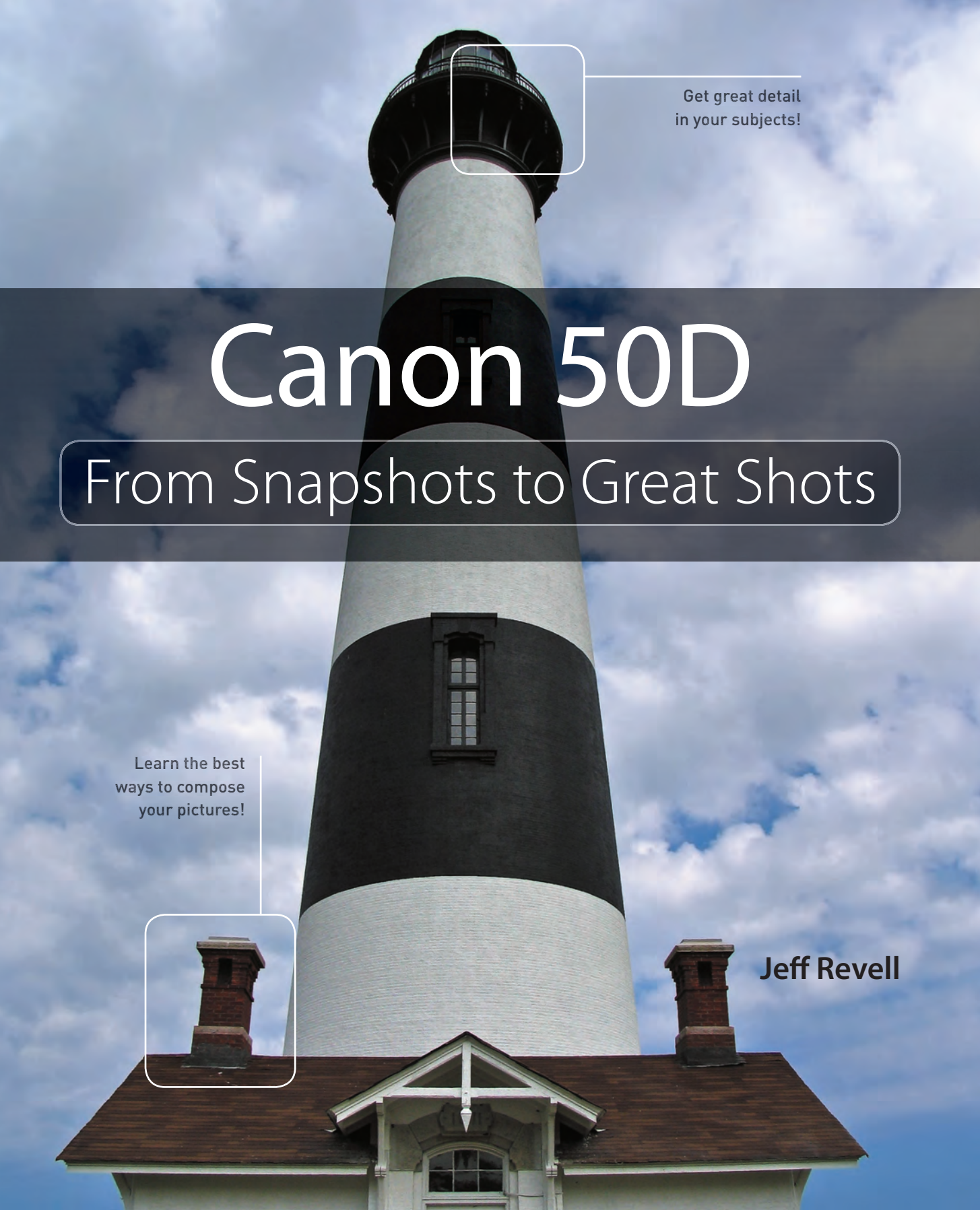

Canon 50D

From Snapshots to Great Shots

Jeff Revell

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Introduction

Walk into any bookseller, go to the photography section, and you will see countless books on the subject of photography. Look a little further and you will locate the camera-specific books. It is this divide between the camera-specific and the instructional photography books that inspired me to write this book. What I was seeing in the store was a lot of books that were just sort of missing the mark—especially when it came to using a specific brand and model of camera along with actual photographic instruction. So with that, I set about to write this book on the Canon 50D, not as a rehash of the owner's manual but as a resource to teach photography with the wonderful technology present in the 50D. I have put together a short Q&A to help you get a better understanding of just what it is that you can expect from this book.

Q: IS EVERY CAMERA FEATURE GOING TO BE COVERED?

A: Nope, just the ones I felt you need to know about in order to start taking great photos. Believe it or not, you already own a great resource that covers every feature of your camera: the owner's manual. Writing a book that just repeats this information would have been a waste of my time and your money. What I did want to write about was how to harness certain camera features to the benefit of your photography. As you read through the book, you will also see callouts that point you to specific pages in your owner's manual that are related to the topic being discussed. For example, in Chapter 5 I cover continuous shooting modes for sports and action photography. Well, instead of listing all the frame rates (how many pictures per second) the camera can take, I added a manual callout that points you to a chart that lists them all.

Q: SO IF I ALREADY OWN THE MANUAL, WHY DO I NEED THIS BOOK?

A: The manual does a pretty good job of telling you how to use a feature or turn it on in the menus, but it doesn't necessarily tell you *why* and *when* you should use it. If you really want to improve your photography, you need to know the whys and whens to put all of those great camera features to use at the right time. To that extent, the manual just isn't going to cut it. It is, however, a great resource on the camera's features, and it is for that reason that I treat it like a companion to this book. You already own it, so why not get something of value from it?

Q: WHAT CAN I EXPECT TO LEARN FROM THIS BOOK?

A: Hopefully, you will learn how to take great photographs. My goal, and the reason the book is laid out the way it is, is to guide you through the basics of photography as they relate to different situations and scenarios. By using the features of your 50D and this book, you will learn about aperture, shutter speed, ISO, lens selection, depth of field, and

many other photographic concepts. You will also find plenty of large full-page photos that include captions, shooting data, and callouts so you can see how all of the photography fundamentals come together to make great images. All the while, you will be learning how your camera works and how to apply its functions and features to your photography.

Q: WHAT ARE THE ASSIGNMENTS ALL ABOUT?

A: At the end of most of the chapters, you will find shooting assignments, where I give you some suggestions as to how you can apply the lessons of the chapter to help reinforce everything you just learned. Let's face it—using the camera is much more fun than reading about it, so the assignments are a way of taking a little break after each chapter and having some fun.

Q: SHOULD I READ THE BOOK STRAIGHT THROUGH OR CAN I SKIP AROUND FROM CHAPTER TO CHAPTER?

A: Here's the easy answer: yes and no. No, because the first four chapters give you the basic information that you need to know about your camera. These are the building blocks for using the camera. After that, yes, you can move around the book as you see fit because those chapters are written to stand on their own as guides to specific types of photography or shooting situations. So you can bounce from shooting portraits to landscapes and then maybe to a little action photography. It's all about your needs and how you want to address them. Or, you can read it straight through. The choice is up to you.

Q: IS THERE ANYTHING ELSE I SHOULD KNOW BEFORE GETTING STARTED?

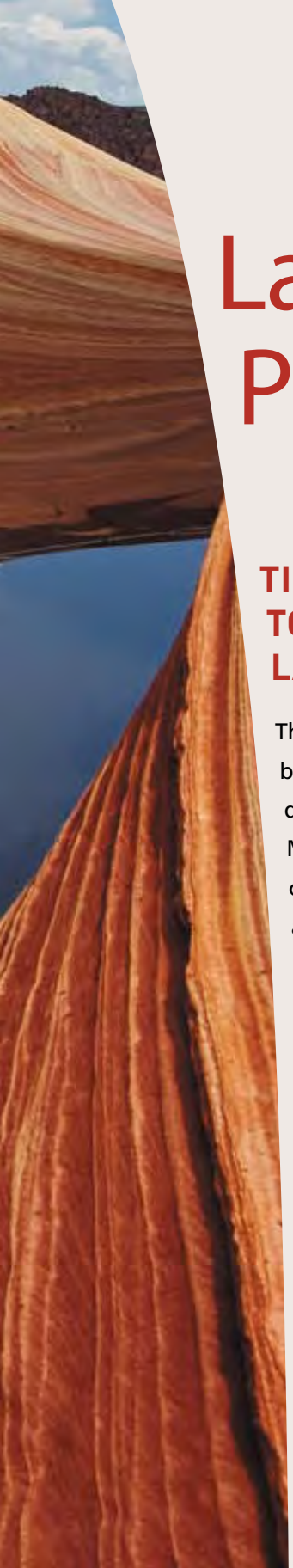
A: In order to keep the book short and focused, I had to be pretty selective about what I put in the book. The problem is that there is a little more information that might come in handy after you've gone through all the chapters. So as an added value for you, I have written a bonus chapter called "Pimp My Ride." It's full of information on photo accessories that will assist you in making better photographs. In it, you will find my recommendation for things like filters, tripods, and much more. To access the bonus chapter, just register your book (it's free) at peachpit.com/Canon50D.

Q: IS THAT IT?

A: One last thought before you dive into the first chapter. My goal in writing this book has been to give you a resource that you can turn to for creating great photographs with your Canon 50D. Take some time to learn the basics and then put them to use. Photography, like most things, takes time to master and requires practice. I have been a photographer for 25 years and I'm still learning. Always remember, it's not the camera but the person using it who makes beautiful photographs. Have fun, make mistakes, and then learn from them. In no time, I'm sure you will transition from a person who takes snapshots to a photographer who makes great shots.

7

ISO 100
1/320 sec.
f/9
34mm lens



Landscape Photography

TIPS, TOOLS, AND TECHNIQUES TO GET THE MOST OUT OF YOUR LANDSCAPE PHOTOGRAPHY

There has always been something about shooting landscapes that has brought a sense of joy to my photography. It might have something to do with being outdoors and working at the mercy of Mother Nature. Maybe it's the way it challenges me to visualize the landscape and try to capture it with my camera. It truly is a celebration of light, composition, and the world we live in.

In this chapter, we will explore some of the features of the 50D that not only improve the look of your landscape photography, but also make it easier to take great shots. We will also explore some typical scenarios and discuss methods to bring out the best in your landscape photography.

PORING OVER THE PICTURE

Driving toward the town of Page, Arizona, with my buddies Scott and Dave, I saw this fantastic sky, complete with a building storm, drifting over the power plant. The late afternoon sun was beautifully illuminating the landscape and contrasted nicely with the clouds.

The horizon was set low in the frame to emphasize the stormy sky.

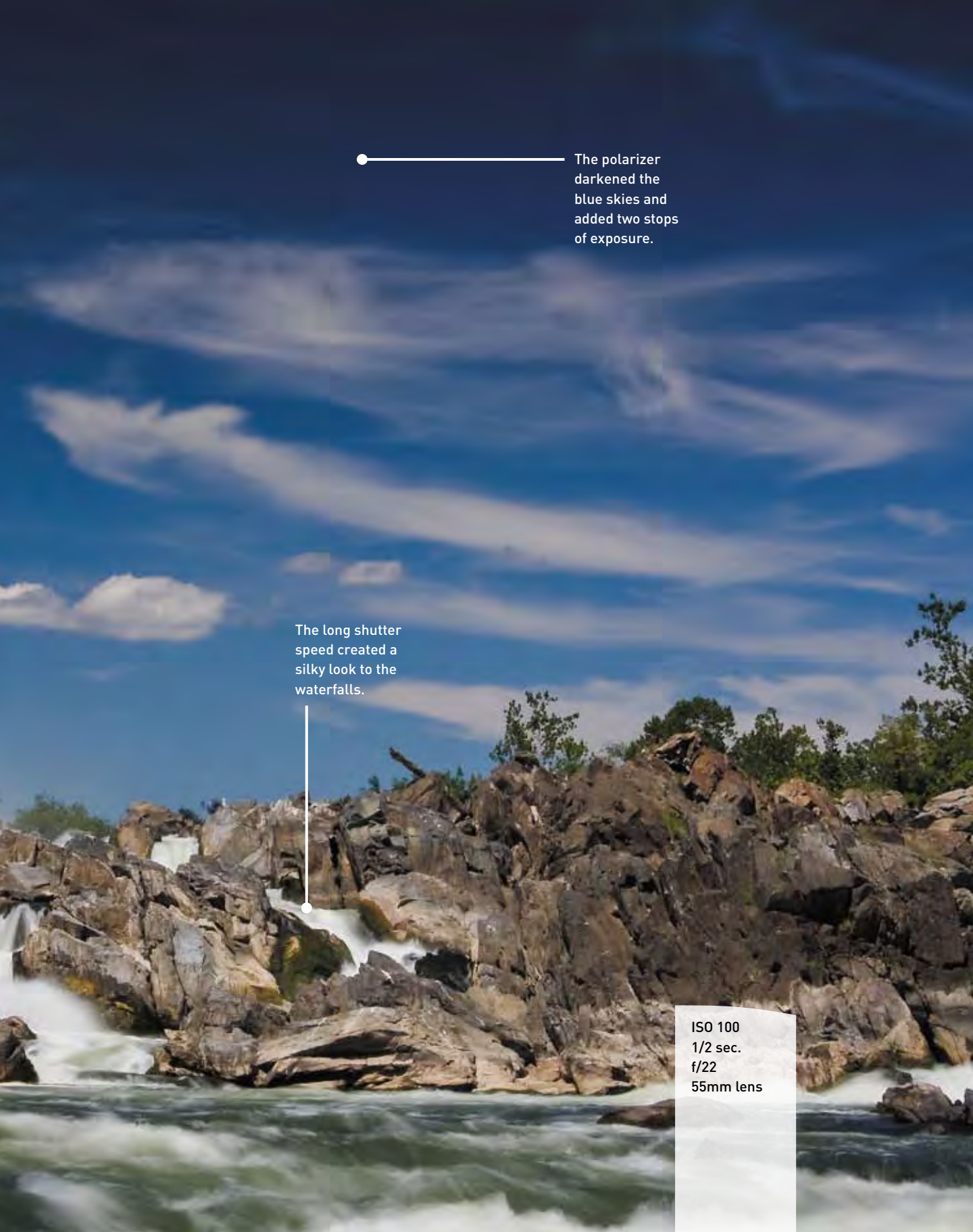
ISO 100
1/350 sec.
f/10
24mm lens


A wide-angle lens was used to capture more of the storm clouds.
I used the rule of thirds in placing the power plant in the lower-right portion of the frame.
A small aperture ensured that the power plant and clouds were sharp and in focus.

PORING OVER THE PICTURE

Great Falls is a waterfall system on the Potomac River. I have taken many a picture there, but on this particular day I decided to climb down to the water's level for a different perspective of the falls. With my camera gear in a back-pack and my tripod slung over my shoulder, I climbed down the rocky gorge and found a great spot to set up. I knew I wanted to get a long exposure to smooth out the water so I set the camera ISO as low as it would go, and with the camera set to Av, I stopped the lens down to f/22. Still unsatisfied with the shutter speed, I screwed a polarizing filter on the front of the lens, which let me finally get the slow shutter speed I was after.

A small aperture gave maximum depth of field and as well as a longer shutter speed.


The polarizer darkened the blue skies and added two stops of exposure.
The long shutter speed created a silky look to the waterfalls.
ISO 100
1/2 sec.
f/22
55mm lens

SHARP AND IN FOCUS: USING TRIPODS

Throughout the previous chapters we have concentrated on using the camera to create great images. We will continue that trend through this chapter, but there is one additional piece of equipment that is crucial in the world of landscape shooting: the tripod. Tripods are critical to your landscape work for a couple of reasons. The first relates to the time of day that you will be working. For reasons that will be explained later, the best light for most landscape work happens at sunrise and just before sunset. While this is the best time to shoot, it's also kind of dark. That means you'll be working with slow shutter speeds. Slow shutter speeds mean camera shake. Camera shake equals bad photos.

The second reason is also related to the amount of light that you're gathering with your camera. When taking landscape photos, you will usually want to be working with very small apertures, as they give you lots of depth of field (DOF). This also means that, once again, you will be working with slower-than-normal shutter speeds.

Slow shutter = camera shake = bad photos.

Do you see the pattern here? The one tool in your arsenal to truly defeat the camera shake issue and ensure tack-sharp photos is a good tripod (**Figure 7.1**).

So what should you look for in a tripod? Well, first make sure it is sturdy enough to support your camera and any lens that you might want to use. Next, check the

FIGURE 7.1
A sturdy tripod is the key to sharp landscape photos. (Photo by Scott Kelby)

height of the tripod. There is nothing worse than having to bend over all day to look through your viewfinder. Finally, think about getting a tripod that utilizes a quick-release head. This usually employs a plate that screws into the bottom of the camera and then quickly snaps into place on the tripod. This will be especially handy if you are going to move between shooting by hand and using the tripod. There's more about tripods in the bonus chapter.

TRIPOD STABILITY

Most tripods have a center column that allows the user to extend the height of the camera above the point where the tripod legs join together. This might seem like a great idea, but the reality is that the further you raise that column, the less stable your tripod becomes. Think of a tall building that sways near the top. To get the most solid base for your camera, always try to use it with the center column at its lowest point so that your camera is right at the apex of the tripod legs.

IS LENSES AND TRIPODS DON'T MIX

If you are using image stabilization (IS) lenses on your camera, remember to turn this feature off when you use a tripod (**Figure 7.2**). This is because the image stabilization can, while trying to minimize camera movement, actually *create* movement when the camera is already stable. To turn off the IS feature, just slide the Stabilizer selector switch on the side of the lens to the Off position.

FIGURE 7.2
Turn off the Image Stabilization feature when using a tripod.

USING A-DEP TO MAXIMIZE DEPTH OF FIELD

As discussed in Chapter 4, A-DEP is what I would refer to as an advanced automatic mode. The camera evaluates the distance of objects in the viewfinder and then determines the proper aperture setting to render everything in focus. It is automatic because it requires no input from the camera operator, but it is advanced because it is not just trying to select the maximum aperture as with the Landscape mode in the Basic zone.

Take a look at **Figure 7.3** and let's see what A-DEP is thinking.

There were two main subjects in the image of the Golden Gate Bridge. The bridge is the main character, but the trees on the hillside are of equal importance to me. There was quite a bit of distance between these two subjects, so a lot of depth of field was necessary to give sharp focus to each of them.

Using the A-DEP mode, the camera utilizes the autofocus information to evaluate the distance of the trees and the bridge. While it is checking the subjects' distances, it is also gathering information on the available light levels. Based on all of this data, it determines that an exposure of f/32 at 1/40 of a second with an ISO of 200 is the proper setting to make all of the subjects appear in focus.

FIGURE 7.3
A-DEP is looking at the trees and the distant bridge and picking a small aperture to give enough depth of field to keep them both looking sharp and in focus.

The problem with A-DEP is the control factor: you really have none. If the mode calls for an exposure of more than 30 seconds, you have no choice except to raise your ISO. If the shutter speed selected is greater than 1/8000 of a second, then you have to lower the ISO. Considering the limitations of this mode, it might best be used as an evaluation of the scene and exposure. Think of it as asking the camera for its opinion.

SELECTING THE PROPER ISO

One of the downfalls of A-DEP mode is the use of ISO to change exposure settings. When shooting most landscape scenes, the ISO is the one factor that should only be changed as a last resort. While it is easy to select a higher ISO to get a smaller aperture, the noise that it can introduce into your images can be quite harmful (**Figures 7.4** and **7.5**). The noise is not only visible as large grainy artifacts, it can also be multicolored,

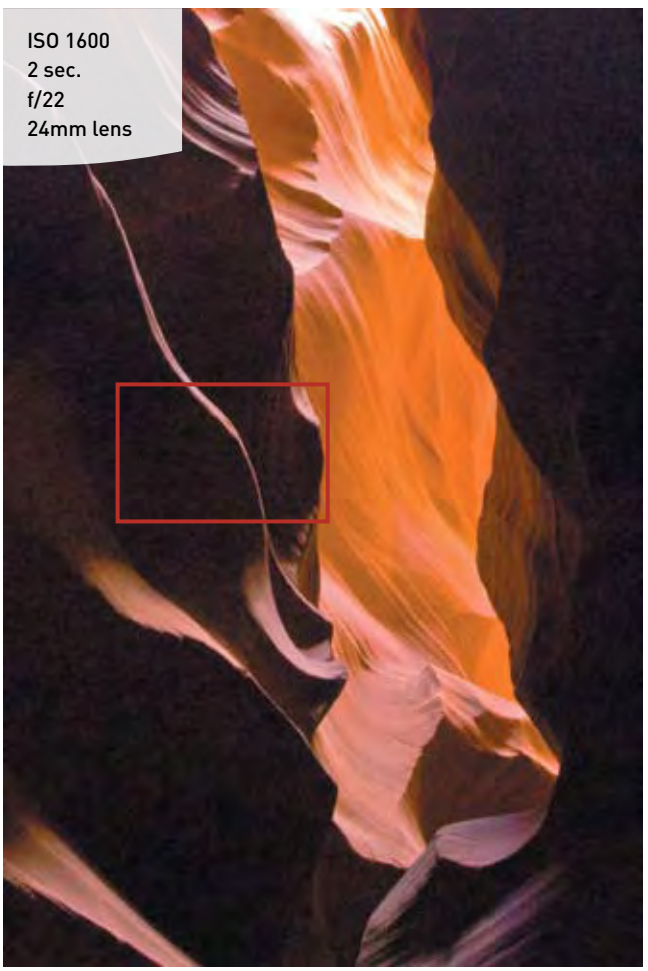


FIGURE 7.4
A high ISO setting created a lot of digital noise in the shadows.

FIGURE 7.5
When the image is enlarged, the noise is even more apparent.

which further degrades the image quality. Take a look at the image in Figure 7.4, which was taken with an ISO of 1600. The purpose was to shorten the shutter speed and still use a small aperture setting of f/22. The problem is that the noise level is so high that, in addition to being distracting, it is obscuring fine details in the canyon wall.

Now check out another image that was taken in the same canyon light but with a much lower ISO setting (**Figures 7.6** and **7.7**). As you can see, the noise levels are much lower, which means that my blacks look black, and the fine details are beautifully captured.

When shooting landscapes, set your ISO to the lowest possible setting at all times. Between the use of image stabilization lenses (if you are shooting handheld) and a good tripod, there should be few circumstances where you would need to shoot landscapes with anything above an ISO of 400.

FIGURE 7.6
By lowering the ISO to 100, I was able to avoid the noise and capture a clean image.

FIGURE 7.7
Zooming in shows that the noise levels for this image are almost nonexistent.

USING NOISE REDUCTION

Both canyon images were taken with a tripod, but the image set to an ISO of 100 required four times the shutter speed (30 seconds at ISO 100) of the high ISO image (2 seconds at ISO 1600). The temptation to use higher ISOs should always be avoided, as the end result will be more image noise and less detail.

There can be an issue when using a low ISO setting: the sometimes lengthy shutter speeds can also introduce noise. This noise is a result of the heating of the camera sensor as it is being exposed to light. This effect is not visible in short exposures, but as you start shooting with shutter speeds that exceed one second, the level of image noise can increase. Your camera has a couple of features that you can turn on to combat noise from long exposures and high ISOs.

A

B

C

SETTING UP NOISE REDUCTION

1. Press the Menu button, then use the Main dial to get to the Custom Functions menu (second from the right).
2. Using the Quick Control dial, select C. Fn II: Image, and then press the Set button (**A**). This menu section contains four custom settings.
3. The first selection is called Long exposure noise reduction. Press the Set button to change the options. Select Auto with the Quick Control dial, and then press Set to lock in your change (**B**).
4. Now turn the Quick Control dial to get to the second setting, High ISO speed noise reduction. Set this to Standard for normal shooting or Strong for instances where you have to significantly raise your ISO (**C**).

SELECTING A WHITE BALANCE

This probably seems like a no-brainer. If it's sunny, select Daylight. If it's overcast, choose the Shade or Cloudy setting. Those choices wouldn't be wrong for those circumstances, but why limit yourself? Sometimes you can change the mood of the photo by selecting a white balance that doesn't quite fit the light for the scene that you are shooting.

Figure 7.8 is an example of a correct white balance. It was late afternoon and the sun was starting to move low in the sky, giving everything that warm afternoon glow. The white balance for this image was set to Daylight.

But what if I want to make the scene look like it was shot in the early morning hours? Simple; I just change the white balance to Fluorescent, which is a much cooler setting (**Figure 7.9**).

FIGURE 7.8
Using the "proper" white balance yields predictable results.

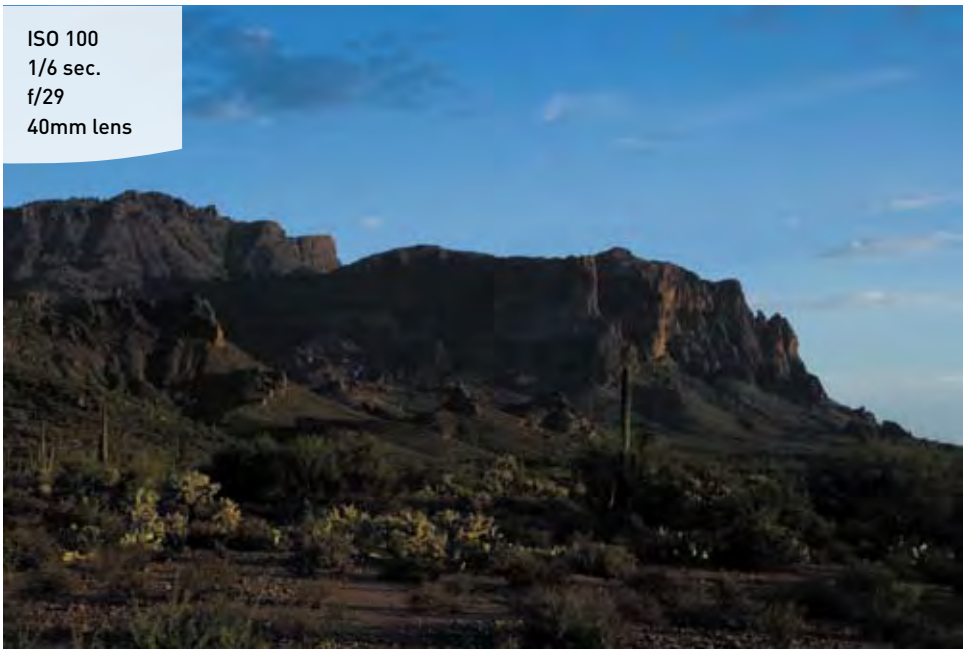


FIGURE 7.9
Changing the white balance to Fluorescent gives the impression that the picture was taken at a different time of day than it really was.

You can select the most appropriate white balance for your shooting conditions in a couple of ways. The first is to just take a shot, review it on the LCD, and keep the one you like. Of course, you would need to take one for each white balance setting, which means that you will have to take about seven different shots to see which is most pleasing.

The second method, and my personal favorite, doesn't require taking a single shot. Instead, it uses Live View to get perfectly selected white balances. Live View gives instant feedback as you scroll through all of the white balance settings and displays them for you right on the LCD. Even better, you can choose a custom setting that will let you dial in exactly the right look for your image.

To use Live View, you must first activate it in the menu system (as described in Chapter 6).

USING LIVE VIEW TO PREVIEW DIFFERENT WHITE BALANCE SETTINGS

1. Press the Live View button located to the left of the camera eyepiece.
2. With Live View activated, press the WB button on top of the camera, which will bring up the white balance symbols on the LCD screen.
3. Use the Quick Control dial on the back of the camera to select among the different white balance choices.
4. To dial in a specific white balance temperature, move the selector to the K symbol and then rotate the Main Dial to change the white balance temperature (you can choose from a very cool 2500 to a very warm 10000).
5. To lock in your change, just press the WB button a second time and then press the Live View button to exit Live View mode.

USING THE LANDSCAPE PICTURE STYLE

When shooting landscapes, I always look for great color and contrast. This is one of the reasons that so many landscape shots are taken in the early morning or during sunset. The light is much more vibrant and colorful at these times of day and adds a sense of drama to an image.

You can help boost this effect, especially in the less-than-golden hours of the day, by using the Landscape picture style (**Figure 7.10**). Just as in the Landscape mode found in the Basic zone, you can set up your landscape shooting so that you capture images with increased sharpness and a slight boost in blues and greens. This style will add some pop to your landscapes without the need for additional processing in any software.

Manual Callout

On pages 65–70, your owner's manual has a complete section on using and customizing picture styles. There, you will find out what the four symbols are next to each style setting, how to customize them, and how to save them as user-defined styles.

FIGURE 7.10
Using the Landscape picture style can add sharpness and more vivid color to skies and vegetation.

SETTING UP THE LANDSCAPE PICTURE STYLE

1. Press your Menu button, and then rotate the Main dial to the second shooting menu.
2. Use the Quick Control dial to navigate down the menu list until you get to Picture Style, then press the Set button (**A**).
3. Rotate the Quick Control dial to highlight the Landscape setting and then press the Set button to lock in your changes (**B**).

A

B

TAMING BRIGHT SKIES WITH EXPOSURE COMPENSATION

Balancing exposure in scenes that have a wide contrast in tonal ranges can be extremely challenging. The one thing you should never do is overexpose your skies to the point of blowing out your highlights (unless, of course, that is the look you are going for). It's one thing to have white clouds, but it's a completely different, and bad, thing to have no detail at all in those clouds. This usually happens when the camera is trying to gain exposure in the darker areas of the image (**Figure 7.11**). The one way to tell if you have blown out your highlights is to turn on the Highlight Alert, or "blinkies," feature on your camera (see the "How I Shoot" section in Chapter 4). When you take a shot where the highlights are exposed beyond the point of having any detail, that area will blink in your LCD display. It is up to you to determine if that particular area is important enough to regain detail by altering your exposure. If the answer is yes, then the easiest way to go about it is to use some exposure compensation.

With this feature, you can force your camera to choose an exposure that ranges, in 1/3-stop increments, from two stops over to two stops under the metered exposure (**Figure 7.12**).

FIGURE 7.11
The walls and underside of the tin roof are well exposed, but parts of the building in the sun has no detail whatsoever.

FIGURE 7.12
A compensation of two stops of under-exposure brought back the detail in the highlights.

HIGH-KEY AND LOW-KEY IMAGES

When you hear someone refer to a subject as being *high key*, it usually means that the entire image is composed of a very bright subject with very few shadow areas—think snow or beach. It makes sense, then, that a *low-key* subject has very few highlight areas and a predominance of shadow areas. Think of a cityscape at night as an example of a low-key photo.

USING EXPOSURE COMPENSATION TO REGAIN DETAIL IN HIGHLIGHTS

1. Activate the camera meter by lightly pressing the shutter release button.
2. Using your thumb, rotate the Quick Control dial to change the over-/under-exposure setting (you must have the camera power switch in the Quick Control On position).
3. Rotate the Quick Control dial counterclockwise one click and take another picture (each click of the Quick Control dial is a 1/3-stop change).
4. If the blinkies are gone, you are good to go. If not, keep subtracting from your exposure by 1/3 of a stop until you have a good exposure in the highlights.

I generally keep my camera set to –1/3 stop for most of my landscape work unless I am working with a location that is very dark or low key.

SHOOTING BEAUTIFUL BLACK AND WHITE LANDSCAPES

There is nothing as timeless as a beautiful black and white landscape photo. For many, it is the purest form of photography. The genre conjures up thoughts of Ansel Adams out in Yosemite Valley, capturing stunning monoliths with his 8x10 view camera. Well, just because you are shooting with a digital camera doesn't mean you can't create your own stunning photos using the power of the Monochrome picture style. (See the "Classic Black and White Portraits" section of Chapter 6 for instructions on setting up this feature.) Not only can you shoot in black and white, you can also apply built-in filters to lighten or darken different elements within your scene, as well as add contrast and definition.

The four filter colors are red, yellow, green, and orange. The most typically used filters in black and white photography are red and yellow. This is because the color of the filter will darken opposite colors and lighten similar colors. So if you want to darken a blue sky, you would use a yellow filter because blue is the opposite of yellow. To darken green foliage, you would use a red filter. Check out the series of shots in **Figure 7.13** with different filters applied.

You can see that there is no real difference in contrast between the color and the black and white image with no filter. The green filter has the effect of darkening the skies slightly and giving a significantly darker look to the buttes, which are orange in color. Using the Orange filter makes the buttes very light but dramatically darkens the sky. For this particular shot, I much prefer the look of the darkened skies.

Other options in the Monochrome picture style enable you to adjust the sharpness, contrast, and even add some color toning to the final image. This information is also in the "Classic Black and White Portraits" section of Chapter 6. I like to have Sharpness set to 5 and Contrast set to +1 for my landscape images. This gives an overall look to the black and white image that is reminiscent of the classic black and white films. Experiment with the various settings to find the combination that is most pleasing to you.

FIGURE 7.13

Adding color filter settings to the Monochrome picture style allows you to brighten or darken elements in your scene. The top right image has no filter applied to it. The bottom left has a green filter, and the bottom right has an orange filter.

THE GOLDEN LIGHT

If you ask any professional landscape photographer what their favorite time of day to shoot is, chances are they will tell you it's the hours surrounding daybreak and sunset (**Figures 7.14** and **7.15**). The reason for this is that the light is coming from a very low angle to the landscape, which creates shadows and gives depth and character. There is also a quality to the light that seems cleaner and is more colorful than the light you get when shooting at midday. One thing that can dramatically improve any morning or evening shot is the presence of clouds. The sun will fill the underside of the clouds with a palette of colors and add drama to your skies.

FIGURE 7.14
The few minutes just prior to sunrise can add great colors to a partly cloudy sky.

WARM AND COOL COLOR TEMPERATURES

These two terms are used to describe the overall colorcast of an image. Reds and yellows are said to be *warm*, which is usually the look that you get from the late afternoon sun. Blue is usually the predominant color when talking about a *cool* cast.

FIGURE 7.15
Late afternoon sun is usually warmer and adds drama and warmth to the clouds.

WHERE TO FOCUS

Large landscape scenes are great fun to photograph, but they can present a problem: where exactly do you focus when you want everything to be sharp? Since our goal is to create a great landscape photo, we will need to concentrate on how to best create an image that is tack sharp, with a depth of field that renders great focus throughout the scene.

I have already stressed the importance of a good tripod when shooting landscapes. The tripod lets you concentrate on the aperture portion of the exposure without worrying how long your shutter will be open. This is because the tripod provides the stability to handle any shutter speed you might need when shooting at small apertures. I find that for most of my landscape work I set my camera to Aperture Priority mode and the ISO to 100 (for a clean, noise-free image).

However, shooting with the smallest aperture on your lens doesn't necessarily mean that you will get the proper sharpness throughout your image. The real key is knowing where in the scene to focus your lens to maximize the depth of field for your chosen aperture. To do this, you must utilize something called the "hyper focal distance" of your lens.

Hyper focal distance, also referred to as HFD, is the point of focus that will give you the greatest acceptable sharpness from a point near your camera all the way out to infinity. If you combine good HFD practice in combination with a small aperture, you will get images that are sharp to infinity.

There are a couple of ways to do this, and the one that is probably the easiest, as you might guess, is the one that is most widely used by working pros. When you have your shot all set up and composed, focus on an object that is about one-third of the distance into your frame (**Figure 7.16**). It is usually pretty close to the proper distance and will render favorable results. When you have the focus set, use your Depth of

TACK SHARP

Here's one of those terms that photographers like to throw around. *Tack sharp* refers not only to the focus of an image but also the overall sharpness of the image. This usually means that there is excellent depth of field in terms of sharp focus for all elements in the image. It also means that there is no sign of camera shake, which can give soft edges to subjects that should look nice and crisp. To get your images tack sharp, use a small depth of field, don't forget your tripod, use the self-timer to activate the shutter if no cable release is handy, and practice achieving good hyper focal distance (HFD) when picking your point of focus.

Field preview button to check the sharpness of all the objects in your scene. The button is located just under the lens release button and is activated once you have depressed the shutter button partway (**Figure 7.17**).

FIGURE 7.16
To get maximum focus from near to far, the focus was set one-third of the way into the pool of water, about where you see the reflection of the clouds in the water. I then recomposed before taking the picture. Using this point of focus with an aperture of f/16 gave me a sharply focused image all the way back to the distant rocks. This is another excellent place to use the One Shot focus mode as well.

FIGURE 7.17
Using the Depth of Field preview button can help you ensure that the image is sharp.

When the Depth of Field preview button is depressed, it will cause the lens to stop down to the selected aperture and let you preview the depth of field directly through your viewfinder. You can also use this feature during Live View mode to see the depth of field directly on your LCD display.

One thing to remember is that as your lens gets wider in focal length, your HFD will be closer to the camera position. This is because the wider the lens, the greater depth of field you can achieve. This is yet another reason why a good wide angle lens is indispensable to the landscape shooter.

EASIER FOCUSING

There's no denying that the automatic focus features on the 50D are great, but sometimes it just pays to turn them off and go manual. This is especially true if you are shooting on a tripod: once you have your shot composed in the viewfinder and you are ready to focus, chances are that the area you want to focus on is not going to be in the area of one of the focus points. Often this is the case when you have a foreground element that is fairly low in the frame. You could use a single focus point set low in your viewfinder and then pan the camera down until it rests on your subject. But then you would have to press the shutter button halfway to focus the camera and then try to recompose and lock down the tripod. It's no easy task.

But you can have the best of both worlds by having the camera focus for you, then switching to manual focus to comfortably recompose your shot (**Figure 7.18**).

GETTING FOCUSED WHILE USING A TRIPOD

1. Set up your shot and find the area that you want to focus on.
2. Pan your tripod head so that your active focus point is on that spot.
3. Press the shutter button halfway to focus the camera.
4. Switch the camera to manual focus by sliding the switch on the lens barrel from AF to MF.
5. Recompose the composition on the tripod and then take the shot.

The camera will fire without trying to refocus the lens. This works especially well for wide-angle lenses, which can be difficult to focus in manual mode.

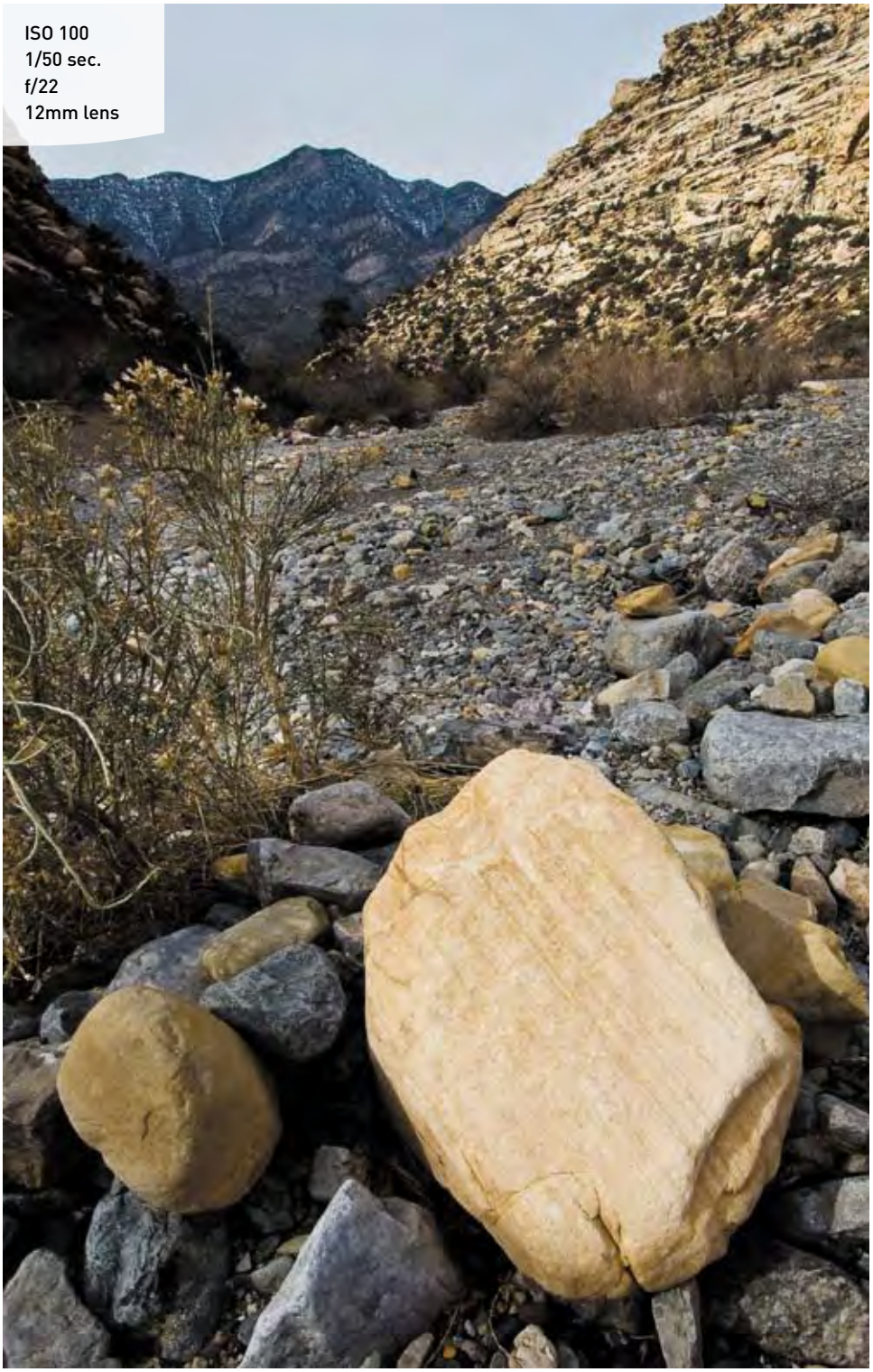


FIGURE 7.18
Using the DOF one-third rule, I focused on the rock bed in front of the boulder, then switched the lens to manual focus before recomposing for the final shot.

MAKING WATER FLUID

There's nothing quite as satisfying for the landscape shooter as capturing a silky waterfall shot. Creating the smooth-flowing effect is as simple as adjusting your shutter speed to allow the water to be in motion while the shutter is open. The key is to have your camera on a stable platform (such as a tripod) so that you can use a shutter speed that's long enough to work (**Figure 7.19**). To achieve a great effect, use a shutter speed that is at least 1/15 of a second or longer.

SETTING UP FOR A WATERFALL SHOT

1. Attach the camera to your tripod, then compose and focus your shot.
2. Make sure the ISO is set to 100.
3. Using Av mode, set your aperture to the smallest opening (such as f/22 or f/36).
4. Press the shutter button halfway so the camera takes a meter reading.
5. Check to see if the shutter speed is 1/15 or slower.
6. Take a photo and then check the image on the LCD.

If the water is blinking on the LCD, indicating a loss of detail in the highlights, then use the Exposure Compensation feature (as discussed earlier in this chapter) to bring details back into the waterfall. You will need to have the Highlight Alert feature turned on to check for overexposure (see "How I Shoot" in Chapter 4).

FIGURE 7.19
I used a tripod and a long exposure time to give the double waterfall its silky look.

FIGURE 7.20
I used a polarizing filter to add two stops of exposure, thus allowing for a longer exposure time under the midday sun. I got the added benefit of darkening the blue sky.

There is a possibility that you will not be able to have a shutter speed that is long enough to capture a smooth, silky effect, especially if you are shooting in bright daylight conditions. To overcome this obstacle, you need a filter for your lens—either a polarizing filter or a neutral density filter. The polarizing filter redirects wavelengths of light to create more vibrant colors, reduce reflections, and darken blue skies. It is a handy filter for landscape work (**Figure 7.20**). The neutral density filter is typically just a dark piece of glass that serves to darken the scene by one, two, or three stops. This allows you to use slower shutter speeds during bright conditions. Think of it as sunglasses for your camera lens. You will find more discussion on filters in the bonus chapter.

DIRECTING THE VIEWER: A WORD ABOUT COMPOSITION

As a photographer, it's your job to lead the viewer through your image. You accomplish this by utilizing the principles of composition, which is the arrangement of elements in the scene that draws the viewer's eye through your image and holds their attention. As the director of this viewing, you need to understand how people see, and then use that information to focus their attention on the most important elements in your image.

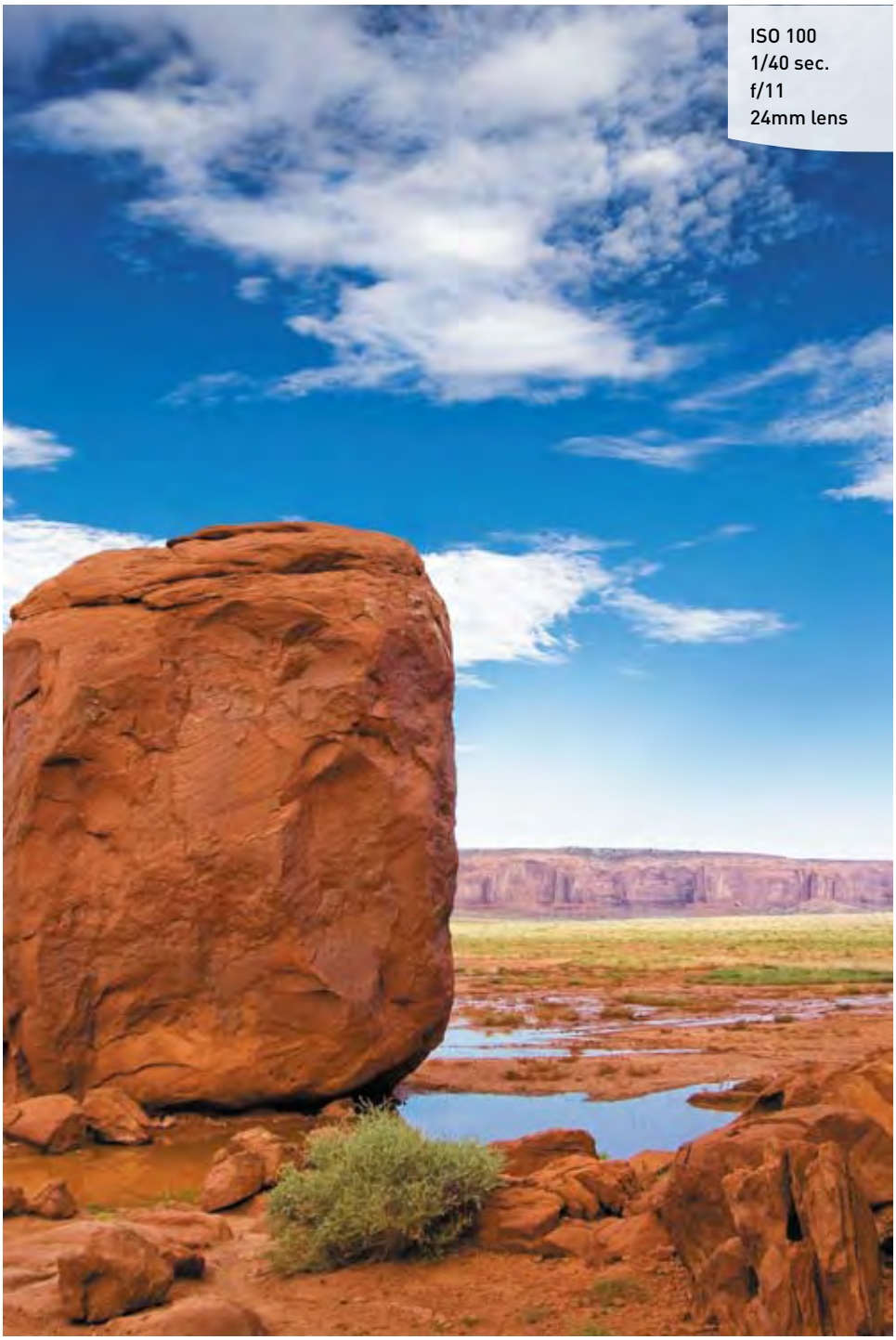


FIGURE 7.21
The composition of the elements pulls the viewer's eyes around the image, leading from one element to the next in a circular pattern.

There is a general order at which we look at elements in a photograph. The first is brightness. The eye wants to travel to the brightest object within a scene. So if you have a bright sky, it's probably the first place the eye will travel to. The second order of attention is sharpness. Sharp, detailed elements will get more attention than soft, blurry areas. Finally, the eye will move to vivid colors while leaving the dull, flat colors for last. It is important to know these essentials in order to grab—and keep—the viewer's attention and then direct them through the frame.

In **Figure 7.21**, the eye is drawn to the bright white cloud in the middle of the frame. From there, it is pulled toward the sharpness and color of the large boulder that is anchoring the lower-left portion of the image. The eye moves around the curved section of stone at the bottom of the frame, where it is then lifted back up to the sky and clouds, right back to the beginning. The elements within the image all help to keep the eye moving but never leave the frame.

RULE OF THIRDS

There are, in fact, quite a few philosophies concerning composition. The easiest one to begin with is known as the "rule of thirds." Using this principle, you simply divide your viewfinder into thirds by imagining two horizontal and two vertical lines that divide the frame equally.

The key to using this method of composition is to have your main subject located at or near one of the intersecting points (**Figure 7.22**).

FIGURE 7.22
Placing the small shrub in the upper-left portion of the image creates a much more interesting composition than having it dead center in the frame.

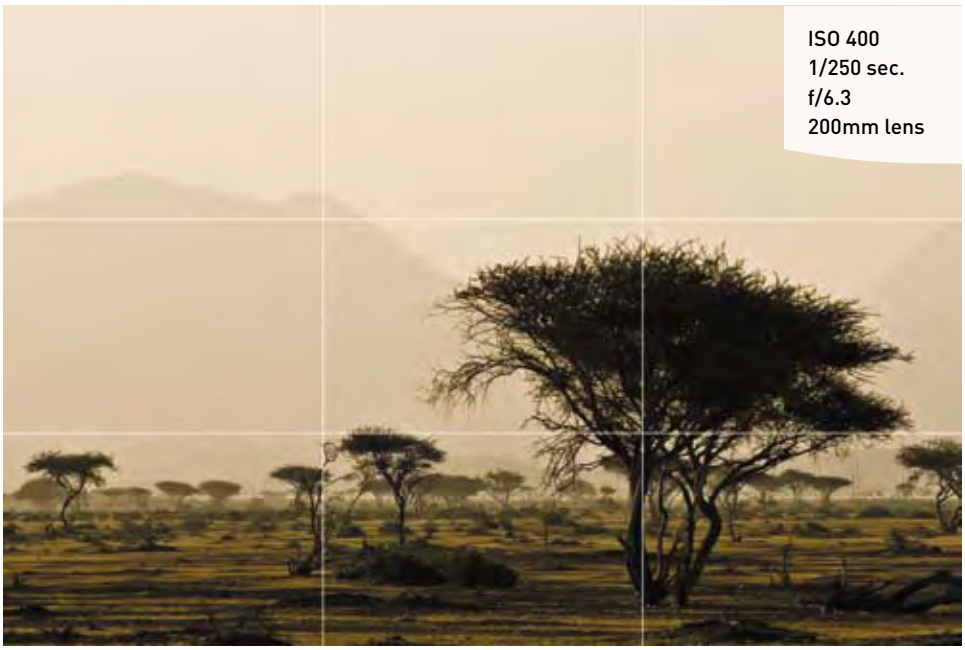


FIGURE 7.23
Placing the horizon of this image at the bottom third of the frame places emphasis on the subjects above it- the large tree and the mountains.

By placing your subject near these intersecting lines, you are giving the viewer space to move within the frame. The one thing you don't want to do is place your subject smack dab in the middle of the frame. This is sometimes referred to as "bull's eye" composition, and it requires the right subject matter for it to work. It's not always wrong, but it will usually be less appealing and may not hold the viewer's focus.

Speaking of the middle of the frame: the other general rule of thirds deals with horizon lines. Generally speaking, you should position the horizon one third of the way up or down in the frame. Splitting the frame in half by placing your horizon in the middle of the picture is akin to placing the subject in the middle of the frame; it doesn't lend a sense of importance to either the sky or the ground.

In **Figure 7.23**, I incorporated the rule of thirds by aligning my horizon in the bottom third of the frame and the mountains near the top third. I have also placed the large tree in the foreground at one of the intersecting lines and the peak of one of the mountains in another. I achieved this by choosing the right focal length (in this case, it was 200mm) and by moving my camera position until I had all of the key elements in the right place.

CREATING DEPTH

Because a photograph is a flat, two-dimensional space, you need to create a sense of depth by using the elements in the scene to create a three-dimensional feel. This is accomplished by including different and distinct spaces for the eye to travel:

a foreground, middle ground, and background. By using these three spaces, you draw the viewer in and render depth to your image.

The hilly scene in northern California, shown in **Figure 7.24**, illustrates this well. The tree strongly defines the foreground area. The shadowy hills help separate the tree from the middle ground, and the sky gives a great blue background that contrasts with the warm tones of the late afternoon sun.

FIGURE 7.24
The tree, shadow, sloping hills, and sky all add to the feeling of depth in the image.

ADVANCED TECHNIQUES TO EXPLORE

This section comes with a warning attached. All of the techniques and topics up to this point have been centered on your camera. The following two sections, covering panoramas and high dynamic range (HDR) images, require you to use image-processing software to complete the photograph. They are, however, important enough that you should know how to correctly shoot for success, should you choose to explore these two popular techniques.

SHOOTING PANORAMAS

If you have ever visited the Grand Canyon, you know just how large and wide open it truly is—so much so that it would be difficult to capture its splendor in just one frame. The same can be said for a mountain range, or a cityscape, or any extremely wide vista. There are two methods that you can use to capture the feeling of this type of scene.

THE "FAKE" PANORAMA

The first method is to shoot as wide as you can, and then crop out the top and bottom portion of the frame. Panoramic images are generally two or three times wider than a normal image.

CREATING A FAKE PANORAMA

1. To create the look of the panorama, find your widest lens focal length. In my case, it would be the 18mm setting on the 18–200mm EF-S kit lens.
2. Using the guidelines discussed earlier in the chapter, compose and focus your scene, and select the smallest aperture possible.
3. Shoot your image. That's all there is to it, from a photography standpoint.
4. Then, open the image in your favorite image-processing software and crop the extraneous foreground and sky from the image, leaving you with a wide panorama of the scene.

Figure 7.25 shows an example using a photo taken in the Tonto National Forest, just outside of Phoenix, Arizona.

As you can see, the image was shot with a very wide perspective, using an 18mm lens. While it is not a bad photo, it lacks impact and suffers from poor composition. This isn't a problem, though, because it was shot for the express purpose of creating a "fake" panorama. Now look at the same image, cropped for panoramic view (**Figure 7.26**). As you can see, it makes a huge difference in the image and gives much higher visual impact by reducing the uninteresting foreground and sky, drawing your eyes across the length of the horizon.

FIGURE 7.25
This is a nice image but it lacks visual impact.

FIGURE 7.26
Cropping gives the feeling of a sweeping vista and makes the shot visually appealing.

THE MULTIPLE-IMAGE PANORAMA

The reason the previous method is sometimes referred to as a "fake" panorama is because it is made with a standard-size frame and then cropped down to a narrow perspective. To shoot a true panorama, you need to use either a special panorama camera that shoots a very wide frame, or the following method, which requires the combining of multiple frames.

The multiple-image pano has gained in popularity in the past few years; this is principally due to advances in image-processing software. Many software options

FIGURE 7.27
Here you see the makings of a panorama, with eight shots overlapping by about 30 percent from frame to frame.

FIGURE 7.28
I used Adobe Photoshop to combine all of the exposures into one large panoramic image.

are available now that will take multiple images, align them, and then "stitch" them into a single panoramic image. The real key to shooting a multiple-image pano is to overlap your shots by about 30 percent from one frame to the next (**Figures 7.27** and **7.28**). It is possible to handhold the camera while capturing your images, but the best method for capturing great panoramic images is to use a tripod.

Now that you have your series of overlapping images, you can import them into your image-processing software to stitch them together and create a single panoramic image.

SHOOTING PROPERLY FOR A MULTIPLE-IMAGE PANORAMA

1. Mount your camera on your tripod and make sure it is level.
2. Choose a focal length for your lens that is somewhere between 35mm and 50mm.
3. In Av mode, use a very small aperture for the greatest depth of field. Take a meter reading of a bright part of the scene, and make note of it.
4. Now change your camera to Manual mode (M), and dial in the aperture and shutter speed that you obtained in the previous step.
5. Set your lens to manual focus, and then focus your lens for the area of interest using the HFD method of finding a point one-third of the way into the scene. (If you use the autofocus, you risk getting different points of focus from image to image, which will make the image stitching more difficult for the software.)
6. While carefully panning your camera, shoot your images to cover the entire area of the scene from one end to the other, leaving a 30 percent overlap from one frame to the next.

SHOOTING HIGH DYNAMIC RANGE (HDR) IMAGES

One of the more recent trends in digital photography is the use of high dynamic range (HDR) to capture the full range of tonal values in your final image. Typically, when you photograph a scene that has a wide range of tones from shadows to highlights, you have to make a decision regarding which tonal values you are going to emphasize, and then adjust your exposure accordingly. This is because your camera has a limited dynamic range, at least as compared to the human eye. HDR photography allows you to capture multiple exposures for the highlights, shadows, and midtones, and then combine them into a single image using software (**Figures 7.29–7.32**). A number of software applications allow you to combine the images and then perform a process called "tonemapping," whereby the complete range of exposures is represented in a single image. I will not be covering the software applications, but I will explore the process of shooting a scene to help you render properly captured images for the HDR process. Note that using a tripod is absolutely necessary for this technique, since you need to have perfect alignment of each image when they are combined.

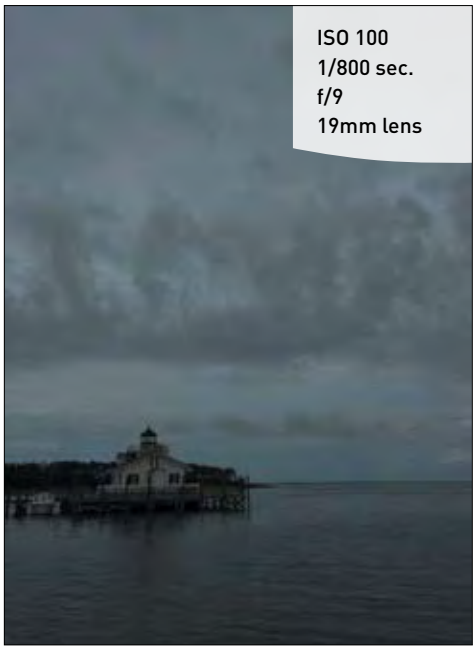


FIGURE 7.29
Underexposing two stops will render more detail in the highlight areas of the clouds.

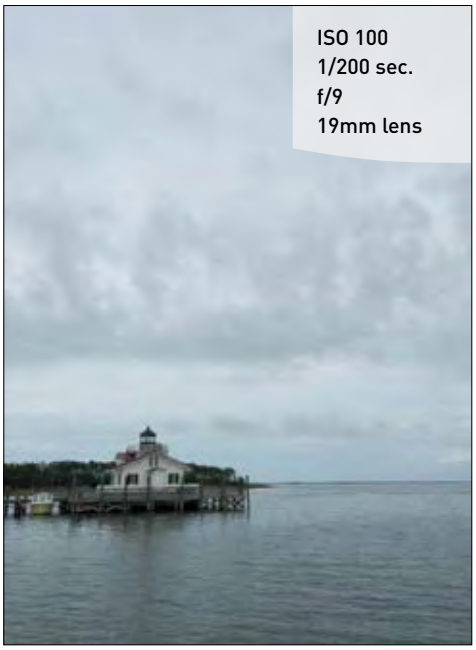


FIGURE 7.30
This is the normal exposure as dictated by the camera meter.

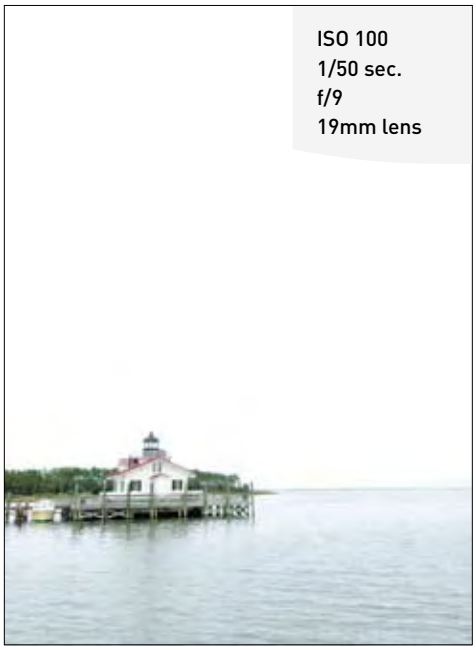


FIGURE 7.31
Overexposing by two stops ensures that the darker areas are exposed for detail in the shadows.

FIGURE 7.32
This is the final HDR image that was rendered from the three other exposures you see here.

SORTING YOUR SHOTS FOR THE MULTI-IMAGE PANORAMA

If you shoot more than one series of shots for your panoramas, it can sometimes be difficult to know when one series of images ends and the other begins. Here is a quick tip for separating your images.

Set up your camera using the steps listed here. Now, before you take your first good exposure in the series, hold up one finger in front of the camera and take a shot. Now move your hand away and begin taking your overlapping images. When you have taken your last shot, hold two fingers in front of the camera and take another shot.

Now, when you go to review your images, use the series of shots that falls between the frames with one and two fingers in them. Then just repeat the process for your next panorama series.

SETTING UP FOR SHOOTING AN HDR IMAGE

1. Set your ISO to 100 to ensure clean, noise-free images.
2. Set your program mode to Av. During the shooting process, you will be taking three shots of the same scene, creating an overexposed image, an underexposed image, and a normal exposure. Since the camera is going to be adjusting the exposure, you want it to make changes to the shutter speed, not the aperture, so that your depth of field is consistent.
3. Set your camera file format to RAW. This is extremely important because the RAW format contains a much larger range of exposure values than a JPEG file, and this information is needed by the HDR software.
4. Change your shooting mode to Low-speed continuous. This will allow you to capture your exposures quickly. Even though you will be using a tripod, there is always a chance that something within your scene will be moving (like clouds or leaves). Shooting in the Low-speed continuous mode minimizes any subject movement between frames.
5. Adjust the auto exposure bracket (AEB) mode to shoot three exposures in two-stop increments. To do this, press the Menu button and navigate to the second shooting screen. Rotate the Quick Control dial to highlight the Expo.comp./AEB setting and press the Set button. Now turn the Quick Control dial to the right until the AEB indicators move all the way out to –2 and +2. Press the Set button to lock in your changes.

6. Focus the camera using the manual focus method discussed earlier in the chapter, compose your shot, secure the tripod, and hold down the shutter button until the camera has fired three consecutive times.

A software program, such as Adobe Photoshop or Photomatix Pro, can now process your exposure-bracketed images into a single HDR file. You can find more information on HDR photography and creating HDR images in the Tutorials section at www.photowalkpro.com.

BRACKETING YOUR EXPOSURES

In HDR, *bracketing* is the process of capturing a series of exposures at different stop intervals. You can bracket your exposures even if you aren't going to be using HDR. Sometimes this is helpful when you have a tricky lighting situation and you want to ensure that you have just the right exposure to capture the look you're after. In HDR, you bracket to the plus and minus side of a "normal" exposure, but you can also bracket all of your exposures to the over or under side of normal. It all depends on what you are after. If you aren't sure whether you are getting enough shadow detail, you can bracket a little toward the overexposed side. The same is true for highlights. You can bracket in increments as small as a third of a stop. This means that you can capture several images with very subtle exposure variances and then decide later which one is best.

Chapter 7 Assignments

We've covered a lot of ground in this chapter, so it's definitely time to put this knowledge to work in order to get familiar with these new camera settings and techniques.

A-DEP vs. Aperture Priority

To find which mode you prefer when shooting landscapes, it is probably a good idea to do some comparison work. For this assignment, you need to find a location that has clearly defined subjects at different distances. This could be as simple as a car in a driveway with a house in the background or a field of flowers in a meadow with mountains behind them.

Take a photograph using the A-DEP mode and note the settings the camera chose for that circumstance. Switch to Av mode and start working with various aperture settings. This will get you comfortable with choosing a particular aperture for the given amount of depth of field that you want in the scene.

Comparing depth of field: Wide-angle vs. telephoto

Speaking of depth of field, you should also practice using the hyper focal distance of your lens to maximize the depth of field. You can do this by picking a focal length to work with on your lens.

If you have a zoom lens, try using the longest length. Compose your image and find an object to focus on. Set your aperture to f/22 and take a photo.

Now do the same thing with the zoom lens at its widest focal length. Use the same aperture and focus point.

Review the images and compare the depth of field when using wide angle as opposed to a telephoto lens. Try this again with a large aperture as well.

Applying hyper focal distance to your landscapes

Pick a scene that once again has objects that are near the camera position and something that is clearly defined in the background. Try using a wide to medium wide focal length for this (18–35mm). Use a small aperture and focus on the object in the foreground; then recompose and take a shot.

Without moving the camera position, use the object in the background as your point of focus and take another shot.

Finally, find a point that is one-third of the way into the frame from near to far and use that as the focus point.

Compare all of the images to see which method delivered the greatest range of depth of field from near to infinity.

Using Live View and the rule of thirds

Now let's get some practice using the rule of thirds for improving composition. To do this, you need to employ Live View with the grid overlay turned on for a little visual assistance.

Using the Live View grid, practice shooting while placing your main subject in one of the intersecting line locations. Take some comparison shots with the subject at one of the intersecting locations and then shoot the same subject in the middle of the frame.

Placing your horizons

Finally, find a location with a defined horizon and, using the Live View grid, shoot the horizon along the top third of the frame, in the middle of the frame, and along the bottom third of the frame.