IMPROVE YOUR LANDSCAPE PHOTOGRAPHY

by

Jim Harmer

SMASHWORDS EDITION

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Improve Your Photography

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Chapter Zero: Author's Introduction

When a photographer shoots for enough years, she will inevitably end up specializing in one type of photography. The same is true with me. When I think of photography, I think of landscapes. Nothing can compare to the experience of waking up at 4AM, driving to a location, and watching nature as the sunrise wakes up the Earth.

As you capture life at 1/100th of a second, don't forget the Creator of the beautiful landscapes you record.

Regards,

Jim Harmer

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Chapter One: What You Didn't Already Know About Composition

Composition is the placement of objects or space within a photograph. The goal of composition in photography is to tie together each element within the frame to create one cohesive scene. Composition is probably the second most important element of great photography--second only



to lighting. The good news is that composition is not difficult to learn.

What You Already Know: The Rule of Thirds

Anyone who calls herself a photographer knows the rule of thirds. Picture a tic-tac-toe board on your image rectangle. If you put the focal point of your image on one of the intersections of the lines, you'll have good composition. Having the subject of the photo off-center creates interesting visual space and makes the eye view the image as a whole. Next time you turn on the TV, notice how often the camera men follow the rule of thirds. Actors or objects which are the subject of the video are often placed on one of those intersections of third lines to create visual interest. Simply following the rule of thirds will instantly make your photographs better than 95% of beginning photographers.



What You Didn't Know About the Rule of Thirds

Unfortunately, most photographers learn the rule of thirds and never learn any advanced composition techniques. The unfortunate truth about the rule of thirds is that it is not the rule of composition that should be followed. The rule of thirds is merely the Cliff's Notes version of composition. The rule of thirds is simply an easy way to explain the real rule of composition that advanced photographers have used for centuries. That rule, is Fibonacci's Ratio.

Fibonacci's WHAT?!?!? Let me explain... First of all, photographers most commonly refer to Fibonacci's ratio as the "golden mean." I only used the words "Fibonacci's Ratio" because it sounds more impressive. Either way, Fibonacci's Ratio, or the golden mean, is the best way to proportionately place objects within the frame of a photograph.

The golden mean is similar to the rule of thirds, but varies the spacing between the lines. Look at the image above. Instead of the three horizontal and vertical sections being perfectly equal, the first section is given 1 unit of spacing from the edge of the photo on both the horizontal and vertical axis. The third section is likewise given 1 unit of spacing from the edge of the photo. The middle horizontal and vertical section, however, is squished. It is only given approximately 0.62 units of spacing. The squishing of the middle section brings the main focal point of the image (which is still placed on one of the line intersections) closer toward the middle.

While the golden mean may seem to be only a slight variation of the rule of thirds, the truth is

that the opposite is true. The rule of thirds is only a slight variation on the golden mean. The golden mean is nearly as old as art itself.

If this subject intrigues you and you want to understand it further, be prepared to read conspiracy theories, hidden mathematical formulas in world-famous paintings, and lots of complex math. The information in this chapter is the need-to-know information on a very complex subject to which there is no limit on the amount of material available.

Suffice it to say in this cursory review of the topic that the rule of thirds is technically incorrect and better proportionality can be achieved in your photography if, when you put the viewfinder up to your eye, you picture the rule of thirds with a "squished" (smaller) middle section. You can see this for yourself by looking at the diagrams on the two images above to illustrate the difference between the golden mean and the rule of thirds. Notice that the placement of the man with the umbrella in the field is more natural in the composition illustrating the golden mean because the man is not quite so shoved over into the corner of the image. While still off-center, he feels more naturally placed somewhat closer to the center area of the photo. The rule of thirds composition is perfectly acceptable, but most people prefer the composition following the golden mean.

Following the golden mean rather than the rule of thirds will result in stronger compositions that contain the subject in the frame with better proportionality. In short, the image will feel more balanced than if the strict rule of thirds is used. When I first learned of the golden mean some time ago, I was skeptical at first. Then, I looked through my portfolio of my all-time best images. Sure enough! A large percentage of the images were closer to the golden mean than the rule of thirds. Since that time, I have fully adopted the golden mean as my primary rule of composition, and use the rule of thirds as an afterthought.



Foreground, Mid-Ground, Background

I recently looked for a good Creative Commons image of lightning on Flickr to use with an article I was writing for a photography publication. After 30 minutes of searching, I gave up hope. I looked through hundreds of pictures of lightning storms, but they all had the same problem.

Beginning photographers fail to understand that subject should never overcome lighting or composition. No matter how incredible a landscape is, the image will never look professional without good lighting and composition. This was the problem with the lightning photos.

All of the images I saw were a black abyss of a landscape with awesome bolts of lightning far in the background. The photographers apparently thought that since they had an incredible subject to photograph (the lightning), they could forget about composition.

So what would have made these plain and average photos a masterpiece? As the sub-chapter title suggests: foreground, mid-ground, background.

Almost every landscape photo looks better when the photographer incorporates something as an interesting foreground subject—a rock, a tree, a stream, a puddle, anything. Then, the mid-ground of the photo should be clear and distinct in order to make the viewer of the photograph feel drawn into the picture. Last, the photo needs an interesting background such as mountains,

lightning, clouds, or whatever else. Photos are 2D but humans see 3d. Applying this technique in your photography will draw the viewer into the scene and give the 2 dimensional image a feeling of depth.

This idea might sound good in theory, but how can you apply this rule in the field? When you go to take a shot of a beautiful scene, find something to put close to the camera and something far in the distance. When you're photographing a waterfall, consider putting something near the camera: a flower, an interesting rock, a tree, etc. Then the photograph will have that foreground element, the ground leading to the waterfall as a mid-ground element, and the waterfall as a background element. Remember that when you do this, you'll have to use a high aperture (somewhere between f/11 and f/22) so that both the foreground elements and the background are in sharp focus.

This rule is not a substitute for the golden mean. In fact, this builds upon the golden mean. The foreground element is usually placed in the lower-left or lower-right third of the frame in order to create visual interest. For example, suppose you are photographing beautiful fall-colored trees surrounding a small pond. You have chosen to place a bright red leaf in the water just in front of you as a foreground element, the water of the pond will be the mid-ground element, and then the trees and sky will serve as background elements. Where should the bright leaf in the foreground be placed? You already know the answer. It should be placed a few feet in front of the camera off to the side of center. It will be placed according to the golden mean. In this example, the composition follows both the golden mean and foreground, mid-ground, and background. Perfect composition.

If your landscape photography is guilty of ignoring composition, remember the most important element of landscape composition—foreground, mid-ground, background.



Leading Lines

Great photographs give the viewer's eye somewhere to go. A leading line, such as a bridge, road, tree line, or shore line, will bring the viewer from the edge of the photograph into the middle and background. This immediately adds depth to a flat image and makes the viewer feel like she is standing where you took the shot. In a way, a leading line acts as a foreground element because it is near the camera and draws the viewer's eye into the depth of the scene.

Remember that leading lines should follow usually follow the golden mean. Suppose you are shooting a landscape where there is thick vegetation with a dirt hiking trail going through the forest. The path should come from the bottom left or bottom right of the scene where the golden mean lines touch the edge of the photo. This will add balance to the lines.

When leading lines are used, it is also common to intentionally break the golden mean and simply shoot from on the trail with the path leading straight out into the distance. This can also

be an effective technique when used correctly. Generally, this intentional violation of the rules of composition works well with a straight leading line. If the path goes on for a long distance without winding, it might be a good time to use this technique; however, if there are bends in the path, it probably will not work well in the center of the image.

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Quick and Random Tip to Improve Your Compositions!

Look at the image later in the book immediately preceding the chapter on taking landscape photos while liking. Notice how the rock arch is used to frame the composition. This is a terrific way to include part of the natural scene, focus the viewer's attention on the center subject of the photo, and follow the foreground, mid-ground, background rule. Anything could be used to frame the subject of a landscape picture. It may be two trees on either side of the image, or you might shoot through the window in a cabin, your anything else that you can imagine. If you have heard this tip before but have never actually tried it, make it your goal to implement this powerful composition in your next shoot.

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Chapter Two: Taking the Iconic Image

I live in a popular vacation destination in southwest Florida. Millions of photos are taken every year in this city by photographers from all around the world. Because of this, many of the local students in my photography classes ask where they can go to shoot photography because all of the tourist locations have already been photographed millions of times.

You probably have the same problem in your city. Perhaps the old school house is a beautiful location for photography, but it has already been shot to the point of becoming cliché. Or perhaps you are going on vacation to New York City, or the Grand Canyon, or Yellowstone and want to capture unique images of the popular sites. Now what?

Making Old Locations Look New

In my city, the most photographed location is the Naples Fishing Pier on the beach near the downtown area. I have seen hundreds of beautiful images of the location but they all look the same. They are all taken at sunset from the same angle with the same composition. It would be difficult not to get a good image from this spot because the scene is so beautiful, but is there really no way to capture a creative and unique view of this landmark?

I wanted to capture images of the pier that people hadn't already seen. I did three things to make the same old location look new. Follow these three steps and you're sure to capture a never before seen image of the popular photography location near your home, too.

First, I searched for a new angle. Everyone shoots the pier from approximately 50 feet to the side of it so that the whole pier can be seen in one shot. So, I walked straight under the pier near the supports that lift it out of the water. This was the least likely place to take a landscape image of the pier, so I knew it would be perfect. You can apply this principle no matter what common landscape location you're attempting to conquer. If there is a beautiful courthouse in the center of your town, shoot from among the columns in the entry rather than the shot from across the street that everyone captures. If the common image of the lake is most commonly taken from the water's edge, consider climbing a nearby hill or tree to shoot from a higher angle. Whatever you do, remember that the first rule to making old locations look new is to find a fresh angle from which to shoot the image.

The second rule is to capture the location in a new light—literally. In my situation of shooting the pier, this meant I would have to shoot the landscape at a time other than sunset. Sunset was the lighting that every photographer used. So, I chose to wait for an exceptionally cold day (In Florida, "cold" weather means below 60 degrees Fahrenheit). This colder weather produced a beautiful fog over the water and created a gorgeous mood for my image. The fog caught the light in a spectacularly new way and gave the old scene a new look.

The third and last rule is to intentionally cut off part of the scene. My viewpoint from under the pier (remember rule number 1?) obviously only allowed me to see the supports under the pier and the underside of the deck of the pier. I couldn't see anything else. I chose to only show part of the pier in my image to highlight a part of the pier. The pier supports have barnacles, moss, and rust all over them. To me, this rustic look on the pier's supports was beautiful and visually appealing. Most people never take a second glance at this part of the pier, so I knew by highlighting this part, it would look like a new location.



Finding the Lesser-Known Landscape Locations

The key to finding lesser-known photography locations is to force yourself to try new things. When shooting in a city or area that is new to me, I start my research on flicr.com. Flickr is the world's largest photo-sharing website. On the site, you can search by location or view geotagged images. I use Flickr to decide where I am not going to go. If there are 100 images on Flickr of Eagle Lake, then choose to leave that location alone and try something new. Once you have ruled out the over-photographed areas (or you shot the over-photographed areas using the tips in the previous sub-chapter), you need to find somewhere new.

For this, I usually start by looking at a map of the area, Geocaching locations, and hiking websites. I'll address each of these options individually.

First, a map of the area. Google maps offer incredible data about every city in the world. First, zoom out and see the city from afar. Do you want to shoot cityscapes? Then decide what is the

most industrialized area of the city. Would you like to shoot at a lake or a more natural location? Then look for forested areas and parks. Google Maps allows you to use the satellite view as well as street view to hone in on the best areas. Now you know the general area where you may want to shoot.

The map option will likely be a work of trial and error. You may find a location that looks interesting on a map, but you later discover to be rather dull; however, working locations with just a map can often lead you to many unknown locations for shooting landscape photography.

The second tip is to look at Geocaching locations. Geocaching is a hobby for people who own GPS units. Geocaching is when people get a box, put something in it (such as an old coin, something funny, or even just a piece of paper for people to sign), hide or bury the box with the prize in it, and then the person gets the GPS coordinates for the location where the prize is hidden and posts the coordinates online. Then, other geocachers can go to the location and search for the treasure. Whoever finds the geocache replaces the old prize with a new prize. What does this have to do with landscape photography? Everything. If you have a GPS unit (including your smartphone, car GPS, or a handheld GPS unit), create a login on a geocaching website, search your city, write down the coordinates, and go to these locations for landscape photography! Almost without exception, these end up being beautiful places. Geocachers take pride in finding the hidden gems in a city and bringing other people to those beautiful little spots by guiding them to a hidden treasure. Also, geocaches are almost always placed in publicly accessible locations, so you know you'll be able to shoot from the spot. This is, perhaps, the most fun way to find new locations and you'll probably discover places in your city that you've never given a second thought to.

The last idea is to search hiking websites. Hikers, like geocachers, usually want to find scenic locations to practice their hobby. Search for public hiking trails and read the comments of hikers as they will usually mention things like what the best time of year is to hike on the trail, what can be seen while hiking, dangers, how rigorous the hike is, etc. Hiking websites are a great resource to landscape photographers.

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Chapter Three: Special Issues in Shooting in Cold Weather

If you live in Florida like I currently do, feel free to take a nap until the next chapter; however, cold weather and snow are situations in which photographers need to change their techniques drastically to achieve useable results.

Shooting in cold conditions can damage cameras and lenses if care is not taken. If taking a camera from the cold weather into a warm car or house, the lens will experience significant condensation. This condensation may be slight and only fog up the front of the lens, or it can be severe and introduce water into the inner workings of the camera or lens. In either case, preparing beforehand can prevent these problems. Simply bring a large grocery sack or freezer bag to put the camera and equipment in when transporting the gear into or out of a warm area. This will make the condensation form on the outside of the bag and protect the camera.

If you frequently change from warm to cold and back to warm when shooting, consider purchasing a cheap rain sleeve for your camera so it can stay on the camera the whole time and prevent the condensation from forming. Then put the lens cap on the front of the lens and you are prepared for cold conditions.

Condensation is not the only battle for photographers when shooting in the cold. Autofocus

doesn't work correctly in the snow because the autofocus picks up the falling snow and tries to focus on it. Consequently, you'll need to focus manually. This also holds true for flash. If you use flash in the snow, the light will catch the closest snowflakes and make them look like blindingly-white blobs and the rest of the snow will look dark and grey. Flash is a no-go in snow.

Exposure is the biggest concern for shooting in the snow. When you press the shutter button half-way down, the camera attempts to find the correct exposure before the shutter is opened. When the camera sees too much white in the image it thinks the image is brighter than it is, so it over-compensates. This results in dark muddy-looking snow. How do you fix this? If shutter priority or aperture priority is selected, positive exposure compensation can be used to remedy the dark snow. Turn your exposure compensation to about +1 (over exposed by one stop of light) and you'll get cleaner images.

Shooting in the snow can give average landscapes a beautiful look and feel. Colors really "pop" (that word is my pet-peeve) when placed on a beautiful snowy background. Notice in the image above that the tan grass at the bottom is a vibrant where it would probably look quite dull without the white background. Look for scenes to shoot in the snow that might not otherwise merit attention.

The last, and one of the most important, considerations for shooting in the snow is white balance. DSLR cameras calibrate colors based on what it deems to be white in a particular lighting situation. While our eyes have no difficulty in determining what is white under varying lighting conditions, cameras are not as adept at making this calculation. Take special care when taking pictures and editing the images that the white balance is set correctly or you will have a blue or yellow color cast to the image.

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Chapter Four: The Easiest Way to Capture Landscapes that Convey a Mood

Photographers who take my in-person photography classes often ask how to give their photos more impact and punch. Too often, beginning landscape photographers have portfolios that look more like postcards than jaw-dropping landscape images. When I see this problem, I usually tell the photographer to choose her 10 best landscape photos. I ask the student to go back to those same 10 locations (where feasible), and shoot the exact same photo at night rather than in the light it was originally shot in. This exercise transforms the "postcard" shots from before into moody landscape photos that actually convey an emotion to the viewer. This is the essence of landscape photography... capturing a scene in such an impactful way that it affects the mood of the viewer.

Undoubtedly, the same impact and mood captured in night images can also be captured during the day, but this takes practice and skill. By shooting landscapes at night, the photographer will begin to catch on to what kind of photography they can eventually capture if they put the work into it.

I already know what will happen if you take this challenge to re-shoot your best 10 images at night. Your images will have mood, but they will also have noise. Digital noise is a grainy effect on images. The effect is caused by stray electric signals being captured by the photosites

on the camera sensor and interpreted as light in the scene and consequently reflected on the image.

To make beautiful landscape images at night, photographers must first learn how to overcome noise. The three main factors that control how much noise is in an image is the quality of the camera, the ISO, and the shutter speed.

The fact is that some cameras perform better in low-light than others. Each generation of camera performs slightly better than the previous generation, and some camera manufacturers do better than others. This factor is only briefly mentioned to call to your attention the importance of low-light performance when picking a new camera. This is the very first spec I look at when choosing a camera.

The second factor is shutter speed. As previously mentioned, digital noise is caused by stray electric signals on the camera sensor. When a long shutter speed is used, the camera sensor must continually record the scene for a longer period of time. Therefore, more electric signals are captured.

The third main contributor to noise is also the most important: ISO. ISO controls how sensitive the camera is to light. Think of ISO like an audio cassette player. If the listener has a hard time understanding the voice on the audio cassette, the listener will turn up the volume. This makes the speakers more sensitive to the information on the cassette. By doing so, the voice becomes louder, but there is also an added fuzz sound in the background. ISO works similarly. It makes the camera more sensitive to light when it is turned up, but it also adds fuzzy grain to the image.

At this point, photographers always ask the same question, and it goes something like this: if shutter speed and ISO both add to the amount of noise, should I choose an ISO of 400 and a 10 second exposure, or should I choose an ISO of 200 and a 20 second exposure? Both of these combinations will gather the same amount of light, but which one will produce less noise? Unfortunately, it is not possible to answer this question generally, because it is camera specific. In general, newer and higher-quality images would produce less noise with the 400 ISO and 10 second shutter speed, and older or lower-quality DSLRs would do better with the other combination. I raise this point to call your attention to the need to learn your camera and how it reacts in these situations.

Aside from choosing the correct ISO and shutter speed, other settings on the camera can aid the photographer in achieving noise-free and sharp images at night.

Most DSLRs have a setting called long-exposure noise reduction. This setting is in the custom functions of Canon cameras. To get there, click the menu button on the back of your DSLR above the LCD, then use your right arrow key to go over to the option for custom functions and select it. Then use your right arrow key to browse through the functions until you see long exposure noise reduction and enable it. This setting makes your camera go through a process to reduce the noise in longer exposures. By enabling this setting, the camera will always apply long-exposure noise reduction when a long shutter speed is used, but will not affect shorter exposures.

Cameras have several methods of reducing noise at long shutter speeds, but the most common is called "Dark Frame Subtraction." In this method, the camera takes the exposure and then takes another exposure (which the photographer never sees) with the shutter closed. The camera detects which pixels are hot and where leakage occurs and then subtracts those deficiencies from the proper exposure taken by the photographer. This method is very effective in reducing noise in long exposures, but it takes twice as long.

Many photographers who use long-exposure noise-reduction become surprised when the camera takes a near eternity to write the image to the card. The reason is that during this time, the camera is taking the second exposure with the shutter closed. After the second image is taken, the camera subtracts the hot pixels from the normal exposure and then applies this information to the RAW file or the JPEG.

You need to change one more setting in the custom functions before leaving. This one isn't quite as important, but still adds a small advantage. Your DSLR has a mirror which allows the photographer to use the viewfinder to look through the lens. The mirror which reflects this view flips up very quickly while the image is being recorded (which is why the viewfinder momentarily goes black when you press the shutter button). This mirror movement vibrates the camera just slightly, but that's enough to make your long exposure look a bit blurry sometimes. To fix this, enable mirror-lockup. When you press the shutter the first time, it will lock the mirror and then when you press the shutter the second time, it will take the image. This is NOT a setting you want turned on all of the time as it quite annoying, but it's a valuable setting for night photographers.

When taking long exposures at night, the camera must be absolutely locked down on the tripod so it won't vibrate at all. Any vibration while taking the image will be noticeable. Since many budding photographers haven't yet invested in a professional tripod, you need to be especially careful. Even if your camera is on a tripod, if the wind blows the camera strap around, it can vibrate the camera just enough to show up in the image. Take the camera strap off or wrap it tightly around the tripod so it can't blow.

If you've ever shot a gun before, you know how important it is not to jerk the trigger. Even a slight bump of the firearm while the trigger is being squeezed can set a bullet far off course when it travels downrange. Photography is not very different. No matter how still you hold, if you smack the shutter button when you're ready to shoot, you'll have a blurry image. Even if you press the button gently, you're still slightly moving the camera at the critical time when the image starts to record.

There are two solutions to this problem. One costs about \$20 and one of them is free. For \$20, you can purchase a shutter release (also called a cable release) for your camera. A shutter release is simply a remote control which connects to your camera and allows you to take a picture with the remote control so that you don't move the camera by pressing the on-camera shutter button. This is a must-have for night photographers. Another advantage to a shutter release is that it allows you to use your camera on bulb mode. Most cameras only allow the user to set the camera for exposures of up to 30 seconds. That's fine for almost all situations, but night photographers often take much more lengthy exposures than 30 seconds. On bulb mode, the shutter simply stays open and the sensor records until you tell it to stop by releasing the button on the cable release. You can set your camera to bulb mode by choosing manual or shutter priority (manual is superior for night photography) and simply scrolling to the longest shutter speed available. The last option will be bulb mode (Canon DSLRs will read "Bulb", but Nikon DSLRs will only show the letter "B").

If you want to save your pennies and still get sharp images, a workaround for this problem of moving the camera when pressing the shutter button is to simply use the self-timer. This is what most of us use to take pictures of ourselves. You know, when you press the shutter button and then madly dash into the picture of you and your spouse? By turning on self-timer, you can press

the shutter button and then the camera will wait a few seconds before starting to take the imageeliminating the vibrations from you pressing buttons. Unfortunately, this option will not allow you to record images longer than 30 seconds.

A technical problem arises when we attempt to take images at night--autofocus ceases to work. Your camera has several autofocus points, or tiny sensors which tell the lens where to focus. Autofocus measures the distance between the camera and the subject that the autofocus point is pointed, but it requires a stark contrast to get an accurate reading. For example, if you point your camera at a bright white poster board which covers all of the autofocus points, then the camera will not be able to focus for a lack of contrast. The same issue occurs at night because everything is dark and there is no contrast on which the camera can focus. Many times, this means focusing the camera manually. This is difficult because the viewfinder will probably be dark. If you are shooting astrophotography or landscape images without foreground elements, you'll want to focus to infinity (the furthest distance at which a lens can focus). On most modern lenses, this means turning the lens to autofocus (a little switch on the lens), putting the focus ring furthest out, and then bringing the focus ring back in just slightly from the furthest point out.

One of the most fun photo projects is taking pictures of star trails. Although we can't see the stars move with our naked eye, a long exposure by a camera shows the movement of the stars as they streak past. You can decide how much streaking you want by controlling the length of the exposure. A 15-minute exposure will produce relatively short streaks, whereas a 4-hour exposure will produce streaks the length of the image.

Because all star trail images are landscape shots, you might be tempted to use a high aperture, such as f/16 so that the stars and the foreground elements are both in focus. Unfortunately, this is not an option. If you do so, your foreground elements will be nicely exposed, but the light from the stars ISOs and still achieve noiseless images. So how do you get the foreground and the background in focus at such a short aperture? You'll probably have to take two images at two exposure settings of the same scene--one with enough light for the stars and one with enough depth of field for the foreground--and then blend the two images together in Photoshop.

I already know what's going to happen. Next weekend you'll head out to a dark place to take pictures of star trails. You'll arrive at your location with perfect foreground elements and look up at the sky only to see clouds streaking across your perfect landscape. Fear not! Taking long

exposures with clouds can produce dramatic images. The streak of the clouds gives an image an ominous and surreal look. You can get your star trails next week, but don't pack up just because it's cloudy.

For more information on this topic, view the fourth book in the "Improve Your Photography" book series, which is entitled "Improve Your Night Photography."

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Chapter Five: Sunrise, Sunset

Most photographers take too simplistic a view of sunset photography. Perhaps this is because it is simple to take beautiful sunset photos. The scene of a sunset is so colorful and vibrant that it is difficult to make the landscape photo look dull; however, professional landscape photographers know a few tricks that drastically improve the impact of a landscape photo. This chapter will reveal the best tips and tricks that I have learned from my personal experience, and also from other pros in the industry.

Hands down, the most common mistake in shooting sunsets is to pick up and leave the instant

that the sun dips below the horizon. Sunsets are beautiful when the sun is just above the horizon, but the brightness of the sun often reduces the brilliance of the colors in a sunset. In reality, there are two sunsets each night, and most people only watch one of them.

The first sunset occurs while the sun dips below the horizon. This is the sunset that everyone watches; however, about 20 minutes after sunset, the colors will become rich and bright again because the sun will have passed low enough under the horizon for its emitted light to become vibrant again. Usually, the "second sunset" is more saturated with color than the first sunset. This is the great key to shooting sunrise and sunset photos.

The only difficulty with shooting after the sun sets is that it gets darker, which means you'll need to use slower shutter speeds and a tripod. Without the tripod, the picture may end up blurry. So next time you go out to shoot the sunset, stay late and bring the tripod.

Most people find that sunsets look prettier when they are slightly under-exposed rather than keeping the same exposure as is typically used for daytime images. A simple method for getting a slightly darker image without utilizing manual mode is to use approximately one stop of negative exposure compensation. Exposure compensation tells the camera to find what exposure it thinks is correct, and then go slightly darker (or brighter) depending on what compensation you selected. Exposure compensation is easy to change, but the buttons used to adjust it varies by camera. Consult your manual to learn more.

While underexposing the image and waiting for the second sunset will improve your sunset images, sometimes there are no clouds in the sky or the clouds block the sun too much. If conditions are not optimal to achieve vibrant color, you might need to cheat a little bit. Photographers "cheat" on their sunsets by adjusting the white balance on your camera to "cloudy" to get warmer tones in the sunset. This will produce stronger yellow tones in the image. Also, the white balance can be adjusted to bring out the purple tones in the image. No two cameras have white balance in the same place on the camera, so it's probably best to consult your camera's manual to see how to change this simple setting. Most DSLRs have a button on the rear of the camera to control white balance.

While sunsets are usually most beautiful after the sun sets, don't miss out on the creative opportunity to take a sunset picture with the sun in the image.

Landscapes, including sunsets, generally look better with an element in the foreground, midground, and background. This adds depth and interest to an otherwise average sunset and makes colorful sunsets look unbelievable. Virtually anything will work as a foreground element: an interesting rock, a wave, a tree, sage brush, or even a person. In shooting sunsets, putting something in the foreground is necessary because it adds contrast to the colorful lighting. The foreground element will generally be quite dark or even completely silhouetted. Taking advantage of this contrast adds interest to the sunset.

Composition will be treated in a later chapter, but relevant to this discussion is the important consideration of where to put the horizon line in the photograph. Generally, it is placed on the bottom third line or the top third line of the photograph. This allows two thirds of the image to be the sky, because that is where the interesting and beautiful color is, but still showing one third of the land or water. Putting the horizon exactly in the center of the image usually makes it dull and uninteresting.

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Chapter Six: Filters—The Landscape Photographer's Secret Weapon

Filters are circular pieces of glass which are screwed on to the front of the lens to accomplish a variety of different tasks. Before digital image editing, filters accomplished many tasks which could not be recreated in any other way, but in today's world, there are only three common filters: the neutral density filter (including the grad ND), the circular polarizer, and the UV filter. Each of these filters is used so much more commonly in landscape photography than any other type of photography that the topic deserves the attention of an entire chapter in this book.

The Polarizer

You will be tempted when you begin taking landscape photographs, to place more emphasis on the subject than the light; however, remember that no landscape image will look as good in flat mid-day light as it will during the golden hours surrounding the sunrise and sunset. Professional landscape photographers wake up long before sunrise, get in position, and wait for the light to grow. One hour after sunrise, the beautiful morning light will dissipate and landscape photography will have ended until an hour before sunset.

While most landscape photos are best suited to morning or evening light, photographers can still take beautiful mid day images. The key to getting great bright-light landscape images is a circular polarizer (discussed later). A circular polarizer is an absolutely indispensable part of a landscape photographer's gear bag.

The polarizer is, by far, the most important filter for a digital camera. A polarizing filter has the same effect as wearing polarized sunglasses--it cuts through glare and brightens the highlights and darkens the mid-tones. This makes polarizing filters indispensable for outdoor photography in bright light. Let's discover the value of a polarizer with the following hypotheticals.

You've seen beautiful daytime landscapes where the clouds are bright white and the sky a dark blue. How do photographers accomplish this look? The polarizer. Using a polarizer darkens the sky and brightens the clouds. A polarizer will also cut through the reflection in water or on leaves in a landscape. Now you're in the Arizona desert taking images of the beautiful rock formations under the puffy cumulus clouds. The trouble is that the sky looks white or light blue and the clouds look dim and grey. The answer? The polarizer. The polarizer makes the sky look like a rich deep blue and the clouds a bright shade of white. Suddenly your amateurish photo of the rock formations and the sky will morph into a beautiful wall-hanger.

When you purchase a polarizer, make sure that it is a circular polarizer and not a linear polarizer. Linear polarizers affect the autofocus system of the modern DSLR. A decent polarizer will cost about \$30, but you can definitely spend up to \$300 if you want to go fancy. I can recommend the Hoya brand of polarizer as producing very good results. Be careful not to buy a \$10 version online... I've seen my share of junky polarizers, so caveat emptor. Also be cautious of the fact that polarizers come in many different sizes, so the polarizer has to match your lens. You need to know two things about a polarizer before you can use it. Remember that you must employ these two aspects of polarizer technique if you expect to see any results from your polarizer.

1. Circular polarizers have an adjustable ring on the front, which the photographer spins to control the amount of polarization. At the lowest setting, the polarizer will show little or no difference than shooting without the polarizer, and at the highest setting you may see too much polarization. In most situations you'll see that the best results occur when you dial in as much polarization as possible and then back it off just slightly.

2. The polarizer works at 90 degree angles to the sun. To remember this, make a gun shape with your fingers--forefinger pointing directly at the sun and thumb making a right angle to your forefinger. The direction to which your thumb points is the direction where you should shoot in order to see the effect of the polarizer. You can rotate your hand in any direction and your thumb will still point to the correct direction to shoot as long as your forefinger still points at the sun. If you shoot at an angle other than 90 degrees to the sun, you'll see little or no difference in using a polarizing filter.

The Neutral Density Filter

Generally, photographers are fighting for the fastest lenses and the highest ISOs in order to get more light on the sensor. The neutral density filter (ND filter) has precisely the opposite purpose--it reduces the amount of light which is allowed to enter the lens. ND filters come in many different strengths and some filters (called variable ND filters) allow for adjustment of how much light the filter blocks. Why would anyone want this? Here are a couple situations... 1. ND filters are useful in working with video. I realize that this book concerns only still photography, but many DSLRs now include the capability of recording HD video. Because video starts to get choppy when shot at too fast a shutter speed, an ND filter is used to allow slower shutter speeds.

2. ND filters can be used when shooting a waterfall during the day. When shooting a waterfall, a longer shutter speed is desired so that the water looks silky and smooth from motion blur. The ND filter allows a long shutter speed even in bright light so that this can be accomplished.

The Graduated Neutral Density Filter

If you have ever seen a car's windshield, you have seen a graduated neutral density filter. The top of car windshields are tinted and then fade to clear. That is exactly what a grad ND filter looks like. The top of the filter is tinted and it fades to clear. The only difference between a graduated neutral density filter and a grad ND is that the grad ND fades to clear and the neutral density filter does not.

Grad ND filters are a necessary piece of equipment for landscape photographers. Proper exposure usually involves balancing the bright and dark regions of a scene to obtain somewhat even lighting in the image. In landscapes, the sky is always the brightest part of the scene, and it is usually much brighter than the land or water on the bottom of the photo. By placing a tinted graduated neutral density filter in front of the lens, the sky will be darkened because it is covered by the tinting, and the rest of the photo will be brighter because no tinting covers the lower region of the photo.

While some cheap filters can still produce good images, cheap grad ND filters and neutral density filters can significantly degrade the quality of an image. Cheaper grad ND filters often have an ugly color cast because the tinting is of cheaper quality. Sometimes this color cast will be brown or yellow.

Grad ND filters come in differing strengths, edge hardnesses, styles, and sizes. This can make a difficult decision without some instruction on which one to buy. First, the style of the filter. Many people are tempted to buy screw-on grad ND filters, but are usually unhappy with the results they receive. The screw-on type prevents the photographer from adjusting where on the image should be dark and what part should be left untouched. Most professional photographers

choose a flat grad ND filter. This type of filter is a flat square piece of glass that does not screw on to the lens, but is hand-held or put in a large filter holder. A filter holder connects to the lens and holds the filter in place.

The second consideration is the size of the filter. I recommend purchasing the P size of filter, because it will be larger than most wide-angle lenses so you won't ever have to purchase a new grad ND filter if you get a larger diameter of lens sometime down the road.

Third, the edge hardness. This concerns how steep of a transition should be made from the tinted area to the clear portion of the filter. Most photographers think they want the widest and most gradual transition from tinted to clear; however, this is often not the best option. For example, photographers who often shoot over the ocean will generally prefer a hard edge on the tinting of the filter, because the horizon line in an ocean scene will be very hard from sky to the water. Using too gradual a transition from tinting to clear on a grad ND filter in these conditions will yield an unnatural-looking fade.

The last consideration is the strength of the tinting on the grad ND filter. This is a matter of personal preference, but I usually find that 3 or 4 stops of tinting provides the most useful grad ND filter for most shooting conditions.

Tips for Using a Grad ND Filter

Using a grad ND filter is usually as simple as holding the filter in front of the lens, sliding it up and down to find the correct position, and taking a picture; however, professional landscape photographers use a few tricks to maximize the use of this tool.

Suppose you found a beautiful little Ficus tree growing out of the sand near the beach. While it is morning and the light is fairly even, you've missed the early morning golden hours. To make matters worse, there is not a cloud in the sky, but you would still like to shoot the little tree. You know that the best angle will be getting down low near the little tree, but this will show a lot of sky, and remember that the sky is just a huge sheet of blue with no clouds in it this morning. What is a photographer to do? This situation calls for a creative use of a grad ND filter. Although grad ND filters are usually used to control the exposure, it can also be used to provide contrast in a single-colored blue sky. By using a grad ND filter in this image, the sky will fade

from moody dark blue to a bright blue. This will add visual contrast and give interest to the large blue sky in the picture.

There are other ways, too, for grad ND filters to be used creatively. One technique is what some professional photographers refer to as "filter dancing." When a long exposure is used on the image, the photographer can move the filter up and down and side to side to create an interesting effect. By moving around the faded are of the filter, the photographer can capture the darkened sky, and then quickly move the filter down a little lower to extend the length of the fade on the image and make a softer transition from dark to light.

One last creative tip on using grad ND filters is to consider using the filter upside down. The sky is always the brightest area of the image, so it usually wouldn't make sense to flip the grad ND filter upside down; however, the sky is not always in the image! Suppose you are shooting a pond with brightly-colored fall leaves in it. On the far side of the pond, the shade of the trees is darkening the water, but the near side of the pond is very bright from the reflected sunlight. Simply flip your grad ND filter upside down to darken the lower region of the photo and you're set. While this type of situation may not present itself to you very commonly, recognizing this possibility will equip you to handle the situation when it occurs.

The UV Filter--and its replacement

When you go to the camera store, the store clerk will undoubtedly try to convince you to buy a UV filter. A UV filter is a clear glass filter which is really only used to protect the lens from scratches. Although even some professionals use UV filters to protect the lens, there is a very good case for not doing so. Because filters are not curved like the elements inside the lens, filters greatly increase the likelihood of getting reflections of sunlight bouncing around in the lens--causing excessive lens flares. Also, UV filters severely reduce the sharpness and contrast in the image. If you have spent hundreds (sometimes thousands) of dollars on a lens, do you want to degrade the optical qualities of your expensive lens with a flat piece of \$8 glass--or sometimes plastic?

Most of the students who take my photography workshops have heard that UV filters cut the contrast and saturation in images, most of the students still use UV filters. I always ask why, and

they usually respond that they don't want to damage the lens. Most of them assume that UV filters only reduce the contrast a little bit and the difference is negligible. In response, I usually show them a few photos taken with and without UV filters. The results can be dramatic under some conditions. For example, when shooting toward the sun or shooting at night.

There is a far superior method to protect the lens from becoming scratched--a lens hood. A lens hood is a piece of plastic or rubber which wraps around the front of the lens and serves two purposes: to protect the lens and to eliminate stray light from affecting the image. Lens hoods are a near-necessity for photographers and protect the lens much better than a cheap UV filter.

So next time the salesman tries to sell you a UV filter, save your money and your image quality.



Chapter Seven: How to Shoot on a Hike

One of the most beautiful aspects of photography is that when a viewer sees a photograph, she is seemingly taken to the place she sees. Powerful photography allows a viewer to feel like she is transported to the location of the photo, and the depth captured by strong composition makes the experience feel real. Because one of the main challenges for photographers is to find the perfect location to take the viewer to, many landscape photographers choose to hike with their photography gear into lesser-known locations that will awe the viewers of their photographs. Hiking photography presents many challenges, but they can be overcome with a little know-how.

Weight is the number one consideration when hiking with photographic equipment. Even a few pounds extra weight can entirely change how enjoyable the hike is. To reduce weight, take only the gear that is necessary. A 400mm f/2.8 won't do you any good if you keel over half a mile from the trailhead. I usually bring two lenses only: an 80-400mm lens for wildlife and a wide-angle lens (such as a 10-22mm) for landscapes. These two lenses cover most of what I would want and don't weigh too much.

For landscape photography, a tripod is a necessity in low-light situations. This is especially true if you want to take HDR landscape images. Tripods are often heavier and more cumbersome to carry than all of your photographic equipment put together. One solution I particularly like is to switch to a cheap monopod. Cheap monopods, such as those by Targus, can be purchased for as little as \$10. Will it work like a Gitzo? Obviously not. However, it will allow you to get steadier images even in low light situations. I frequently hook my camera up to a cheap monopod, lean the monopod/camera against a tree, and viola! I have a steady set-up to take a landscape shot. Also, the monopod is perfect for the hike because you can afford to use it as a hiking stick (which it actually works quite well for). If the monopod gets dinged up from rocks or breaks... you only lost \$10 and have great pictures from the trip.

Another tripod option is the poor man's tripod. This is made by getting a piece of string and tying it in a loop about the same height as you are. Then, buy a cheap bolt from a hardware store that fits the fitting on the bottom of your camera. Tie the bolt onto the string loop. Then screw the bolt into your camera. Last, step onto the bottom of the string loop and hold the camera up to your eye. The string acts as a tripod to keep the camera steady and is locked down by your weight by stepping on it. It certainly isn't ideal, but only weighs a few grams and will allow you to take images at much lower shutter speeds than would otherwise be possible if you just handheld the camera. Not a bad choice.

Your camera bag is an important consideration when hiking. I personally use the Lowepro Fastpack 250. It has a side-access pocket for my DSLR so I can reach in without setting my bag

down and unstrapping my camera. This is perfect for hiking because I keep a long lens attached to the DSLR body while hiking and I can quickly remove the camera from the bag and shoot in a manner of seconds if any deer, bird, or other interesting animal appears in front of me on the trail. Then, when I get to a spot where I want to take a landscape image, it takes little effort to get another lens, make a switch, and shoot the landscape.



Quick and random landscape photography tip!

It is uncomfortable to kneel or lay on the ground in order to get a good angle. To encourage yourself to get down low, but a pair of thin Styrofoam kneepads from a home improvement store

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and wear then under your long pants.



Chapter Eight: Panoramas

Stitched panoramic images impact viewers unlike anything else. We're used to seeing only a small part of a scene, so it's refreshing to see a picture which provides a wide angle view that we are capable of seeing with our natural eyes. Photos can easily be stitched together with a number of very good programs. Photoshop is, undoubtedly, the king of stitching together multiple shots to create a large and very wide-angle image; however, you can also find a number of free versions online that will do a reasonably good job. The stitching software you use is important to

a good image. Stitching software needs to overcome three main hurdles: the natural curvature of an ultra-wide scene, lens vignetting, and possible movements in the scene. While software can overcome these problems to some extent, you can adapt your photography to produce better results.

10 Quick and Easy Tips to Produce Stunning Panoramas

10. When you look through your images after a long day of shooting, it's sometimes difficult to remember which images are shot as part of a panoramic set and which images were shot as single shots. To make this process simpler, take one picture with your hand or finger in front of the lens, and then shoot the panoramic images that you intend to stitch together, and then shoot another picture of your finger or hand. This way, when you go to edit the images, you'll easily see that the images to be stitched together are the ones between the two pictures of your hand or finger.

9. Purchase Photoshop CS5. The inevitable problem with panoramas is that the photographer inadvertently misses one small area of the scene as he takes the different pictures to be stitched together. Photoshop CS5 comes with a brand new technology which is absolutely incredible at filling in the missing pieces. You really have to see it to believe it. I'm convinced that it can only be explained as magic.

8. Most panoramas cover an area that is simply too skinny. By shooting multiple shots in portrait (with camera oriented up-and-down) orientation, you'll get more of the scene above and below the horizon line and you won't have to worry as much about moving up or down as you shoot the different shots.

7. Just two images? Bah... Some of the most beautiful panoramas involve many images which are all stitched together.

6. If you really want to get fancy, try taking HDR panoramic images. Just take three images of each area before moving to the next part of the landscape. This can produce beautiful images, but is also quite difficult. Also, processing so many images will make slow computers crash.

5. As you rotate the camera along an axis on your tripod to photograph the different areas of the scene, keep in mind that the axis point around which you rotate must be correct. The correct

point around which the camera should rotate in order to take a panorama is called the entrance pupil. Some photographers erroneously call this the nodal point, but that's something different. Your camera should be mounted on the point of the entrance pupil so that distortion in the image is minimized. You can look up some highly technical explanations of this principle, but I at least want you to be aware of it at this point.

4. Think about what photo stitching software has to do. The software must find which pixels on multiple images roughly resemble the same pattern and then match the two images together. You'll find that your software will correctly stitch the scene together if you overlap each image by about 20%. This allows the software a little margin of error if it has difficulty in matching together some of the pixels.

3. Vignetting is always a problem. You'll remember that vignetting is the slightly darker areas of an image around the corners and edges of a photo. Vignetting is caused because of poor lens design, so be careful which lens you choose to shoot a panorama. You might consider choosing a lens with minimal vignetting or you can go into Photoshop and use the vignette removal tool in Adobe Camera Raw to brighten up the edges of the photos before stitching them together. Otherwise, the finished product will show seams where the separate photos meet because the edges of each image are darker than the center.

2. I've seen too many panoramas in which photographers throw composition out the window. Make sure to plan your image to place the subject in a way that follows the rule of thirds. Notice the rock formation placed in the lower-left third of the beach panorama on the previous page spread?

1. Don't forget vertoramas! By combining multiple images which cover the vertical axis rather than the typical horizontal panorama, you will capture the sky and ground and create a very interesting image. Give it a shot!

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Chapter Nine: Light—The Most Important Element of Photography

The first and most important lesson in anyone's photography education is that lighting is what divides an average photo from a great photo. Landscapes, unfortunately, aren't willing or able to move around and pose for the camera in perfect lighting. For this reason, many beginning landscape photographers simply leave lighting to luck and hope that the lighting will work out. This chapter aims at teaching beginning and intermediate landscape photographers how to take control of the most important aspect of any photo—the lighting.

Some lighting fixes can be as simple as changing position. One of my favorite locations for landscape photography is a river near my home. Having shot the location many times, I know that I need to shoot on the east side of the river in the mornings and the west side of the river in the evenings. Because the sun rises in the east, if I am positioned on the east bank early in the morning for sunrise, the landscape will be front-lit with the sun to my back. In the evening when the sun sets to the west, I can similarly guarantee that the landscape will be properly front-lit. It is obviously not always the case that you will want landscapes to be front lit. In fact, all sunset and sunrise images are, by necessity back-lit. This principle merely shows the importance of taking a second to think about where you will park the car and begin shooting depending on the lighting conditions. Plan your shoot.

Understanding the principles of lighting

Beautiful lighting has three characteristics: directionality, color, and relative size. Why do pointand-shoot images with flash look so flat? The flash is located only inches away from the lens and removes shadows which would show shape and texture. If the light source is moved further away from the camera—even a foot or two—the lighting casts beautiful shadows which define the subject. Therefore, the first principle of quality lighting is that it is directional, meaning that the direction from which the light source illuminates the subject will impact the overall quality of light on the subject.

The second principle of good lighting is color. Most photographers notice that when they shoot inside, their images look orange. Cameras are not as adept at changing to meet varying light conditions as are our eyes. It has to use technology to analyze whether the color temperature from a light source has a yellow, green, blue, green, or magenta color cast to it. Good lighting will match the color of the ambient light in the scene so that the lighting is cohesive rather than one light being one color and another light having a different color temperature.

The third principle of good lighting is relative size. Counter-intuitively, a light placed close to a subject produces softer light than the same light if it were across the room. The further away from the subject, the harder the light. It is not the actual distance between the light source and the subject that determines if light is hard or soft, but the relative size of the light. When the light source is far away from the subject, it looks smaller to the subject than if it were up close. Anything a photographer can do to increase the size of the light source will produce softer lighting.



How Landscape Photographers Can Manipulate the Light

I am a bit non-traditional when it comes to my landscape photography technique. I am about the only landscape photographer on the planet who carries a 5-in-1 reflector on every shoot. A reflector is a cheap \$20 device used by portrait photographers to reflect the suns light onto dark areas on a model. It looks like a large circular windshield sun protector for a car. Why would I carry this portrait photography tool with me? Because photography is about the light, and I am unwilling to leave the light to chance.

I'm fanatical about proper composition—almost to a fault. This means that my bread and butter is to always use a foreground element in my landscapes. Sometimes, the lighting on the foreground element is simply unacceptable, and I use a reflector to fix the problem.

Let's take an example to clarify this point. Suppose you are shooting the beautiful red rock deserts of Arizona. While walking to the landscape location you want to shoot, you come upon a small Saguaro cactus in the middle of the sand. The sun is rising and you'd like to get the colorful sky in the background. This means that the cactus will be back-lit. Unfortunately, this makes the cactus a silhouette and the small size of the cactus makes it look more like a blob of vegetation than a beautiful plant. The answer to this situation is simple. Use the reflector! Simply propping up the reflector against your tripod reflects beautiful light onto the front of the cactus and you now have a great shot.

I readily admit that this technique is not traditional. In fact, I have never seen another landscape photographer use a reflector; however, if you bring your reflector with you the next time you shoot landscapes, I promise you'll find opportunities to get great shots where you otherwise would not get any shot at all. Try it!

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