

# Chapter

# 1

## Get Ready to Take Photos

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No matter what your preference for subject matter or your level of photographic skill, you can always improve your photography if you do the right things before shooting. A little preplanning and forethought can go a long ways in helping you get better photos.

Choosing what and where to shoot is the first step that you must take before shooting. You can find good events, places, and subjects to shoot all around you if you stay alert to the possibilities. Read local newspapers, check out travel books, or browse online resources to find out what is happening in your area. You can find great photo opportunities at local fairs, botanical gardens, nature preserves, national parks, or even zoos. And when outside shooting is difficult, consider setting up a still life inside or creating a mini-studio situation so you can photograph at any time.

The more you know about your equipment, the more you can concentrate on getting the photographs that you want and not on learning how to use your camera. Spend time with your camera and its manual before you have to use it for something important. It can be very disappointing spending valuable time and money to take a trip only to find that you did not take good photos due to improper camera settings or lack of knowledge about how certain features work.

When you go to shoot, you will be more satisfied if you are realistic; a day of shooting does not always result in one or more good photos. All photographers have bad days that end up with only mediocre photos — especially when the shooting conditions work against you!

# Top 100

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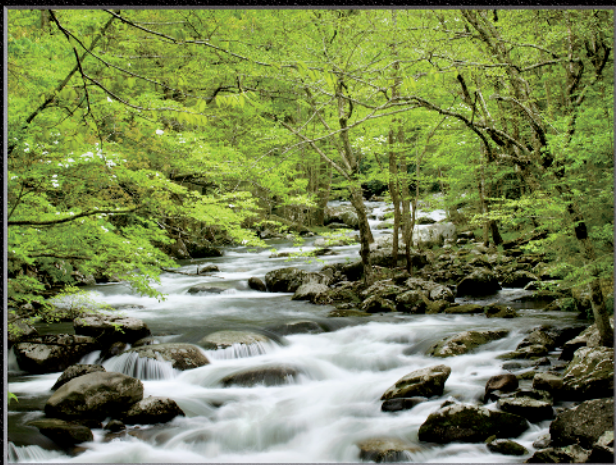


# Select good PHOTO OPPORTUNITIES

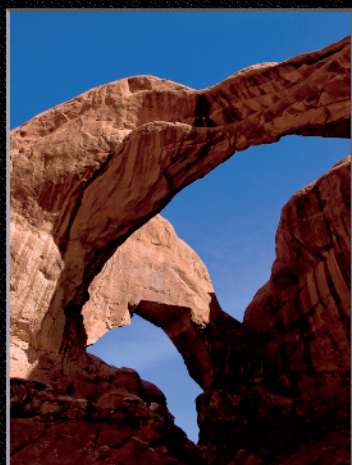
The best photo opportunities for any photographer are those subjects that you enjoy. Why not photograph those things you have an affinity for? If you enjoy gardening and appreciate the thousands of different variations of iris, shoot irises. Or if you are a people-watcher and find pleasure in observing folks in action, choose places where you can find active people in settings that make great photographs.

When planning a trip, give yourself plenty of time to stay and take photographs. Allow yourself some flex

time to compensate for bad weather or other shooting conditions that might prevent you from photographing. You might spend an entire day or more at a location, but the light never really becomes good enough to shoot. Avoid the scheduling trap of trying to see too much too quickly. You may miss the kinds of shots that you had hoped to capture because you saw everything, but shot little. Photography takes time, and time is often the most important factor in capturing truly great photographs.



When shooting well-known places such as the Great Smokies in Tennessee or Arches National Park in Utah, take the traditional shot and then shoot creatively, too.



Being patient can pay off with the right light. The famed Double Arch in Arches National Park needs a certain combination of sun and shade in order to look its best.



People are easiest to photograph when they are involved in activities that keep their attention away from the camera.

When traveling, markets can be great places to photograph people, such as this gentleman in Chinchero, Peru. Markets are a place where people are more involved in buying and selling than in paying attention to a photographer.

Gardens offer terrific opportunities for interesting and colorful close-up images, such as this shot of crab apple blossoms.

**TIPS****Photo Tip!**

When you find a good place to take photographs, visit it again and again. Your images will improve each time that you return because you will learn the best times and subjects for photos.

**Did You Know?**

Some of the best photo opportunities may be in your own backyard. Explore details, shapes, or colors that might make good photographs and give them a try. A digital camera's LCD review will help you refine your shots.

**Photo Tip!**

Use the Internet to learn where and when to shoot. There are many online guides and forums that provide all the information you need to find wonderful places and subjects to shoot that will suit your interests.



# It starts with FOUR LETTERS

Most photo enthusiasts today began with film. Many of them have enjoyed the advantages of digital cameras, but they feel uncomfortable with computers and the digital world. They often think that all this digital stuff adds a layer of complexity that can be difficult, so much so that it can prevent them from really getting the most from this new technology. By keeping in mind the letters *I*, *C*, *A*, and *N*, you can overcome any apprehension you may have about shooting digital photos.

The letters *I*, *C*, *A*, and *N* represent possibility and potential. Put them together and you get the phrase "I can," thereby banishing the thought, "I can't."

There is no question that a lot of photographers get stopped by some of the new digital tools and throw up their hands saying, "I can't do this."

Everyone from teenagers to octogenarians can learn digital photography and love its possibilities. "I can" does not mean that you can do everything right away. After all, no serious photographer understood everything about a film camera without some study and practice. You might not know it all right away, and you might still be working on learning the technology, but with practice, you will be able to accomplish great things with your digital camera and the computer!

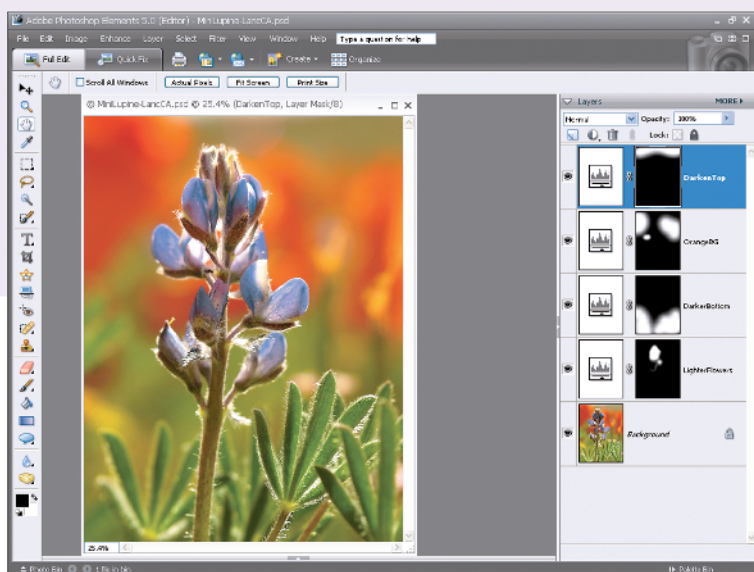


From your family to exotic foreign locations, possibilities for great photos are everywhere. A lot of your success depends on your ability to silence the self-critic and say, "I can do this!" for your photography. At left, an intimate portrait of brother and sister shot to emphasize the graphic and color qualities of the image.



Travel gives you wonderful chances for new subjects, but remember that in popular locations like this in Cusco, Peru, a lot of photographers have already taken pictures of striking architecture. Just taking an attitude of "I can find something different here" can lead to new and interesting compositions.





Layers intimidate a lot of photographers. It looks so alien to photography that “I can’t” escapes and runs amuck in their heads. That does not have to be the case. You might not understand layers yet, but you will discover how useful they are so you will say, “I can do layers.”

#2

DIFFICULTY LEVEL

Once you believe in possibilities, you can find good photographs almost anywhere. I like to keep a small digital camera with me wherever I go so I can capture whatever catches my eye, no matter what the location.



## TIPS

### Photo Tip!

When you know that you will share a photo online, you do not need a high image resolution. Try cropping a detail from a large image before you resize it for the Web. A small bird in a mostly blue-sky print can become a large bird that fills the frame when it is cropped for the Web. To learn more about cropping, see Task 62.

### Did You Know?

Adjustment layers in Photoshop Elements allow image adjustments that can be readjusted as many times as needed with no effect on image quality. They offer you flexibility and a lot of power to change your image, plus they are a good way to get started using layers. See Task 73 to begin working with layers.

# MASTER YOUR CAMERA

## to get great photos

To consistently produce the best photos with your digital camera, learn all that you can about it. Today's sophisticated digital cameras are amazing. Even pocket point-and-shoot cameras enable you to take excellent photographs with their superb automatic features and high sensor and lens quality. However, most digital cameras offer many additional features that are worth learning so that you gain important creative control over how photos are taken and ensure that you get exactly what you want.

One of the best features of all digital cameras is the LCD screen that lets you review the image and camera settings immediately after taking the photo. This enables you to check that you have composed the photo as you like and that the camera settings were set as you expected. Some digital cameras even provide a *histogram* to give you a visual impression of the exposure. These review features encourage you to make adjustments while you are still there with your subject.



You have made an investment in purchasing a digital camera. Although you do not have to know everything about it in order to use it well, the more controls you master on your camera, the better the return on your investment.



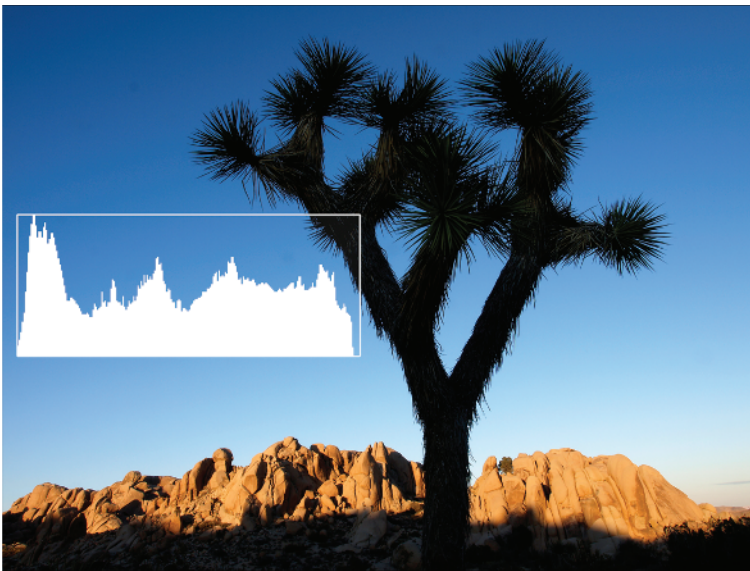
The instant review LCD monitor on a digital camera gives every photographer the chance to check the shot. This lets everyone become a better photographer because camera controls can be adjusted, and then the results immediately seen on the LCD.





Digital cameras house a lot of great technology that works in the photographer's favor. Learn a bit about the specifics of your camera and you will gain even more from that technology.

#3



Advanced compact digital cameras and digital SLRs can display a histogram with the image on the LCD. You can get consistently better exposures if you learn to read a histogram (see Task #25).

## TIPS

### Did You Know?

The more you learn about and use different features on your camera, the more possibilities you have for creative control. However, sooner or later you may forget which settings you have changed and shoot using the wrong settings. Use your camera's LCD review to make a quick check of things like exposure and white balance. Learn how to quickly check other settings or to set them to the defaults in order to avoid shooting with the wrong settings.

### Caution!

Many digital cameras have shooting modes that automatically choose a faster ISO setting if there is not sufficient light. Make sure that you know which shooting modes allow this to avoid taking photos that have too much *digital noise* (which can come from high ISO settings).



# CHOOSE THE IMAGE FILE FORMAT

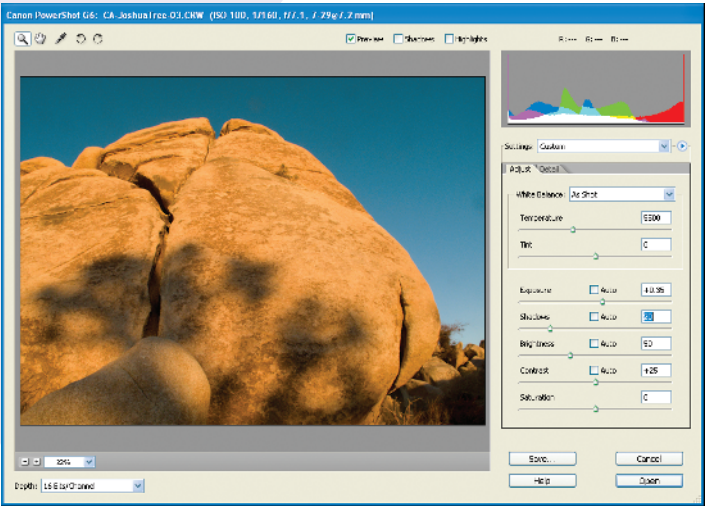
## to suit your needs

Each time that you press the shutter release, you capture an image with the image sensor. The image is then written to a file in a user-selected format with or without applying your chosen camera settings. Most digital cameras other than basic point-and-shoots offer two formats: JPEG and RAW.

Most digital photographers use the JPEG format. It offers a nice balance between image file size and image quality, plus it is universally recognized by software that can use photos such as word processors or page design programs. The JPEG format is a compression format; it uses a

mathematical algorithm to smartly reduce the file size while losing minimal image quality. At high quality settings (which you should generally use), the loss is negligible, yet you can capture more images on a memory card.

RAW image files are proprietary files that have minimal processing applied to them by the camera, plus they hold more tonal information than JPEG files. A RAW file can be processed with much more flexibility and adjustment range than is possible with JPEG.



RAW format images are proprietary, data-rich files that you must convert before you can view and edit them.

Approximate Image File Sizes for 8MP Camera		
Format	Megabytes	Number of Images on 1GB Memory Card *
JPEG (high quality)	3.3	303
JPEG (low quality)	1.2	833
RAW	8.3	120
* This is only an estimate. JPEG and RAW file sizes vary depending on the detail in a scene. These file sizes are typical for an 8-megapixel camera. File sizes from other digital cameras will vary.		

JPEG versus RAW Formats	
JPEG	RAW
All camera settings embedded in file	Image stored with minimal processing from sensor, allowing more post-shoot changes
Fastest, most convenient format	Most flexible, adaptable format
Smaller file size	Larger file size
Easily viewable images	Requires RAW conversion software
Camera shoot and file-to-memory speeds faster	Camera shoot and file-to-memory speeds slower
Fast to view	Slower to view
8-bit file (less picture information)	16-bit file (more picture information)

## TIPS

**Did You Know?**

The RAW format is the best image format to use if you want to get the best possible pictures from your digital camera. Camera settings, such as white balance, contrast, saturation levels, sharpening, and other settings, are not applied to a RAW image file. After you shoot, you have control over these settings when processing them with a RAW image converter. Many photo enthusiasts shoot in RAW format most of the time, or choose RAW + JPEG if the camera offers that setting.

**Did You Know?**

You can shoot more JPEG images in a row compared to RAW before the camera's memory buffer is filled, making the camera stop in order to catch up. On the other hand, RAW allows instant changes to white balance after the shoot with no quality effect on the image.

# Set the IMAGE RESOLUTION AND COMPRESSION LEVEL

In addition to letting you choose a file format for your photos, most digital cameras enable you to choose the image resolution. Usually, you will choose the highest resolution — after all, that is what you paid for in the camera.

Image resolution is expressed in terms of pixels, such as 3456 x 2304 pixels. If you multiply these two numbers together, you get the total pixel count — for example,  $3456 \times 2304 = 7,962,624$ , or just about 8 megapixels (8MP). More pixels in a picture enable you to print at larger sizes, which is one good reason to buy a digital camera with a higher megapixel rating.

This is not a simple decision, however. More pixels on a small sensor can mean increased noise in the image (noise looks like grain in film or “snow” on a TV with poor reception). Also, as pixel counts increase, so does file size, meaning you need more memory to hold the same number of images, requiring you to purchase higher-capacity memory cards for extended shoots. You could gain space by choosing a smaller image resolution or a low JPEG compression. Unfortunately, both of these options reduce image quality. Choose the highest resolution and highest quality JPEG compression unless you have special need for small images, such as those used only on the Web (which needs a much lower resolution).



This photo is cropped slightly from a 7-megapixel camera with an image size of 3136 x 2352 pixels. This particular photo is the full image file.



This image is at a much reduced resolution of 1200 x 900 pixels. Yet, both look fine at this size because either resolution supports the small size of the images as shown on this page.



The cropped image shows the difference. The top photo is cropped from the larger image file and looks fine printed here.



The second one comes from the smaller file and starts to show loss of sharpness and pixilation. The point is that the small file is much more limited on how large it can be displayed or printed compared to the big image file.

## TIPS

### Did You Know?

By reducing the image resolution to store more photos in your camera, you reduce your ability to crop photos later and the opportunity to get the largest possible prints. Memory card prices are very reasonable for high storage capacities, so buy extra cards so that you can store your images at the maximum image resolution and with the least image compression. This helps you avoid taking a prized shot that is too small or has too much compression to make a good print.

### Did You Know?

Each time you save a JPEG file after editing it, your image degrades. Therefore, JPEG should not be used as a working file format when adjusting it in Photoshop Elements or any other program. Save a working file in an uncompressed image format such as TIFF (.tif) or Photoshop (.psd). JPEG can be used later for archiving finished files to save disk space.

# Control your camera's light sensitivity with the ISO SETTING

In traditional film photography, you choose film for a certain sensitivity based upon an ISO rating, such as ISO 100 or ISO 400. Digital cameras also enable you to change ISO settings, which are similar to, but not the same as, film ratings. Digital camera ISO settings come from the camera amplifying the signal from the sensor rather than a built-in rating as in film.

This sensitivity affects how you can deal with certain photo needs, from the amount of light to a desired shutter speed. Low settings such as ISO 100 are less sensitive, or "slower," than ISO 400 because it takes

a slower shutter speed to properly expose the image. A higher ISO setting enables an image to be recorded with a faster shutter speed.

Choosing an ISO setting is one of the most important settings that you can make. High ISO settings, such as ISO 800, enable you to shoot in lower-light settings with faster shutter speeds, but you end up with more digital noise in your photos. Digital noise is similar to grain in traditional photography and is minimized when you choose a low ISO setting.



This photo was shot at ISO 1600 to enable a faster shutter speed, avoiding image blur in low levels of indoor light.



Digital noise is easily visible in most of this photo. Still, people expect indoor photos like this to have noise.



This photo was shot at ISO 100 to give the image the highest color and sharpness, plus best tonalities, while keeping noise low.



Digital noise is minimal throughout this photo, but it did require using a tripod because a slower shutter speed ( $\frac{1}{3}$  sec.) was used.

**TIPS****Did You Know?**

You generally get the best picture quality by using the lowest ISO setting your camera offers, such as ISO 100 or 200. A higher setting, such as ISO 800 or 1000, will have considerably more digital noise.

**Photo Tip!**

Although digital noise is generally an unwanted characteristic of a digital photo, you can use it as a creative design element. In the days of traditional film, photographers often used grain to add a romantic look to their people and travel photos.

**Did You Know?**

When you edit a digital photo with an image editor such as Adobe Photoshop Elements, you are likely to get more noticeable digital noise when you perform steps such as increasing contrast, adjusting saturation, and sharpening an image.



# Improve color with the WHITE BALANCE SETTING

Color photography has always had a challenge with getting accurate color. A common problem is an undesirable *color cast*, such as a red, blue, or green haze over the image. This was difficult to deal with when using film and often required special films or filters to balance the color with the light.

Digital photography has really changed this because of white balance settings. Now you can select an in-camera white balance setting so that your camera will record correct colors when shooting under a variety of different lighting conditions, such as incandescent light, tungsten light, sunshine, or

clouds. You will find icons representing presets for each of these in the white balance setting area. Auto white balance (AWB) gives less consistent results (even when working with RAW files).

Besides letting you choose an appropriate white balance setting, many digital cameras have a custom white balance setting that can record very accurate colors. Each camera deals with this setting differently, though custom white balance requires that you have a neutral white or gray card for the control. If your camera offers such a feature (and most do), it is worth learning about and using.



This photo was taken at sunset with the white balance set to Cloudy. Cloudy gives a warm sunset that looks more like traditional film-captured sunsets.



This photo was taken at sunset with the white balance set to Tungsten. Tungsten brings out more of the rocks' natural color, but makes the sunset colors look more blue than is generally accepted.

A strongly colored background can cause AWB to give false results. This portrait of a Peruvian girl was made using the Shade preset.



The slight warm color cast to this image is important because it reflects the time of day it was captured. A Daylight preset was used to preserve that color cast.

**TIPS****Photo Tip!**

Sometimes you can add a preset white balance setting to add an attractive color tone to a photo. For example, using a cloudy white balance setting can add warmth to an otherwise cold or blue-toned scene.

**Did You Know?**

Most digital image-processing software offers several color-correction tools. However, many of them work best if you have a pure white or neutral gray tone in your image. If your subject requires absolutely accurate color, consider placing a white or gray card in the same light as your subject for a reference shot, and then remove the card for your real photos. You can then use that reference shot to help you get very accurate color in your final photos.



# SHOOT YOUR BEST

## from the start

Digital photography is so adaptable and flexible that many photographers start thinking they do not have to worry so much when taking pictures because they can “fix it in Photoshop.” That idea can get you into trouble.

Underexposure can cause problems with color in dark areas, as well as dramatically increased noise.

Overexposure can change highlights to detail-less white that can never be recovered. The wrong shutter speed will cause sharpness problems from camera movement during exposure to blurred subjects. An incorrect white balance can create color cast problems.

You do not have to be a pro to shoot your images correctly from the start. Simply know your camera and be sure to make wise decisions for how you use it. This requires a little discipline and knowledge of photographic craft, which this book is designed to help you with.

Although image-processing software provides you with tremendous image-adjustment power, you can always do more with well-crafted photos than you can with marginally acceptable ones. You spend less time working on an image in Photoshop if you have an excellent image to begin with.



The wrong exposure and detail will also be captured wrong in a photo like this that holds a large range of tones.



Part of the appeal of this simple photo of a fall blackberry leaf is its sharpness. That comes from the right technique of using a tripod, careful focusing, and exposure control from the start.



Choosing the right white balance preset (Daylight) gave this late-day shot the warmth on the building.



The wrong exposure on this shot would have washed out the white details of the parent egret's body.

**TIPS****Photo Tip!**

Once you have your digital camera, get a good-sized memory card (prices are very reasonable now). Taking photos does not cost anything, so get out and shoot as much as you can. Learn to try different exposure settings and compositions, and shoot plenty of photos so that you have a choice among them.

**Did You Know?**

You can use any camera to quickly adjust exposure without using any dials. Point your camera at something dark, lock exposure (usually by pressing the shutter halfway), then move the camera back to the composition in order to add exposure. Do the same with something bright to darken exposure. You do need to be careful of distances here because locking exposure on many cameras also locks focus.



# Pack for a SUCCESSFUL SHOOT

Every photographer has a different comfort level with how much gear he or she needs to bring along. But it is easy to carry too much. Photographers develop back and shoulder problems from the weighty gear bags they tote around.

If you really must bring a lot of gear, take along a smaller bag and use it when you know you do not need the whole kit. It can be literally painful to lug a heavy camera backpack along steep trails when you never really needed that heavy telephoto lens that was included.

Staying comfortable during shooting also helps you photograph more successfully. It is hard to be creative if you are cold, bug bitten, hungry, or sunburned. Bring along items that will make your outing more enjoyable, productive, and safe.

Before you head off for a shoot, carefully consider what you should take with you in addition to your photography equipment. A few nutrition bars, water, gloves, bug repellent, sunscreen, and a hat can unquestionably contribute to your taking better photographs.



Use multiple bags for your gear to be used for specific shoot needs. Avoid always carrying your gear in one heavy bag.



Water, sunscreen, insect repellent and bite medication, and snacks are just a few things that will make your picture-taking time more enjoyable.

This photo is a nice shot from the cloud forests of Costa Rica when it was pouring rain! Not having an umbrella would have ruined this shoot.



Take a hat to protect yourself from the sun and use a headlamp, such as the Princeton-Tec, to make your walks safe when walking in the dark.



## TIP

### Did You Know?

Some of the most useful information for photographers is found on the Internet.

*Sunrise/Sunset/Twilight/Moonrise/Moonset/Phase information:* [http://aa.usno.navy.mil/data/docs/RS\\_OneDay.html](http://aa.usno.navy.mil/data/docs/RS_OneDay.html)

*Weather:* [www.weather.com](http://www.weather.com)

*Outdoor photography:* [www.outdoorphotographer.com](http://www.outdoorphotographer.com)

*Online mapping service:* [www.mapquest.com](http://www.mapquest.com)

*Best state parks:* <http://usparks.about.com/cs/stateparks/a/bestparks.htm>

*Photo advice from the author:* [www.robshppardphoto.com](http://www.robshppardphoto.com)