10 Land, sea, and sky

Throw on a wide-angle lens when looking at the natural world—you'll be surprised at what you find.

The wide view

Landscapes are one of the most difficult subjects to capture with camera and lenses. They're so vast and complex—filled with trees and grasses, mountains, clouds, cliffs, beaches, rivers, waves—that we're overwhelmed with subjects to photograph. The key to making beautiful images of all this complexity is to *slow down*.

Great landscape photographers have always moved slowly. Many use cumbersome large-format cameras. All use tripods. They take hours or even days to find the perfect spot to compose a scene, and then they wait. They wait for the light. Light is the most important element in capturing dramatic images of our natural world (**FIG. 10.1**). Without the drama of light, our photographs of the land, sea, and sky can be flat and lifeless, regardless of the subject or composition.

Consider the work of one of my former students, David H. Collier. David understands the importance of light; he's a master of landscapes and light. Looking at his images is a lesson in *planning*, *perseverance*, and *patience*. He *plans* his trips around weather, since the chance of storms means changing light. He *perseveres* in searching for the perfect vantage point; this gives him powerful compositions, bringing together all the elements within complex scenes. He is *patient*; his waiting pays off when the light finally breaks through the clouds and bathes his compositions in drama. If it doesn't happen on the first day, David goes back and waits again.

FIG. 10.1 I've been to Limekiln State Park in California many times, and only once has the right mix of sun and clearing fog created light this amazing. A wide lens let me capture the creek and redwoods in one view. (Nikon D2X, ISO 100, 12–24 mm lens, tripod, 4 sec. @ f/16.)

◀ **FIG. 10.2** Lying on the dock, I framed this photographer at the center of converging lines. Wide lenses are great for forcing perspective like this. Wonder Lake, Denali National Park, Alaska. (Nikon D200, ISO 200, 12–24 mm lens, handheld, 1/400 sec. @ f/5.6.)

▼ **FIG. 10.3** During the spring rains, California newts migrate by the hundreds to lay eggs in nearby streams. My wide lens shows the story—the newt isolated on the road, the forest where the newt lives, and the "Newt Crossing" sign. Wide lenses exaggerate perspective, making things up close in the foreground look very big and things far away look really small. Butano State Park, California. (Nikon D300, ISO 400, 12–24 mm lens, flash, handheld, 1/6 sec. @ f/10.)

Telling the story

Wide-angle lenses have always been the first choice in landscape photography. In small-format digital photography, wide-angle lenses run from 10.5 mm to 28 mm in focal length. These lenses have a wider angle of view than normal or telephoto lenses—they *see* more (**FIG. 10.2**).

Nearly every landscape, every scene, has a story. Once you find a story you want to tell, wide-angle lenses give you the ability to tell that story in a photograph by relating the different elements within the scene. Only with wide lenses can we include enough in one shot to show the whole "place" as we saw it (**FIG. 10.3**).

The key to using wide lenses to tell a story is the *foreground*—what's up close, right in front of you, above you, or to one side. Find a foreground for your image; then compose the shot with your wide-angle lens to tell the story, by relating elements in the foreground to elements in the background (**FIG. 10.4**).

When I captured the image at the beginning of this chapter, I was in Montana, watching a massive storm front roll across the prairie. Montana, Big Sky country—there's my story. Using my widest lens and composing with a bit of prairie and lots of sky, I told the story of where I was and what I saw.

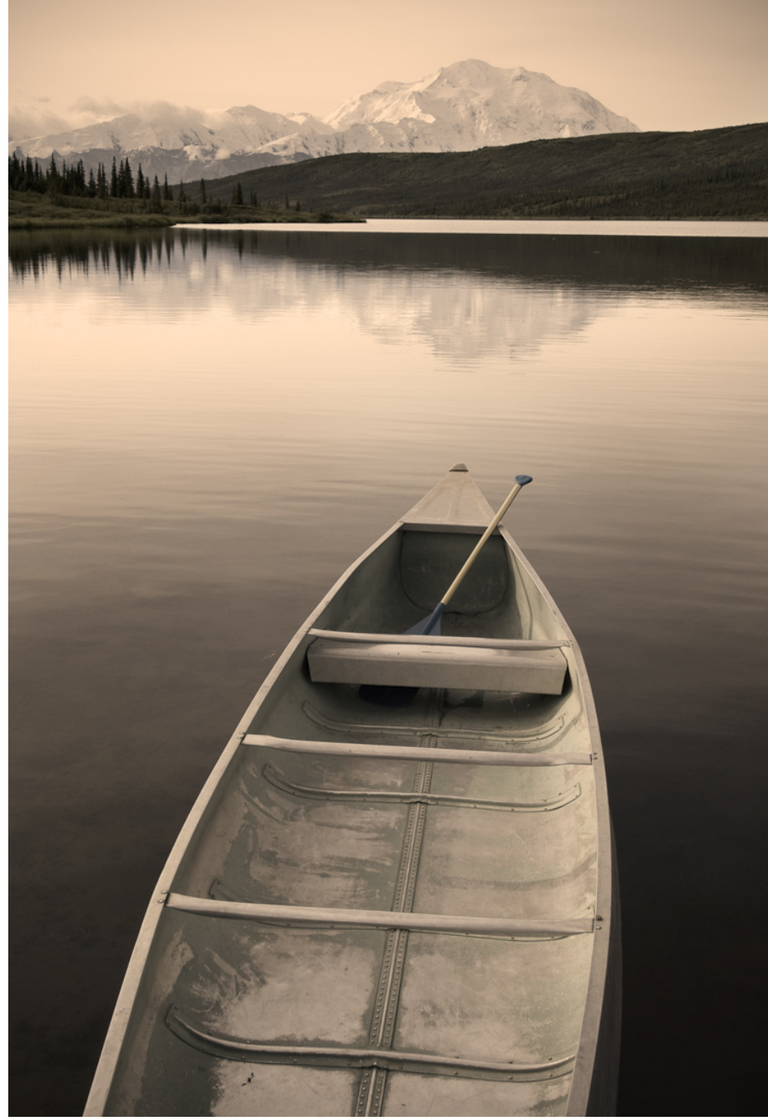
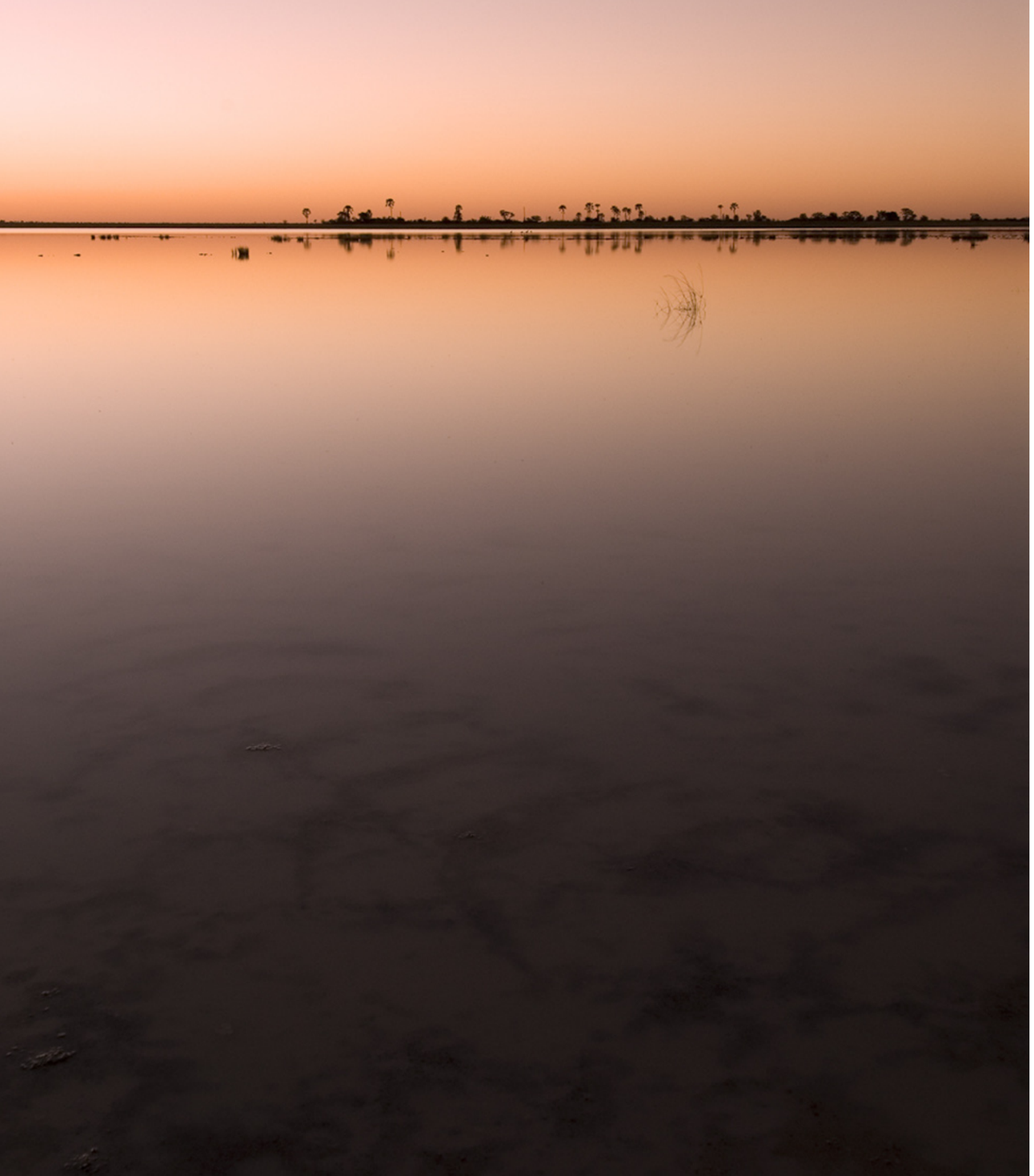


FIG. 10.4 The story in this scene is Wonder Lake, the canoe, and Mt. McKinley. A small aperture gave me the depth of field I needed to get everything in focus. Pointing down emphasized the canoe and showed less of a boring sky. I tied the canoe to the dock so I could use my tripod and take my time composing the scene. Denali National Park, Alaska. (Nikon D200, ISO 100, 12–24 mm lens, tripod, 1/60 sec. @ f/16.)



Equipment

Your light meter's modes

The light meter inside your DSLR camera is a *reflective* meter, measuring the light reflecting off a subject and entering the lens. Camera designers include a variety of metering modes and patterns for different shooting situation. One mode may be great for a running animal, another for landscapes or a sunset (**FIG. 10.5**), and so on. Understanding metering modes and patterns will help you to get your exposures right and create the highest-quality image. The four metering *modes* are explained in detail in your camera manual; here, I'll talk about when to use them. (I cover metering *patterns* in the next chapter.)

In *manual mode*, you choose the shutter and aperture. This is the only mode I use, and I require my students to use it. Using manual mode puts you in control of exposure and the effects of shutter speed and aperture on motion and depth of field. If you hit a problem, you figure out how to fix it—that way, you *learn* and become a better photographer (**FIG. 10.6**).

Program mode automatically selects aperture and shutter speed based on the metered exposure and ISO you've set. When you hand your camera to someone who knows nothing about photography, put it in this mode.

◀ **FIG. 10.5** There was not a breath of wind on this shallow lake in the Makgadikgadi Pan in Botswana, Africa. The sun had set and the western sky was glowing. Using manual metering, I pointed my lens up and took an exposure reading off the sky, and then reframed so you could see the pattern of dried mud under the water. (Nikon D200, ISO 100, 12–24 mm lens, tripod, 1/4 sec. @ f/16.)

Shutter-priority mode lets you select the shutter speed, and the camera selects the aperture for a correct exposure. Use this mode to freeze or blur a subject moving through different lights, like sun and shade. Your exposures in both sunlight and shade should be okay, since the camera adjusted the f/stop automatically. Choose this mode if you have changing light while you're handholding a telephoto lens and you need a higher shutter speed to prevent camera motion.

▼ **FIG. 10.6** Some animals, like this meerkat, let you get close enough to use a wide-angle lens. After watching me lying quietly by the burrow for several minutes, they scurried around completely ignoring me. It was a bright day with no clouds, and even with lots of light bouncing off the sand I still needed to add a flash to fill in the shadows. Botswana. (Nikon D200, ISO 100, 12–24 mm lens, flash, handheld, 1/250 sec. @ f/11.)

FIG. 10.7 I wanted both the euphorbia plant in the foreground and the palm trees in the distance to be sharp. Using small apertures gets you more depth of field, but they also need slower shutter speeds, so a tripod is critical if you don't want a blurry photo. Santa Barbara, California. (Nikon D2X, ISO 100, 12–24 mm lens, tripod, 1/40 sec. @ f/16.)

Aperture-priority mode lets you choose the aperture, and the camera adjusts the shutter speed for the correct exposure. Aperture affects depth of field, so with this mode you're trying to control how much of a scene is in focus. This works with landscapes and wide lenses, since you're likely to be using a tripod and trying for maximum depth of field (**FIG. 10.7**).

Many cameras, especially point-and-shoots, have special auto-exposure scene modes that adjust exposure, white balance, contrast, and color settings based on specific subjects such as portraits, landscapes—even pets or food. For instance, in the sports setting, the mode chooses a fast shutter speed to freeze action, saturate the color so it's more intense,

FIG. 10.8 This tumbleweed looks normal because it's in the center of the shot, but the fisheye lens curves the horizon line near the top of the frame. I'm pointing the lens down to exaggerate the tumbleweed in the foreground. Owens Valley, California. (Nikon D2X, ISO 200, 10–17 mm fisheye lens, handheld, 1/640 sec. @ f/8.)

and maybe add contrast for a crisper appearance. But you can do these things using manual exposure and the camera's custom settings, so using these scene modes with DSLRs is just for convenience. I'd rather use my own settings.

Fisheye and perspective-control (PC) lenses

Fisheye lenses are extreme-wide-angles that distort any straight-edged object outside the center of the frame. Some of these lenses are so wide that they produce a circular image surrounded by black, but most fisheyes fill the sensor frame with an image. Cameras with small sensors use fisheyes in the 8 mm to 11 mm range, and cameras with full-frame sensors use fisheyes in the 14 mm to 16 mm focal lengths. I like to use these lenses in places that are really small, so I can show as much of the scene as possible. To prevent distortion, keep everything centered; as soon as you point up or down, or put the subject close to the edge, it'll bend like crazy. But maybe that's what you want (**FIG. 10.8**). One of the biggest problems with these lenses is accidentally capturing your feet or your tripod legs in the shot, so check the edges of the frame carefully.

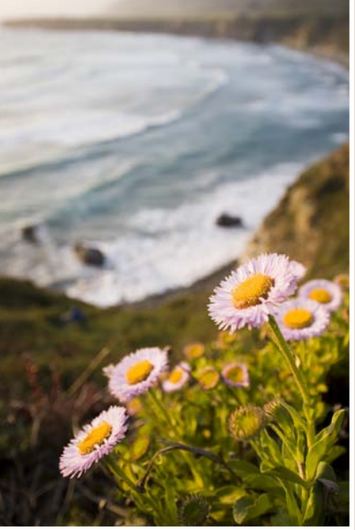
Tilt-shift or *perspective-control* (PC) *lenses* do something that no other DSLR lens can do: Fix how things look. You know how, when you tilt a wide-angle lens up at a tree, the tree seems to tilt backward? The only way to straighten the tree is with one of these special lenses, which shift the position of elements within the lens to retain the correct perspective. Many landscape photographers use large-format view cameras to tilt and shift the film plane and the lens. Tilt-shift lenses can also alter the plane of focus, allowing you to get more or less depth of field, with less dependence on f/stops.

Lighting

Just watching light—I mean *really paying attention*—will help you to see how important light is to landscape photography. Late one afternoon as I drove, I noticed how the light kept changing. As the light got lower in the sky, the shape of the land changed. The valleys filled with shadows, hills were separated from each other, trees stood out against dark backgrounds. The land changed as the light changed. The time for landscapes begins a couple of hours before sunset, and every 20 minutes everything changes again. It really is amazing to watch the light over a few hours. You'd think someone who has taken pictures for so long would know this, but when I take the time to watch the light, I gain new insight into how to make my images better (**FIG. 10.9** and **10.10**).

Sometimes you can't wait for the beautiful light, but you have an interesting scene. What do you do? If you've got puffy white clouds and a colorful subject in the foreground, hard midday light can work. But without the clouds, you have to find something to cover up the boring sky, or compose with more of the interesting foreground and less of the sky (**FIG. 10.11** and **10.12**). Think about your light direction: Are you trying to show color, texture, or shape? Each of these elements requires a different lighting direction.

FIG. 10.9 and **FIG. 10.10** These shots were taken 11 minutes apart, about an hour before sunset. Every few minutes, the dropping sun and moving clouds changed the way the dunes looked. I liked the clouds, so I pointed the camera up to fill the top of the frame. Kelso Dunes, Mojave National Preserve, California. (Nikon D2X, ISO 100, 12–24 mm lens, tripod, 1/400 sec. @ f/6.3.)



▲ **FIG. 10.11** It was nearly sunset, but the sun was dropping through thick haze and the sky was just a pale gray. I decided to concentrate on the seaside daisies and show how they grow on the ocean cliffs. Pointing the camera down eliminated the boring sky, and getting close to the daisies emphasized the flowers. Big Sur, California. (Nikon D3, ISO 200, 12–24 mm lens, handheld, 1/160 sec. @ f/5.)

▶ **FIG. 10.12** There were no puffy white clouds in the afternoon sky, so I used the branches of another tree to fill in the empty sky above this western juniper. My wide lens even got the little shadow in the lower-left corner that helps to frame the scene. Side lighting brings out the texture in the trunks of these ancient trees. Eastern Sierras, California. (Nikon D100, ISO 200, 20 mm lens, handheld, 1/250 sec. @ f/10.)

Questions & Answers

Q ***Could a polarizing filter make my landscape photos more colorful?***

A Nearly every effect that an optical filter can provide can now be done in Photoshop. There's even a filter pull-down menu in Photoshop with common "filters" listed, like the 81A warming filter, which I used all the time when shooting film, to warm up skin tones. But there's one filter that you won't find listed in Photoshop: the polarizing filter. This unique filter is designed to eliminate reflections and has an interesting effect on color and contrast. First, the bad news about polarizers: They're expensive, they cut out nearly two stops of light, and they make skin look pasty. So don't use them when doing portraits of people. And definitely don't leave them on your lens all the time.

I use polarizers to eliminate reflections on water and other specular surfaces such as leaves. Leaves and flowers have a waxy coating to prevent evaporation and can be very shiny, especially when front-lit. A polarizer eliminates these reflections and make leaves look greener, more "saturated." Polarizers also darken the sky by controlling the scattering of light in the air, but this only happens at about a 90-degree angle from the sun; even then, the effect falls off quickly, so only part of the sky gets darker. Be careful; this effect can look a little strange (**FIG. 10.13**).

FIG. 10.13 The polarizer darkened the sky, but it didn't polarize equally across the frame. Wide-angle lenses see so much sky that this uneven result happens frequently with these filters. Owl's clover and California poppies, Antelope Valley, California. (Nikon D2X, ISO 200, 12–24 mm lens, polarizing filter, handheld, 1/400 sec. @ f/6.3.)

TIP Before you put a polarizing filter on your lens, hold the filter up to your eye and look at the scene. Rotate the polarizer to see its effect on the light. If you like the result, put the filter on the lens. Always take one shot without the polarizer, though, just to be safe.

FIG. 10.14 Crescent Meadow is a magical place. This story is about the giant sequoia trees that surround the meadow. I framed the base of a fallen sequoia in the foreground, put my wife next to another sequoia to show scale in the middle-ground, and let the meadow fall away into the background. Getting really close to the foreground is the key to this wide-angle composition. Sequoia National Park, California. (Nikon D300, ISO 200, 10–17 mm fisheye lens, tripod, 1/50 sec. @ f/13.)

Q ***Sometimes my scenic photos aren't tack-sharp, even if I used a tripod. Why not?***

A A lot of landscape photographers make big enlargements of their images for display on walls. The images have to be very sharp to blow up to these sizes (**FIG. 10.14** and **10.15**). Using the best-quality lenses and a tripod is critical to image sharpness, but there are other techniques you can use to ensure sharp scenic images. First, use a cable release. A cable release allows you to trip the shutter without touching the camera, preventing any chance of camera movement. If you don't have a cable release, try using your self-timer. Second, use your camera's mirror delay or mirror lock-up feature when taking a photograph. The mirror in your camera can introduce motion, especially at slower shutter speeds. Mirror lock-up or delay raises the mirror, waits a second or two to let all motion stop, and then allows the shutter to fire, making the exposure. Of course, you can't see anything during this delay, but it doesn't matter because your landscape isn't going anywhere.

FIG. 10.15 In Denali National Park, cool fall mornings create mist on the ponds. My exposure was very slow, so I used a cable release and the camera's mirror delay to ensure a sharp image. Pointing down let me use the grass as a foreground and helped to create symmetry in the composition. Alaska. (Nikon D2X, ISO 200, 12–24 mm lens, tripod, 1/6 sec. @ f/11.)

Q ***How do you get water in streams to look so silky?***

A Easy—long exposures. But getting sharp pictures with long exposures isn't always easy. Your shutter speed controls how long the exposure will be. A slow shutter speed, say 1/15th second or longer, will cause most subjects—including streams—to blur if they're moving fast. But if the water is moving slowly, you may need two seconds, or even longer. Most DSLR cameras can go as long as 30 seconds. Use your lowest ISO, meter your scene using a slow shutter speed, and put your camera on a tripod. Study the water: How is it flowing? The places where you see whitewater will be the brightest and "silkiest." Think about your composition based on these parts of the stream (**FIG. 10.16**).

Sometimes it's too bright to use these long shutter speeds, even when you stop down to f/16 or f/22 and use your lowest ISO. Using neutral-density (ND) filters or even a polarizer to cut light can help in these situations. Neutral-density filters go on the front of the lens and cut the amount of light reaching the camera, but they don't change the color.

FIG. 10.16 You have to study the water for a while to see where the lightest areas are and how they fit into a composition. You need a slow shutter speed to get the silky look in the moving water. I'll usually bracket my exposure time a bit to get different effects in the water. Big Sur, California. (Nikon D300, ISO 200, 12–24 mm lens, tripod, 1.6 sec. @ f/16.)

▲ **FIG. 10.18** The sun had gone down by the time I found this little fern by a creek. I made my exposure for the dark forest and just popped a little flash on the fern to get it to stand out. I used hyperfocal distance, focusing just past the fern, to make the whole scene sharp. Big Sur, California. (Nikon D300, ISO 200, 12–24 mm lens, flash, tripod, 10 sec. @ f/16.)

Q How can I get my landscape photos to be in focus from the foreground all the way to infinity?

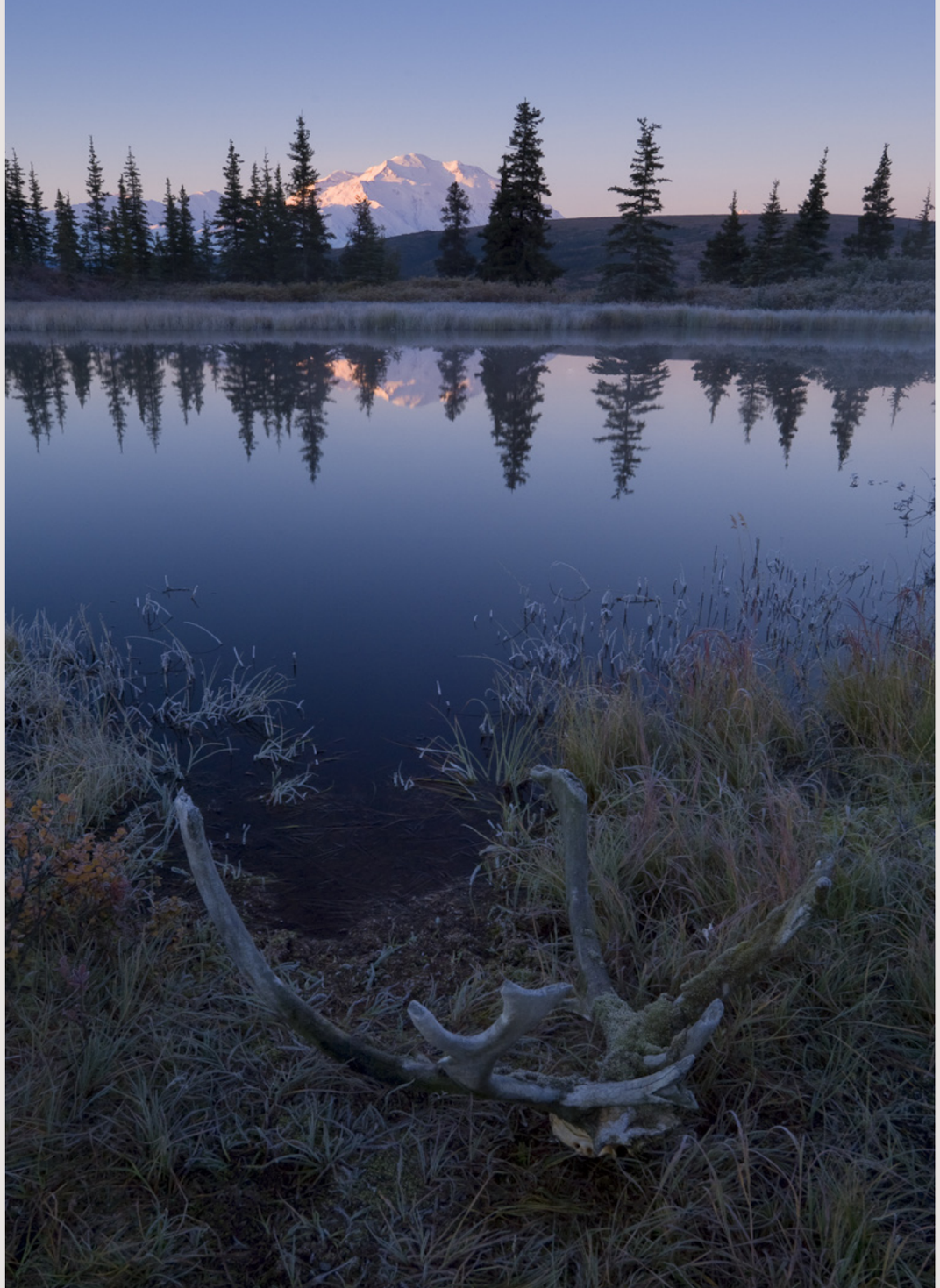
A When you look at images by famous landscape photographers like Ansel Adams, Ray Atkinson, David Muench, and Jack Dykinga, you'll notice that everything in their photographs is in focus. Everything—the foreground, the background, all tack-sharp. Using view cameras and large-format film allowed them to make these amazing images. You can come close to duplicating their results with your DSLR, wide lenses, and a technique called *hyperfocal distance*. Essentially, the hyperfocal distance is the point of focus that produces the largest depth of field at a given aperture. Once you've focused a lens at the hyperfocal distance, everything in your scene—from the subject in the foreground all the way to infinity—will be sharp (**FIG. 10.17**). It's all based on depth of field.

To get this technique to work, choose a scene with a strong foreground subject and an interesting background (**FIG. 10.18**). Compose so the foreground subject is close to you. Wide-angle lenses in the 12 mm to 28 mm range work best, a tripod is critical for sharpness, and you need to use f/11 or f/16 for maximum depth of field (**FIG. 10.19**).

Some fixed wide-angle lenses have hyperfocal distance scales, but you won't find them on zoom lenses. Go to DOFMaster.com or Outsight.com and use their online hyperfocal distance calculators to find the distance to focus for the camera, lens, and f/stop you're using. (You can even download a depth-of-field hyperfocal calculator for your iPhone from DOFMaster.com.)

I used this trick for each of my lenses, wrote down the distances, and now I carry that list in my camera bag.

▶ **FIG. 10.17** You need a foreground for wide-angle scenes, and these caribou antlers work perfectly. The pond is the middleground, and sunrise on Mt. McKinley fills in the background. I wanted everything sharp, so I used a tripod and cable release, focused on the hyperfocal distance, and selected a small aperture to gain the sharpest image and greatest depth of field. Camp Denali, Denali National Park, Alaska. (Nikon D2X, ISO 100, 12–24 mm lens, tripod, 1/5 sec. @ f/18.)



Assignments to try

To gain a better understanding of how the hyperfocal distance technique works, start by finding a scene with a nice foreground and an interesting background. Then follow these steps:

1. Set your camera on a tripod. Use a wide-angle lens and manual focus.
2. Set your f/stop at f/16 and meter the scene to get the proper shutter speed for a correct exposure. Use ISO 100 or 200.
3. Compose your scene so the subject in the foreground is about two feet away—it should look pretty large. Make sure that you can see the background in the top of the frame. (Vertical compositions help here.)
4. Using the info you got from the hyperfocal distance calculator, set the distance on the lens to match the hyperfocal distance, and take a picture. You'll probably notice that you're focused past the subject in the foreground; that's right where you want to be.
5. Refocus on the closest part of your foreground subject and take another picture.
6. Focus on the background and take a picture.
7. Check the photos on the computer and see which picture has everything from foreground to background in focus.

◀ **FIG. 10.19** This broken tree made a great foreground, nicely framing the aspens lining Rock Creek. I always carry a printout of hyperfocal distances for my lenses, and I used the distance to get the maximum depth of field. I framed the scene so the log was at the close-focus point, about 16 inches in front of me. Remember, finding a foreground is the key to these images. Eastern Sierras, California. (Nikon D3, ISO 200, 14–24 mm lens, tripod, 3/4 sec. @ f/16.)