you need for shooting landscapes), ***and,*** you have a decent job with not too much personal debt. Luckily there are many alternative (alt) budget options available if you don't mind manually focusing. Most veteran landscape photographers I exchange information and images with (both hobby and pro) seem to prefer manual focus anyway. Manual lenses can usually achieve "critical focus" with more precision and more consistency than most autofocus lenses offer. AF is of course better for action shoots - especially in the professional arena where you can't afford to miss the money shots. This is true for most sports photography, some kinds of wildlife, most kinds of fashion photography, and so on.

The recommendable “alts” of the most interest to me are typically between one third and one tenth the price of the lenses mentioned above and deliver the same high pro or semi-pro, image quality (IQ). In the one third range I and most people I have encountered, highly recommend The Zeiss C/Y (Contax/Yashica) mount lenses. These are now discontinued so the places to go to get them are Craig's List, EBay, or a photography site with a Buy & Sell area. My ultimate favorite and the most honest by far is fredmiranda dot com - specifically their Buy & Sell sub-forum:

Fredmiranda.com. - Use the search but not the “Search B&H Photo”.
www.ebay.com - Scroll down a bit for the lenses.
Zeiss Data-Sheets - My collection of Zeiss C/Y data-sheets.

Since these are C/Y mount lenses you will also need a C/Y to Canon EF adapter (if I remember right you shoot Canon right?). The Fotodiox brand is good but pretty much any of them will do just fine. I’ve tried 4 or 5 different inexpensive brands and I can’t tell the difference between them - especially for simplistic adapters like the C/Y to EF is. Many people prefer the ones with the AF confirmation chip in them but I’ve never tried them myself so I don’t know - they seem useful according to what I’ve read on-line.

In the one tenth price range I recommend pretty much any of the Tamron SP lenses from the Adaptall II mount series. Almost all of them have superb MTF (Modulation Transfer Function) values. Here’s a page that shows what models are out there and how sharp each is as measured by lines/mm.

Palm notes on Lines/mm values:

- 50 lines/mm is sharp,
- 60 lines/mm is exceptionally sharp,
- Anything in the 70’s or above is like, WOW!
- Most of the modern Canon DSLR kit lenses are 40 and below if I recall correctly.

Like C/Y mount Zeiss lenses, these Tamron SP Adaptall 2 lenses are found at places like Craig's List, Ebay or Fred Miranda's where many models sell for as low as $50 or there abouts. They're a great bargain value and proof that price isn't always a good indication of a lens's optical properties. Be sure to read up on the Adaptall 2 mount system so you know what to get. The short of it is that the Tamron company developed a universal mount system so that they could manufacture lenses for many different camera mounts without having to alter the lens design or complicate production. This system which began life long long ago ended production as the "Adaptall 2 ™" as far as I know. It consists of their own custom mount and a series of adapters rings for whatever mount your camera happened to have - or whichever you happened to order it with. With this system one could buy a lens with say, a Canon mount adapter included, and then just by purchasing an additional Nikon, Olympus, or etc. adapter they could use the same lens on other camera bodies having different native mounts. Both the adapter rings and the lenses were manufactured and sold by Tamron.

Probably the best bet these days for your EF Canon is just to buy a new (third party) Adaptall II to EF adapter like this. Just make sure the lens is an "SP" grade Tamron and you should be happy.

Tamron still makes an SP line of lenses for modern DSLRs like yours, with AF and AE, etc.. But now we're back up in price and not all of the new SP models are superb like the old manual focus (MF) line-up was - and is.

These four options represent maker line-ups where pretty much every lens in the line-up delivers exceptional image quality! There are also select models from just about every manufacturer's product lines - both new and old. Finding the older exceptional models can be time consuming and even cause a condition known to many as GAS (Gear Acquisition Syndrome) - an very enjoyable syndrome I must say.

When selecting models for landscape and family-scapes like you sometimes post on FB, it's wise to consider the focal lengths and zoom ranges you're the most comfortable shooting with. Most of the landscape photography I look at seems to be shot using focal lengths from ultra-wide-angle (UWA) to about 180 or 200mm - something like that.

Most photogs try to acquire lenses which are very bright like f/1.2 or 1.4 in the case of "normal" (about 50mm) lenses and so on. Having a narrow DOF available is exceptionally useful! And if desired the same lenses can of course be stopped down to F/5.6, F/8, or whatever - in order to gain more DOF when wanted or needed.

The inverse of course doesn't hold true. If you purchase a 24-240mm F/4.5 - 5.6 for example, there's just about no way to achieve subject isolation via narrow DOF except maybe by using close focusing techniques. Even though the lens may have the focal length range you like to work with most, you're ability to achieve that popping crisp look will be noticeably limited - unless you fake it using Photoshop or some other effects software. I'll try to explain why in the next chapter.

I think software generation, artist manipulation, and other so termed "fake effects" are completely legitimate and if the image looks good or even improved as a result then that's a success! The only trouble with this is that it's extremely time consuming with some single images requiring hours and hours of tweaking, masking, blending, selecting, and so on. There seems to be an axiom accepted among photographers: *The better the lens the less time one spends processing the images. The poorer the lens the more time is spent trying to get the images to an acceptable level.* And I'll add to that by saying: at a glance there doesn't seem to be all that much difference when looking at RAW images from mediocre and very good lenses. It's not until processing is attempted that the differences become oh so very apparent.

CHAPTER 2

Isolation, DOF, and Pop

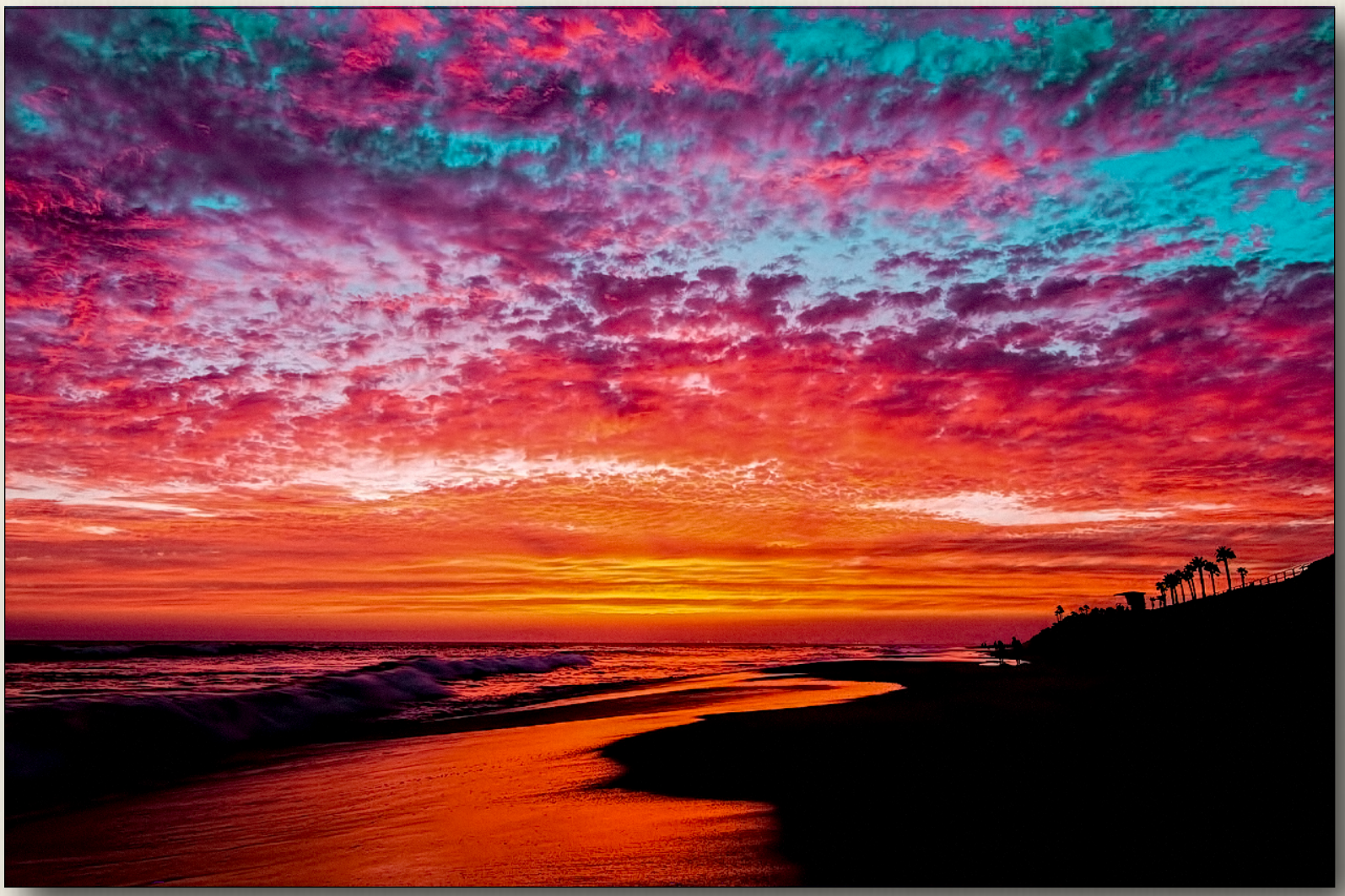
These three elements isolation, DOF, and pop, are variables in one of the most common equations for producing sharp, crispy looking landscapes, portraits, and group shots. This particular equation applied to the "good glass" we discussed in chapter one, can be expressed in sentence form using simple English (with a fun font of course!) as such:

> *Shallow DOF is one of the easiest ways to achieve subject isolation which will cause properly exposed photographs to pop with definition and notable micro-contrast!*

OK, you probably think I'm just making stuff up at this point - I know I would if I were reading this. But actually the digital and even classical emulsion photographers I've been exposed to from the 1970's to present, use these specific terms as if they come defined in every camera's owner's manual right next to "shutter release" and "battery compartment". Until the millennium rolled around I didn't pay much attention to this kind of techno-jargon and just kind of guessed using their common language meanings. And that will get you pretty close if you wanna skip the next few paragraphs. I know technical descriptions can often be a chore to wade through - especially when the camera is in hand and experimentation beckons. I'll try to make it painless though.

I'll start with "pop" ummm, just because. Pop sometimes also called "popout", is an image property basically just like it sounds. Some area of an image or one image among several pops out at you. It's more noticeable, feels more "live" and stands out.

There are a bunch of ways to achieve pop including color contrast, global contrast (which can be identified by solid, well defined [sharp edged] areas or image elements), and patches or islands of micro-contrast. These types can be additive in nature as well. And when all three of them come together in a single image the image can really POP!



Using all three kinds of pop producing elements isn't always desirable. The photographer may be after a much more subtle rendering of the scene but combinations of image attributes which cause pop are useful to understand. And, if you're going for that postcard look maximizing as many as possible might be just what you're after.

I should probably mention that when attempting to use color contrast with either highly saturated colors or pastel tones, it's useful to acquire at least a cursory understanding of color theory if you don't have one naturally.

Micro-contrast can be understood by thinking of fine or granular-like, highly defined, surface textures - like maybe the rough bark of a distant tree, or the granular texture of beach sand at some angle & distance when "critical focus" is achieved. Easy ways of getting micro-contrast to show up in only desired areas typically the subject itself, is to use a shallow depth of field when photographing detailed or finely textured subjects. This alone even without global or color contrast, is enough to cause both pop and subject isolation thus drawing the viewers attention to the subject - where they will notice the ***difference*** between the sharply defined details and the out of focus (OOF) areas.

If you zoom in on this page a little the effect is much more visible - assuming you're currently zoomed out that is. I hope I haven't stumped you already.

Pinus puns aside, you should now be able to see how both DOF and various pop generating image attributes can be used separately or in combination to produce subject isolation. Subject or element isolation can be a critical factor to the goal of producing sharp, crisp looking photographs.

The human brain perceives tonality, colors, and details in a relative way. One might think a particular color is very red - until they set it next to something even more red, for example. Crispy sharpness is the same kind of thing. We want the viewer to both notice the subject first and foremost, and also present them with contrasting levels of detail like micro-contrast or sharpness like highly defined edges. When those two things come together and happen in an image the viewer is often given that initial wow-factor reaction which increases the momentary enjoyment they receive from what they're seeing.

Actual sharpness as opposed to relative sharpness, as well as some other things like the story the image tells and etc. prolong a viewers initial rush of enjoyment such that the photograph becomes a memorable experience and this seems to be the goal of most photographers I encounter. Certainly that is one of the stated goals of "The Great Ones" - whoever they are. I'm not one hundred percent sure what I just wrote on this page is actually true but that's my story - *and I'm sticking to it!*

Achieving story, statement, intrigue and other emotions in an image is of course a labor of love for most. Most people seem to require lots of practice and meditation before those skills emerge and develop to the point where it seems as natural as riding a bike. But thankfully "actual sharpness" doesn't need any such investments in spiritual, emotional, or mental cognition. All that's required for that is critical focus, a sharp lens, and a capable post processing application - the later of which is also of critical importance.

CHAPTER 3

Post Porcessing

Choosing an application that's fast, easy to use and learn, and yet capable of producing exceptional results can be a daunting task. I've watched some men my age spend 10 to 15 years on this and never get the hang of it or find an application they can understand - and they're not all that dumb either. On the other hand, myself and others only seem to need a few hours with even the most complex applications in order to know and understand 95% of it's abilities and grasp the techniques it's capable of. I don't understand this learning curve gap myself but if you have read this far and understood even half of it, you're likely in the second category.

Mostly I like AfterShot Pro from Corel and PhotoShop. I use Photoshop the most. It's my default ***go-to*** application and I have a few plug-in suites installed to more easily or more capably achieve the results I'm after. The two plugin suites which interest me the most (primarily because of the superior results they produce) are commercial offerings from Nik Software and Topaz Labs.

The full collections like I have are not uber cheap however, for the purpose of reconstructing a scaled image's sharpness and micro-contrast all you need are their respective detailers and noise removers. Of those two individual plugin types the ones from Topaz Labs are measurably superior. Measurable on a very fine scale but still measurable.

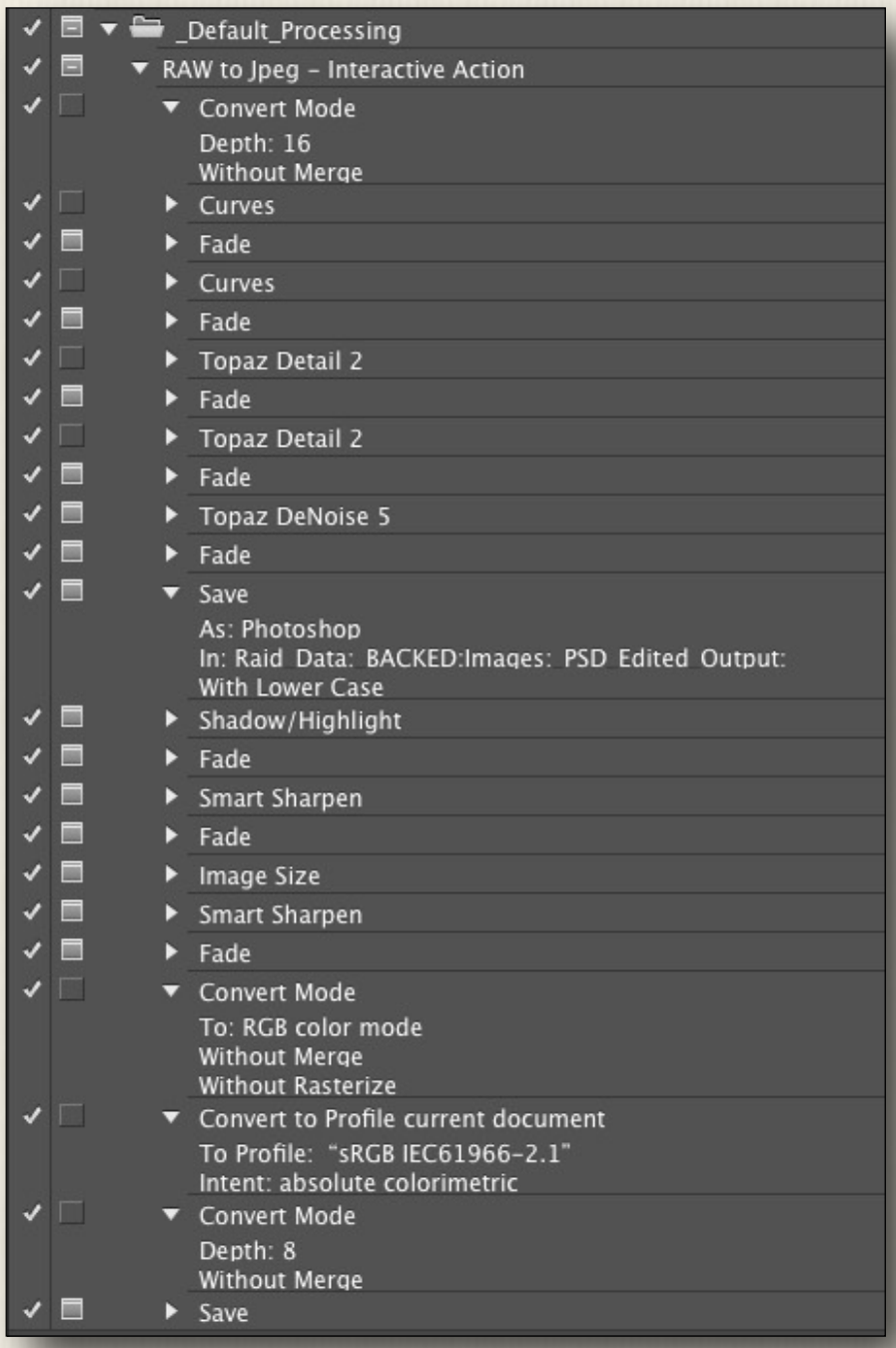
If you choose not to go for the entire suite, the two to get then are DeNoise and Detail. Added to PhotoShop that covers 90% of my processing. The other 10% is when I'm feeling all artsy-fartsy and attempting to create "unique art" of some kind.

But PhotoShop isn't the only game in town. All of these are worthy and all have free trial downloads - so you can get fitted so to speak:

- Aperture - Download / Site - Good/average but a little slow, OS X only.
- CaptureOne Pro - Download / Site - Probably the best there is.
- The Gimp - Download / Site - The last 2 or 3 point releases were nice!
- CinePaint - Download / Site - Powerful but stability problems on Mac/Win.
- PS Plugins 4 Gimp - Download / Site - Haven't tried it.
- PaintShop Pro - Download / Site - Excellent tool IMO.
- Photo Impact - Download / Site - I have no experience with this one.
- AfterShot Pro 2 - Download / Site - Extremely fast and powerful!
- Pixelmator - Download / Site - Sexy and fun now with 16bit support!!
- GraphicConverter - Download / Site - Excellent for web and game, Mac.
- RAW Therapee - Download / Site - Haven't really tested latest versions.
- ImageJ - Download / Site - Some people like it - I dunno.
- PhotoLine - Download / Site - Excellent, I dunno why I don't use it more.
- PhotoShop Elements - Download / Site - Cheaper version of Photoshop.
- PhotoShop CC - Download / Site - Excellent, this is what I use most.
- LightRoom - Download / Site - Good, like Photoshop w/photo workflow.
- Acorn - Download / Site - Very simple features.
- AVS Photo Editor - Download / Site - I dunno, older vers were OK - PC.
- ACDSee Pro - Download / Site - Excellent but not worth the price IMO!
- F-Spot - Download / Site - Good, Linux only?
- PhotoStudio - Download / Site - Excellent.
- Silkypix Dev Studio - Download / Site - I think excellent.
- ArtRage Studio Pro - Download / Site - Excellent, unique, no RAW.
- Photo Mechanic - Download / Site - Excellent, simple, good cataloging.
- DigiKam - Download / Site - Good at DB interfacing and organizing.
- PhotoPerfect - Download / Site Looks OK. I've not tested this one.
- Photo Plus - Download / Site - It's supposed to be good, <shrug>
- Zoner Photo Studio - Download / Site - Excellent for shareware.
- Project DogWaffle - Download / Site - Awesome for painting and FX
- UF-Raw - Download / Site - I've heard of this but never tried it.
- RawStudio - Download / Site - Very Good IMO.
- DxO Optics Pro - Download / Site - Excellent, very structured workflow.
- Photo Filtre - Download / Site - Looks very powerful, PC only.
- Paint.NET - Download / Site - PC only I think. Looks nice.
- Photo Ninja - Download / Site - Looks OK, Worth it's HDD space!
- LightZone - Download / Site - Excellent and still FREE too. ☺
- Faststone - Download / Site - Looks very nice! Fast and free!

If you happen to own one of the newer cameras or one of the new-ish and very expensive pro cameras released in the past 2 or 3 years, you may not need PhotoShop at all as the plug-in mentioned above will run as stand-alone applications. The images from theses newer cameras need much less attention than images produced by cameras released prior to umm, maybe 2012 - give or take. In such a case you can save a lot of time editing and a lot of money by downloading a free or inexpensive RAW editor capable of opening RAW and Jpeg images, scaling, and saving. Then just put together an OS level script and batch everything into the RAW converter and Topaz plug-applets.

I do kind of the same thing using PhotoShop's "Action" recorder / player. Hopefully, you're able to get a general idea of what's happening just by looking at the name level script calls:



If you have or acquire PhotoShop and would like to look at or run this yourself I'll leave a copy of my PhotoShop Action online indefinitely for you (or anyone interested) - feel free.

This Action script is dynamically interactive via calls to the Fade tool after every major or invasive operation. Essentially the Fade calls allow you to apply the results of the previous tool from between 0% and 100% so if something comes out a little over sharpened, too saturated, or whatever it can be adjusted up or down or not applied it at all simply by setting the Fade slider position to 0%.

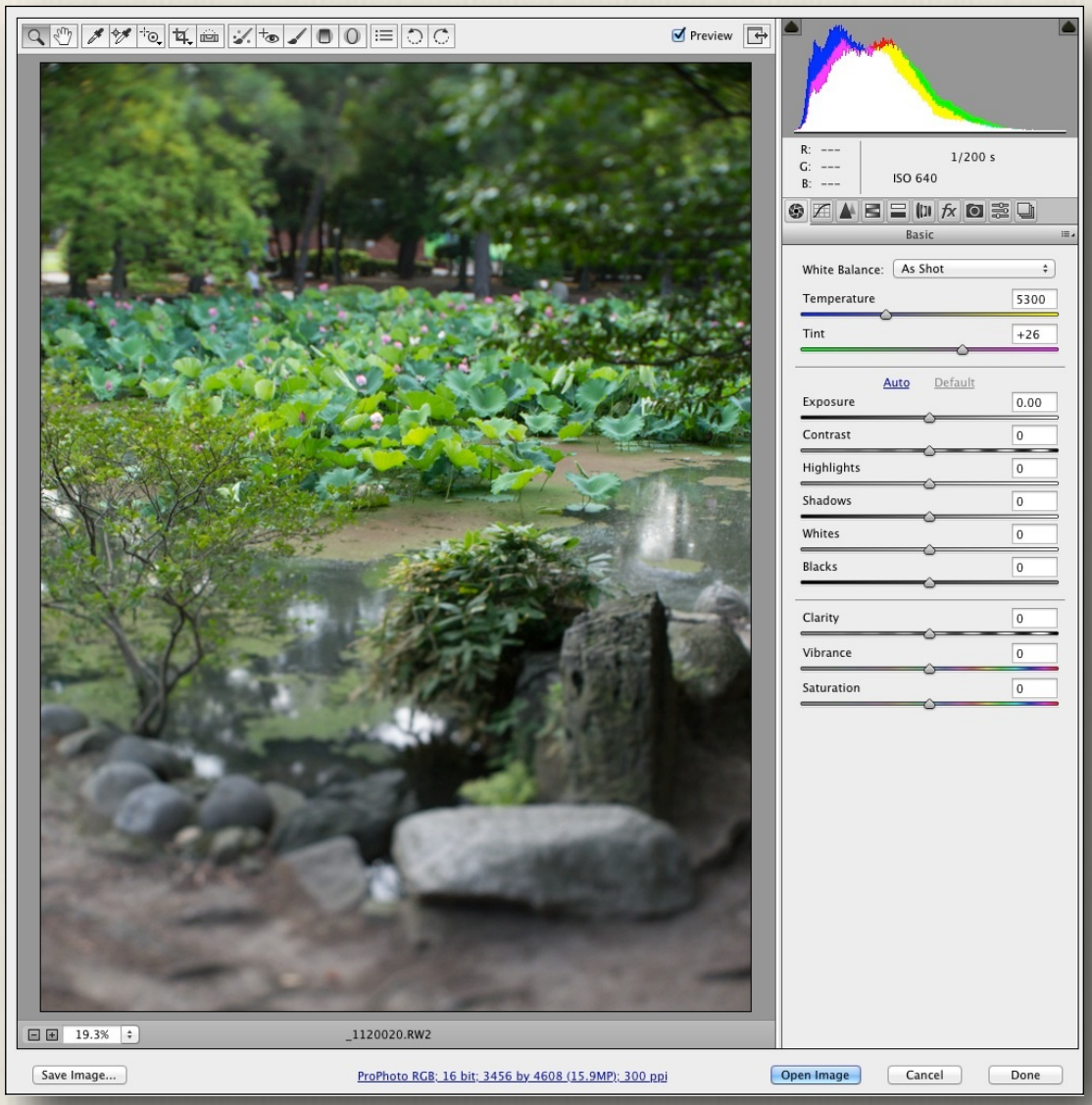
Here are the basic steps I typically perform on every image I post or print:

- I always shoot RAW as anyone who doesn't want to depend on the camera's internal image processing engine should.
- I upload the RAW images to a folder I create iterated consecutively every 1000 images.
- I then use an image browser (Adobe Bridge, AfterShot Pro, or OS X's Finder) to view and delete all the undesirables - I like to shoot more than one image of a scene just in case camera shake or motion blur happens.
- I choose the one(s) I want to share or print, and open them up in PhotoShop which uses Adobe Camera Raw (ACR) for demosaicing the bayer array data. ACR has other ***very*** useful adjustment controls too.
- Once I'm satisfied with my adjustments in ACR it's sent to PhotoShop where that script I linked to is executed - which ultimately results in the creation of a full-sized printer-ready image and, a very scaled down Jpeg.

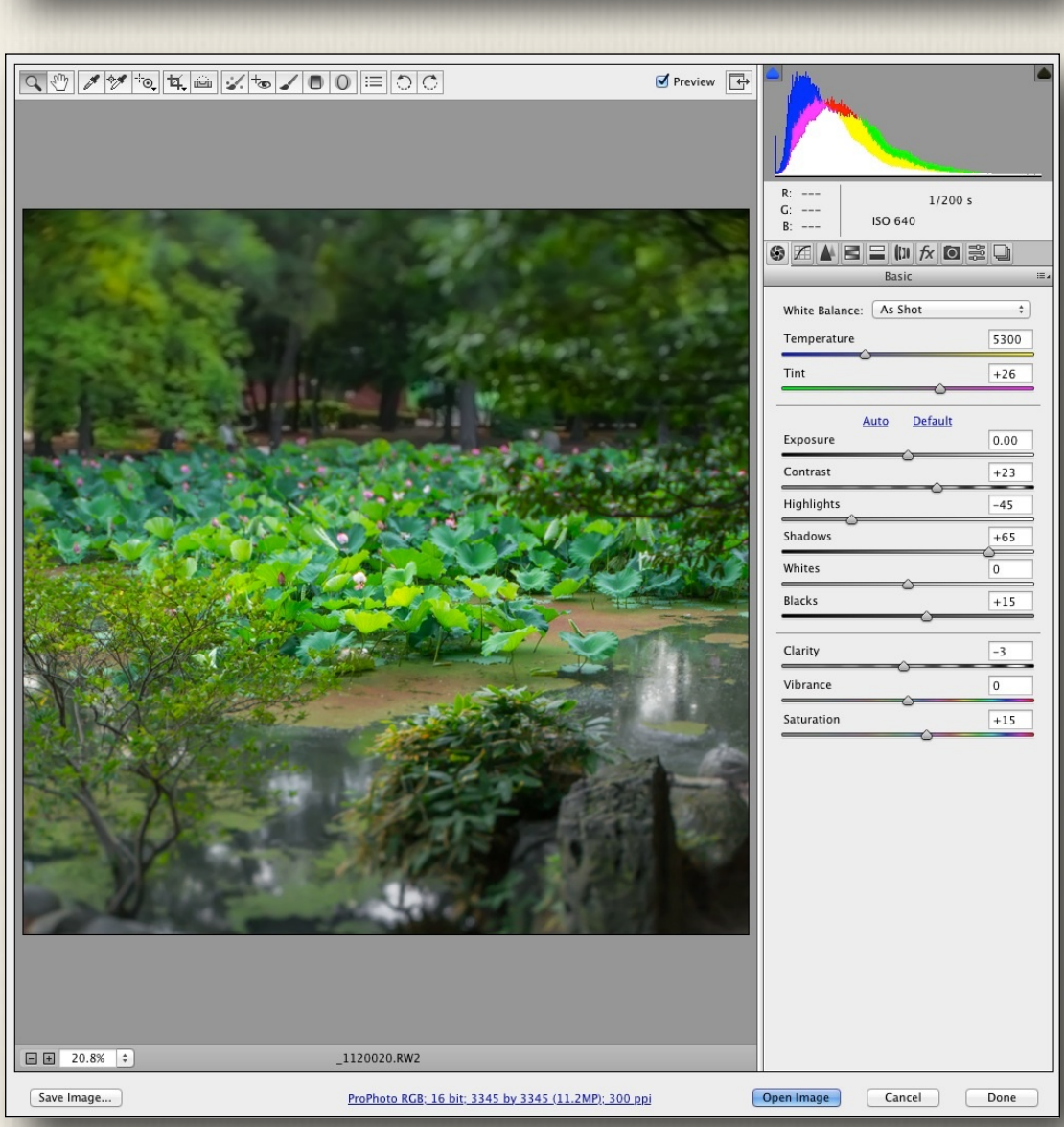
Here is the image stepped through in oder as:

- an unadjusted RAW straight from the camera,
- an adjusted RAW before sending it to PhotoShop in 16bit, ProPhoto,
- and the final 8-bit Jpeg my PhotoShop "Action" creates.

RAW Unadjusted



Adjusted & Cropped



Action Edited, saved, and ready to share on Facebook, Fredmiranda.com, cell-phone, or whatever.

In this particular image the background and foreground OOF blur is acomplished by the use of a tilt adapter. I've had it for awhile but I just started using it last month. I still don't know the best ways to use it - as you can tell no doubt. So I'm experimenting with different scenes and settings.

CHAPTER 4

Supports, Toys & Bandaids

One of the most awesome aspects of being into photography is all the cool high precision gadgets and gear we get to play with. There are literally thousands of different kinds of gadgets besides the basic camera, lens, and tripod.

Macro rails, beanbag supports, gimbal motion heads, creative lens filters, flash guns with effects, flash gun attachments, robotically controlled panorama mounts, remote control shutter releases, intervalometers, monopods, gorillapods, load-bearing gyro quadcopters, bags & straps, manual and remote follow focus controllers, uber-fancy light meters, manual and computerized dolly tracks, solar-system & DSO trackers, articulated booms, zip-lines, waste-level camera holsters, rifle-shaped supports with trigger style shutter releases, stedicam-like motion stabilizers, and it goes on and on.

If you have a use for any of that stuff then it is indeed all very useful! I have some of those things. I don't use them all very often but I'm very happy to have them when the need arises! Likely the three most important gadgets are the most commonly found "standards". For me that's thick rubber lens hoods, a steady set of tripod legs, and a smooth high-precision tripod head.

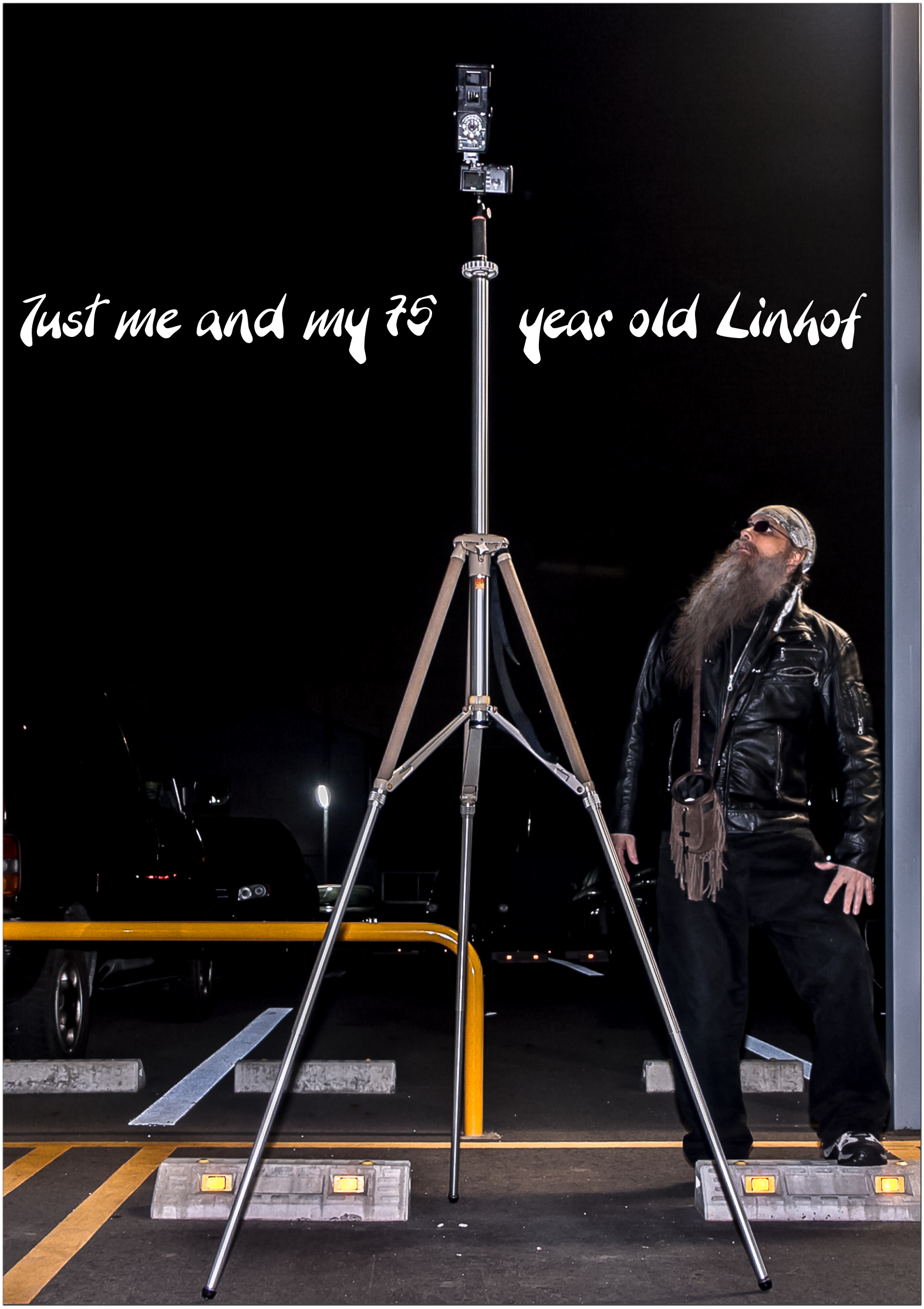
One might tend to disbelieve the huge difference a deep lens-hood can make but I've proven it to myself many times over. Not only do the thick rubber ones protect your lenses from bumps, scrapes, and front element scratches but they also improve saturation and contrast under many if not most circumstances. Almost all outdoor shots greatly improve with the use of a hood. Even on overcast days, when shooting in the shade, or when the sun is at your back! At night too! Street, car, and signboard light pollution is cut drastically saving your images from contrast killing light-spills and glare.

With a half way decent one on, you can completely forget about using image destroying protective glass filters. Out with the filters, in with the hoods! I make sure I have thick rubber hoods for every thread size there is - so I'll never go hoodless.

Yep, I mean how cool is photography?!? We get to say right out loud and in public, that we love rubber hoods - and no one thinks we're a chester or a deviant of any kind! Nice!

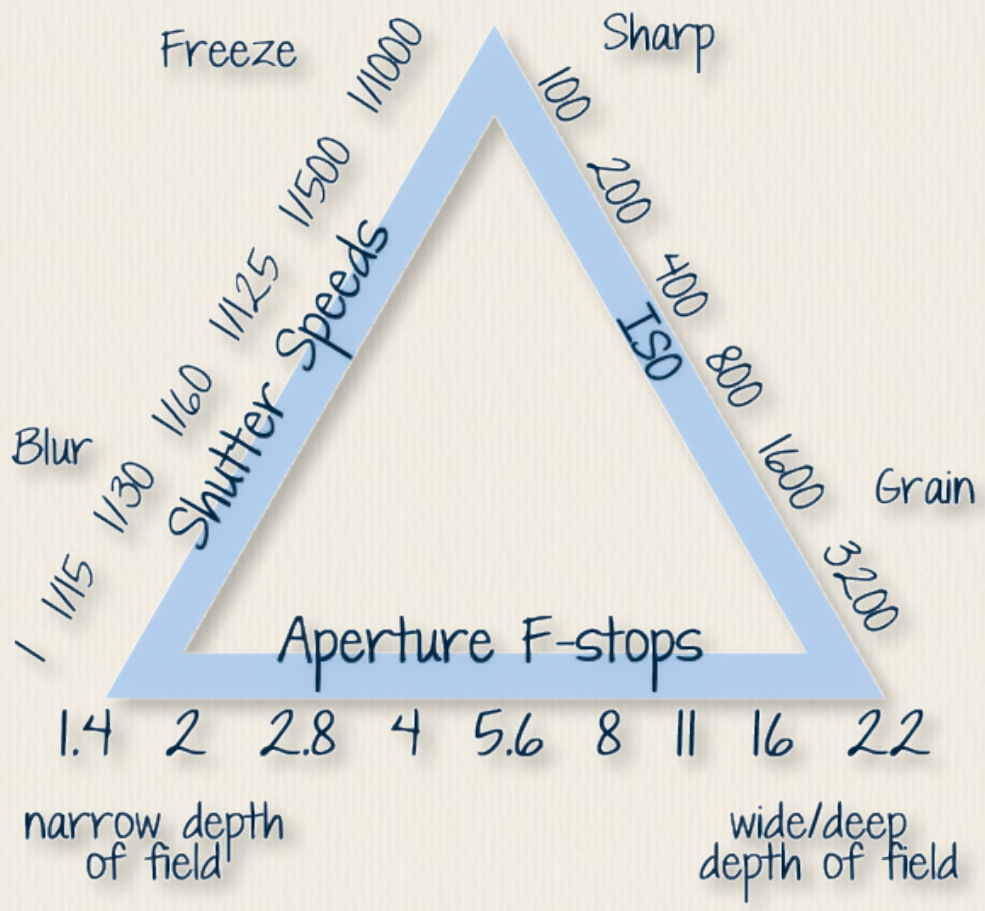
Tripods like other accessory gear are useful when one has a need for them. If a person doesn't need it, it just gets in the way on trips and stuff. Even the $900 lightweight carbon fiber jobs are bulky and intrusive when on family vacations. I used to bring a travel-pod with me on most outings. It came in handy quite often but I stopped bringing it along in favor of a 75 year-old antique Linhof. It's constructed of titanium alloy and is as light as most carbon fiber pods yet it's indestructible - I think I'd need an industrial grade diamond cutter to even *scratch* the kind of metal it's made of - wow!

I once recommended the same travel-pod setup to a young man about to tour Europe. Upon his return he praised the recommendation and exclaimed that it was just perfect for the task! It's basically a $9.^{99}$ junker with a semi-decent ball-head replacement. When fully extended it's wobbly and suffers severe lens droop if you don't use rails or something to center your camera rig.


Just me and my 75 year old Linhof

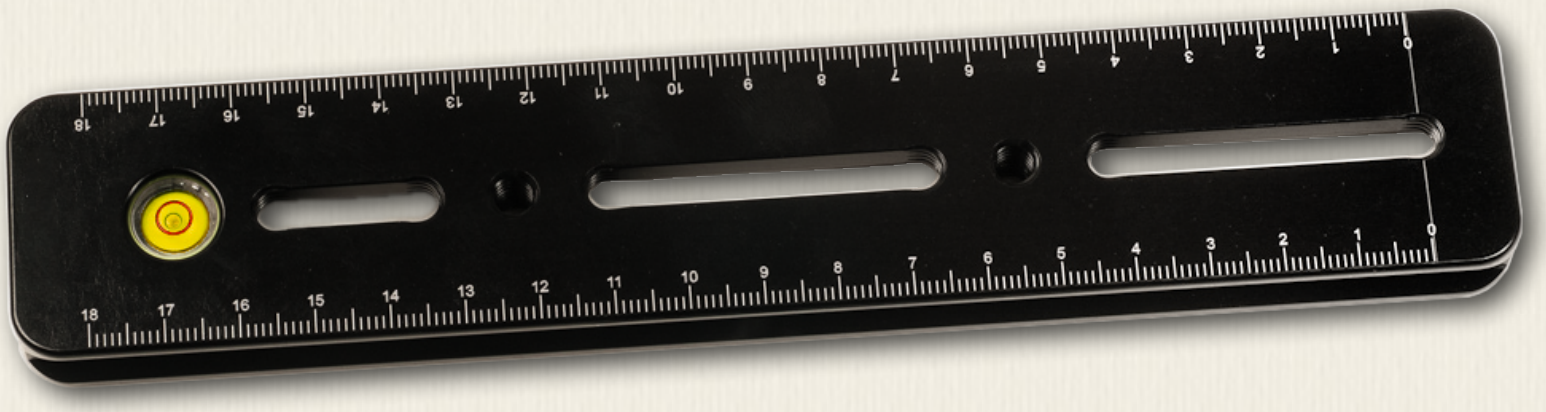
I use tripods for all kinds of stuff. For crispy sharp landscapes I feel it's semi-standard equipment. A person might not need one at high-noon unless they're shooting multi-shot panoramas or own a heavy camera and wish to wait on some wildlife or something - then a tripod is very useful even though there's enough light to use fast shutter speeds. But of course most landscape photogs will be shooting in the light of the golden hour, and/or attempting sunsets and sunrises.

Cranking up the ISO in order to maintain your exposure triangle is always a bad idea if you're attempting to use micro-contrast as we discussed earlier. Well, unless you own a recently released $5,000+ camera body. Most affordable cameras introduce too much noise at higher ISO settings. You can run noise removal (NR) plugins but you will likely be removing the wanted micro-contrast right along with it. You can just **not** remove the noise but then when you process the image for micro-contrast enhancement all that noise gets enhanced right along with the MC. You can create and use effects masks for selective NR and MC processing - which works - but that's a lot of work. Especially if you have very many images to process. In fact, this is one of the troubles which keep photogs appreciating sharp fast lenses.



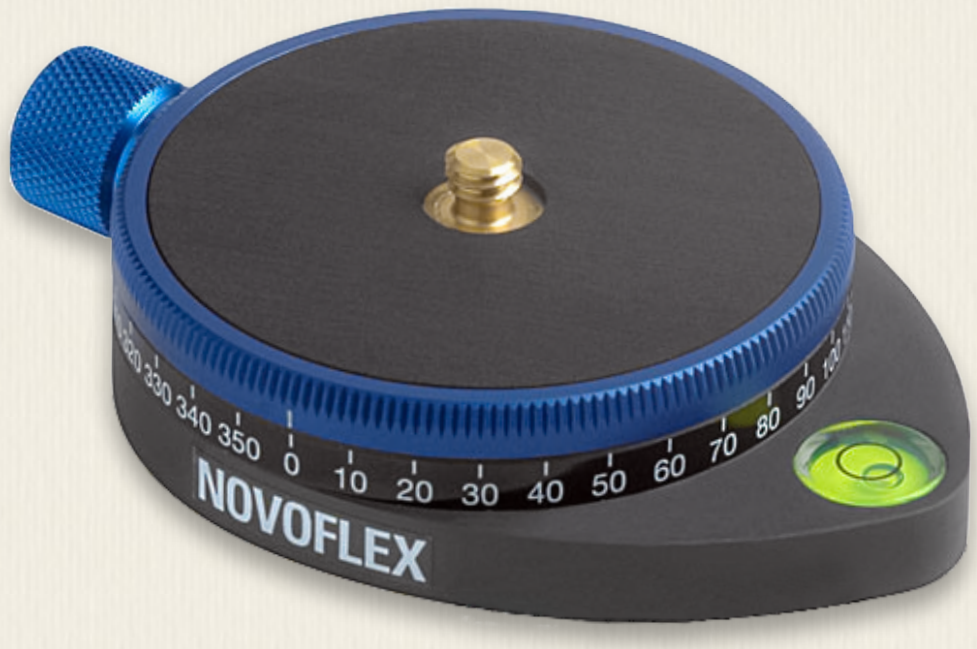
So, whether or not you lug a tripod along just depends. It depends on the social situation, the available light of course, and your purpose in bringing your camera rig with you in the fists place. Also something to keep in mind in the western world is that touristy locations often do not allow you to set up a pod and doing so can actually result in a fine and/or an invitation to leave the area. Luckily these kinds of control freaks haven't yet popped up in Asia - specifically, Japan where I live. (Yet!)

While on the subject of the purpose and usefulness of tripods I'd like to add that I've come to a place that has me thinking ball-heads are pretty useless. I even kind of wonder is every beginner shouldn't start out with a gimbal head from the very start. Ball heads have a very limited function. They're not good for much else other than pinning your camera in a stationary position. And the vast majority of them aren't even very good at that unless you opt for Arca Swiss standards plus shell out for an optional 6 to 8 inch release plate. The problem is that most tripod mounts sockets are on the camera body leaving the lens to hang out over the edge causing imbalance - maybe not so bad if you shoot with a plasticy lightweight lens. The long Arca Swiss plate is of course for the purpose of balancing the rig thereby eliminating *much of* the trouble anyway.



But even with the additional hundred dollar plate, ball-heads are still limited, generally forcing the operator into a time consuming and bothersome cycle of framing the image, locking down the head, and then repeating the process for every additional different shot. And most hobbyists I meet seem to assume that this is the expected norm with few or no reasonable alternatives.

There are a lot of different kinds of add-ons that people have developed over the years in what I feel is maybe an attempt to address the shortcomings of what I think may be a poor design solution in the first place. I guess ball-heads are OK-ish in a product photographer's studio. And there are a few that are well enough designed and constructed that it's not all that much of a problem most of the time. But those heads are very expensive! So are many of the *bandaid* solutions I'm referring to too. This little puppy goes for almost $200 for example, and it's mostly like that no matter which bandaid you're applying. The same gadget but with an Arca Swiss clamp stuck on top is double this price - if you can believe that.



The day I tried my first gimbal head all of these thoughts and a few others I'll not put to paper, came to me. Most gimbal heads are outrageously priced as well however. The first ones I looked at some ten years ago now, were selling for between $500 and $800 US dollars. And that's not even counting the one or two extra plates the typical person might like to have.

About three years ago I chanced to notice an ebay seller who was peddling gimbal heads which were being manufactured Guangzhou. He was only asking about $80 USD for them delivered to my door, so naturally I couldn't pass that up. A week later I sold all my others and I've been using these exclusively for nearly three years without a hitch!

Checking just now, I noticed they're still on ebay and available for the same price too. Wonderful! What would we do without our Asian brothers in Guangzhou working their butts off so common folk and beginners can skip right to the goal - no bandaids needed. The head is made by a company called BEIKE, and is called the BK-45.

And instead of writing about how gimbal heads are used and why I personally feel they're so superior - especially for generalists involved in the most common forms of photography, I thought I would end today by sending you to Youtube to watch a man named Mike Lane critique the quality of the Beike BK-45 and explain how he uses it to capture **b**irds **i**n **f**light (BIF) and wildlife.

- The BK-45 Video: https://www.youtube.com/watch?v=vmvcui3m_a4
- Mike's Web Site 1: http://www.nature-photography.co.uk

CHAPTER 5

Camera Settings

In this chapter I'll likely go on about knowing your camera's firmware well, experiments with the various setting, and maybe challenge AF/AE shooters to use their cameras manually for a day or two. I dunno, I wrote what's here in the better part of a day. After I awaken from a nice sleep I'll see if I'm in the mood to write a few more chapters. I probably will, this is kind of fun for me and there's still lighting and composition to cover. Even though, a lot of people more knowledgable than I will likely think these the rambling of the truly mad.

Mmuahahahaaa!