Adventure SPORTS PHOTOGRAPHY

Creating Dramatic Images in Wild Places

TOM BOL

Adventure SPORTS PHOTOGRAPHY

Creating Dramatic Images in Wild Places



TOM BOL

ADVENTURE SPORTS PHOTOGRAPHY

Creating Dramatic Images in Wild Places

Tom Bol

Peachpit Press 1249 Eighth Street Berkeley, CA 94710 510/524-2178 510/524-2221 (fax)

Find us on the Web at: www.peachpit.com To report errors, please send a note to: errata@peachpit.com Peachpit Press is a division of Pearson Education.

Copyright © 2012 by Tom Bol

Acquisitions Editor: Ted Waitt Project Editor: Rebecca Gulick Development Editor: Stephen Nathans-Kelly Copy Editor: Liz Merfeld Production Coordinator: David Van Ness Compositor: Kim Scott, Bumpy Design Proofreader: Patricia Pane Indexer: Valerie Haynes-Perry Cover Designer: Charlene Charles-Will Interior Designer: Charlene Charles-Will with Kim Scott, Bumpy Design

Notice of Rights

All rights reserved. No part of this book may be reproduced or transmitted in any form by any means, electronic, mechanical, photocopying, recording, or otherwise, without the prior written permission of the publisher. For information on getting permission for reprints and excerpts, contact permissions@peachpit.com.

Notice of Liability

The information in this book is distributed on an "As Is" basis, without warranty. While every precaution has been taken in the preparation of the book, neither the author nor Peachpit Press shall have any liability to any person or entity with respect to any loss or damage caused or alleged to be caused directly or indirectly by the instructions contained in this book or by the computer software and hardware products described in it.

Trademarks

Many of the designations used by manufacturers and sellers to distinguish their products are claimed as trademarks. Where those designations appear in this book, and Peachpit was aware of a trademark claim, the designations appear as requested by the owner of the trademark. All other product names and services identified throughout this book are used in editorial fashion only and for the benefit of such companies with no intention of infringement of the trademark. No such use, or the use of any trade name, is intended to convey endorsement or other affiliation with this book.

13-digit ISBN: 978-0-321-80982-7 10-digit ISBN: 0-321-80982-3

 $9\,8\,7\,6\,5\,4\,3\,2\,1$

Printed and bound in the United States of America

This book is dedicated to my wife, Cree, and my son, Skyler. Their endless support, patience, and encouragement have allowed me to pursue my photography dream.

Acknowledgments

This book wouldn't have happened without a lot of help and support of others. The list is long; I'm grateful to all.

First, I'd like to thank Rebecca Gulick, Stephen Nathans-Kelly, Sara Jane Todd, Ted Waitt, Charlene Will, and all the other hard-working people at Peachpit who made this project a reality. Their tireless efforts brought my words and images to life in these pages.

I'd also like to express my gratitude to the many talented photographers who have given me sound advice during my career, including Dave Black, Peter Dennen, Patrick Endres, and the late Galen Rowell.

To the great folks I teach workshops with, including Colby Coombs, Mirjam Evers, Najat Naba, and George Theodore.

To Scott Kelby and Matt Kloskowski; their humor, energy, and knowledge are insurmountable.

To Adam Rothman, who can make even me look good on video.

To Mark Astmann, Kriss Brunngraber, and Will Holowka for their support and technical advice.

To my friends at Nikon, Lowepro, and SanDisk, who always have a solution for my precarious shooting situations.

To Steve Glass and Randy Pfizenmaier for helping me out on numerous shoots.

A lot of credit for this book goes to the outdoor athletes I've photographed through the years. They are the ones who make these images possible. I hope this book captures some of their adventurous spirit.

I'd also like to thank my family, who have always supported my interest in photography and the outdoors.

Contents

	Introduction
ONE	PACK THE RIGHT GEAR
	Layer It Up
	Keep your extremities warm
	What Camera Gear to Bring?
	Choosing cameras
	Lenses
	Flash cards and cases
	The minimalist kit
	The standard camera kit
	The underwater kit
	Tripods and heads
	What about filters?
	How to Carry All That Gear
тwo	ON THE ROAD
	Portable Power
	Backing Up in the Field
	Portable drives
	Navigating Airports and Customs
	Working in different cultures
	Work permits
	Model and Liability Releases
	Liability waivers
	The Planning Checklist
	My Typical Photo Gear Checklist



THREE	CREATIVE COMPOSITION	 44
	Elements of Design	 46
	Line	 46
	Shape.	 49
	Form	 49
	Texture	 50
	Pattern	 53
	Color	 54
	It's All About Light	 57
	Qualities of light	 57
	Viewing an Image	 59
	Rule of Thirds	 60
	Perspective	 61
	Capturing emotion	 63
	Developing your style	 64
	Ten Composition Tips	 67
FOUR	LIGHTING IN THE FIELD	 70
	Natural Light	 72
	Reflectors	 73
	Overhead silks	 76
	Artificial Light	 77
	Speedlight flash	 78
	Large flash systems	 87
	Effective outdoor flash: Two scenarios	 92
FIVE	PHOTOGRAPHING WATERSPORTS	 96
	Keeping Your Gear Dry	 98
	Waterproof cases and packs	 98
	Underwater housing	 101
	Fishing Images Don't Lie	 103
	Over/under fishing images	 103
	Use the fly line	 104

Photographing Canoeing	106
Get close to the water	106
Rafting and Kayaking	111
Photographing whitewater	111
Add flash to the image	114
Underwater high-speed sync	115
Sea Kayaking in Paradise	
Shooting creative angles	
The glowing-boat shot	122
PHOTOGRAPHING MOUNTAIN SPORT	S
<i>c</i> ·	107

SIX

Camping					•	•				•	•	•	•	. 1	26
Star trails					•									. 1	28
Hiking														. 1	32
Compressing the scene.					•	•	•			•	٠			. 1	34
Mountain Biking						•		•						. 1	36
Big air	•			•	•	•				•	•			. 1	36
POV shot	•				•	•				•	•			. 1	40
Rock Climbing						•								. 1	44
360-degree shooting					•	•				•	•			. 1	47
Bounce flash		•	•			•								. 1	147
On a rope					•					•				. 1	.49
The big guns	•				•	•				•				. 1	151
The Quadra cross light.														. 1	52

SEVEN PHOTOGRAPHING WINTER SPORTS	154
Shooting the Northern Lights	156
Ice Climbing	159
Mountaineering	161
Take the plunge	166
Skiing and Snowboarding.	169
Powder pockets	171
Pipe shots	172
Seaming up the shot	175



EIGHT	PORTRAITS.	. 178
	Location, Location	. 181
	Environmental portraits	. 181
	Downplaying the background	. 183
	Establishing Rapport.	. 183
	Researching the subject	. 183
	Posing your subject.	. 185
	Effective Use of Light	. 188
	Get the light right	. 188
	Five ways to light a portrait	. 188
	Impeccable Technique	. 197
	Depth of field	. 197
	Shutter speed	. 198
	White balance	. 198
NINE	VIDE0	. 202
	Shooting Video vs. Stills	.204
	Creating a storyboard	. 204
	Video resolution and quality	. 207
	Creating Dynamic Video	. 209
	Keep it simple	. 209
	Use a variety of shots.	. 210
	Stabilize your camera	. 212
	Focusing the shot	. 214
	Recording Audio	. 216
	In-camera audio	. 216
	External microphones	. 217
	Video Lighting	. 219
	Special Video Techniques	. 222
	Tilt-shift lenses	. 222
	Sliders	. 225
	Overhead cranes	. 225
	Putting It All Together	. 226

4

TEN	IN THE OFFICE
	Setting Up Your Workflow
	What software to use?
	Downloading and adding metadata
	Editing Your Images
	Searching for your image
	Six Ways to Optimize Your Images
	Dust spot
	Adjust white balance
	Set white/black points
	Add vibrance
	Adjust curves
	Sharpen the image
	Backing Up Your Images
	Gallery

Index

261





Ontroduction

I still vividly remember that frosty winter day I graduated from journalism school in Colorado. I had spent five years of my life learning everything there was to know about taking photographs and writing magazine articles. I was ready to conquer the world with my new education. But I had one distraction—a very big distraction. I was obsessed with adventure sports.

While my college roommates went off to job interviews in three-piece suits, I was lacing up my climbing shoes for another bouldering session. Three weeks after graduation, my roommates were settled in a nice apartment in Denver with promising careers. I was hunkered down in a tent at 20,000 feet on Aconcagua in Argentina getting ready to take National Outdoor Lead-ership School (NOLS) students to the summit. Ten years later, my college roommates had moved into a nice house and were very successful. I had also moved up in the world, teaching kayaking and climbing in remote parts of the world like Patagonia and the Himalayas.

I spent month after month in the backcountry pursuing my passion. My total material worth consisted of a beat-up blue Toyota truck, my climbing gear, and my cameras. No house, no cell phone, no computer. I spent my summers climbing on jagged Alaskan peaks and my winters paddling warm ocean waters along the Baja coastline. I was living the dream of a climber, kayaker, and wilderness junkie. But then I got distracted again, this time in the opposite direction. I had always carried a camera with me to document my expeditions. But I started to notice that same creative urge I had experienced growing up and in journalism school. The desire to create got stronger and stronger. Soon my passion to create overtook my desire to climb the next peak or paddle the next river. I wanted to share my outdoor adventures with others, to communicate my deep appreciation and respect for wild places. Adventure sports and wild places had become a permanent part of my makeup. Now I needed to show the world the incredible sports taking place in some of the most beautiful places on the planet. My love of adventure sports and my passion for photography merged.

Today I'm more settled, living in a house instead of a truck. I don't spend as much time on lengthy expeditions, but I shoot more adventure sports than ever. Society has changed its views of climbers and kayakers. Instead of being viewed as outcasts, climbers and kayakers are in vogue. Indoor climbing gyms have popped up around the country and many schools have their own climbing gyms. Whitewater parks have been built in rivers, some in the middle of downtown urban areas. You can sip your Starbucks coffee, then drop right off the sidewalk into a surfing hole. The outdoor industry has become a multimillion-dollar revenue source. A photographer can make a living working in this industry.

Other things have also evolved in adventure sports photography. Digital cameras have become more advanced, allowing photographers to capture scenes that, only a few years ago, would have been unthinkable. Flash technology is rapidly advancing. High-speed-sync flash photography using studio packs has come of age. I can shoot an airborne skier at 1/2500 of a second and illuminate him 60 feet away using my Elinchrom Ranger, an impossible feat only a few years ago. Camera technology will continue to improve and open up new frontiers in adventure sports photography.

Every year I teach hundreds of students about adventure sports photography. I enjoy teaching, no doubt an offshoot of teaching wilderness skills as an outdoor instructor for so many years. Digital photography has given many new photographers the access and affordability they needed to pursue this art form. Based on questions I'm asked by students, there is a huge demand

for more information and technique on shooting adventure sports. Current trends have paralleled my own progression; digital photography and adventure sports have merged for many people.

I wrote this book to answer as many of those questions as I can. I hoped to weave together some interesting personal experiences, hard-learned lessons, and a lot of useful photo technique. Learn by my mistakes. Use this book as a reference for photographing adventure sports. Take what you learn in these chapters and create stunning images, instead of mediocre snapshots. I've included many specialized techniques to elevate your image-making to the next level.

In the end, I hope this book inspires you to head outdoors and capture images of your favorite adventure sports. This may be as simple as capturing a family camping trip or documenting an expedition to an 8,000-meter peak. Maybe your college roommate never had a chance to try rock climbing. Now is your opportunity to make his hands sweat and pulse race through the images you capture on your next climb. Go out and shoot! The process is as important as the end result.

Lighting in the Field

ighting is key to the success of any image. Without light, there would be no photographs. My life revolves around light. I wake up early for it. I plan vacations around it. I buy special gear to capture it. My career depends on it. Photographers are joined at the hip with light.

Adventure sports photography relies on good light to make compelling images. Photographing mountaineers on a glacier on an overcast day is like shooting flies in pea soup. Everything is flat and murky with no contrast. The viewer can't see any detail in the snow; it's a featureless, foggy mess. If the climbers are wearing drab clothes, they look like brown boulders in a snowfield. Not good.

Using flash on this wake surfer adds drama and tension to the image.





But then the sun comes out, and this mountaineering scene is transformed. Detail emerges in the snow, and steep ridges and deep crevasses are revealed. The climber's Gortex jacket brightens, and his skin tones rosy up. Nature just turned on the light switch.

I speak from experience. Once I shot a new clothing line for Columbia Sportswear in Alaska. We had decided mountaineering would be a great way to illustrate what the new clothes could do. I had hired climbers to be the models since they would actually



4.1 Climbers roping up on a ridge on the Matanuska Glacier, Alaska.

be climbing in serious situations. The climbers had climbed up a ridge for a shot, and I had set up a quarter-mile away with a telephoto lens to compress the scene. There was no scene; only dull shapes on featureless white. I was sweating bullets since the shoot depended on good light. But then the sun broke through a hole in the clouds and perfectly illuminated the climbers. I squeezed off a few shots, and then the clouds pinched the sun out. But I had my shot (**FIGURE 4.1**).

Natural Light

Natural light has been the mainstay of adventure sports photography for years. Adventure sports take place outdoors, so the easiest and most logical source to use is available light. And the good news is, natural light creates stunning images. If you use the lighting and design principles outlined in Chapter 3, "Creative Composition," your images should look good. Seek out warm light for pleasing landscapes. Look for edgy light situations. Put your model in the sun with a dark-shadowed background and you should have a dramatic image. On overcast days use a slower shutter speed (since there is less light) to create pan-and-blur images (Chapter 6, "Photographing Water Sports").

Every time I head out the door on a photo shoot, the first thing I do is evaluate the light (**FIGURE 4.2**). What I see determines how I will proceed on a shoot. If it's sunny, figures in a landscape with lots of blue sky will work great. If it's overcast with pasty-white skies, I'll focus on smaller scenes or shoot in the forest. And I have another option with natural light: I can alter the direction and quality of available light using light modifiers.



4.2 A photographer's day begins with evaluating the light.

Reflectors

Reflectors are light modifiers that reflect light on to a subject. Generally, we think of specialty reflectors designed for photographers, but natural reflectors are abundant in the field. Snowfields and sandy beaches reflect a lot of light onto subjects. Water reflects sunlight into a kayaker's face. Always be aware of natural reflectors you can use in your image (**FIGURE 4.3**).

Light reflected back on your subject will fill in shadows and reduce contrast. Reflected light also reflects color onto your subject. If you use a white reflector, it will reflect white light on the subject. If the reflector is gold, then the light will have an orange color.

One important characteristic of a reflector is its *throw,* or the distance it can reflect light back into a scene. Silver reflects light the most efficiently, and

LUCK FAVORS THE PREPARED

Sometimes during photo workshops, a participant asks me what separates the pro photographer from the amateur. Invariably I reply, "The pro photographer takes more pictures." Of course, this isn't the whole story-most pros have advanced technique and a strong style. But there is truth in this statement. If you want to take good photographs, you have to get out and shoot. Images aren't made sipping coffee on a rainy day at the café; they're made out in the rain. The more you shoot, the better your chances of creating a good image and improving your technique. Sometimes, a viewer will tell me how lucky I was to get a shot. Luck is certainly a part of the equation, but you have to be out shooting in the field to be lucky. So get that camera and go out and shoot!



4.3 Sand and water are natural reflectors that can be used in adventure photography.

can reflect light into a scene from a long way away. This works great when you are photographing a large scene and want to add some reflected light into the scene. The person holding the silver reflector can be outside the field of view and still reflect light onto the subject.

Reflectors come in a variety of shapes, sizes, and colors. Collapsible reflectors work great for adventure sports photography. Small sizes collapse down to round disks about a foot in diameter, yet expand big enough to reflect light for portraits. I like to use Lastolite TriGrips. These reflectors have a handle that makes holding and positioning them much easier, especially in the wind. My TriGrip has a variety of interchangeable fabric colors that slip onto the reflector. I use soft gold, white, and silver the most (**FIGURE 4.4**).

Larger reflectors are also a good choice for adventure sports shooting, but they're better used closer to the car since they're bigger and heavier. I use $42" \times 78"$ and $78" \times 78"$ Lastolite Skylite reflectors for big light jobs. These reflectors have a metal frame with material attached via Velcro and reflect a large amount of light into a scene. Often I use the Skylite with white material to reflect light back into scenes.

An advantage of using reflectors is that the reflected light is easier to meter and preview on the scene. You can see what the reflected light looks like, and meter accordingly. With flash you get a quick burst of light that can be harder to visualize.

Using a reflector is simple: Just position the reflector to aim sunlight or another light source back onto your subject. To control the intensity of the light, move backward or forward from your subject. A big mistake that photographers often make when using reflectors is getting really close to their subject and overpowering them with light. If you reflect full sunlight onto your subject from a foot away using a gold reflector, your model will look like a sunburned tourist in Cabo. Back away to get less powerful reflected light. And when you're not shooting photographs, make sure to lower the reflector to ease the strain on your model's eyes (**FIGURE 4.5**).

REFLECTOR TIPS

- Choose the color you want to reflect. White and soft gold work best.
- Use black reflectors to subtract light and add contrast.
- Control light output by moving the reflector closer to or farther from your subject.
- Position the reflector far enough from your subjects so you don't overpower them.



4.4 TriGrip reflectors come in a variety of colors.



4.5 A reflector is used to reflect light back onto the subject.

MAKE YOUR OWN REFLECTOR

If you are a DIY (do it yourself) person, there are a number of ways you can make inexpensive reflectors with simple materials. One option is to go to your local art store and buy large pieces of white foam core to use as white reflectors. Many studios use large pieces of foam core as reflectors. Another option is to glue aluminum tinfoil onto pieces of cardboard. This makes a great silver reflector. And never forget the triedand-true bed sheet. A white bed sheet stretched between two light stands works in a pinch as a large white reflector.

Overhead silks

Another way to control and modify natural light is using an overhead silk. Overhead silks are large white panels that allow light through in varying intensities. Some silks reduce light by 1 stop, others by 2 stops. As with reflectors, they come in a variety of sizes, from small handheld reflectors to large overhead silks (**FIGURE 4.6**).

Overhead silks are portable shade producers, and a great item to have for shooting portraits on a bright, sunny day. If there is no shade around, you can position your model under a silk and get great, smooth, wraparound light. You can also use other reflectors and strobes with overhead silks and create nice lighting for portraits.

Start by using an overhead silk to soften the light on your subject. Then use a soft gold reflector to reflect light onto one side of your subject, creating



4.6 Using an overhead silk for a portrait.

some contrast and interesting light for your shot. To increase shadows on the opposite side, use a black reflector to subtract light. Using the sun as your main light and modifying it with reflectors and overhead silks, you can create terrific portraits using available light.

Artificial Light

Let's face it. All adventure photographers dream about golden crepuscular sun bathing their subjects in flattering light. And sometimes that happens. But a lot of times it doesn't. Instead, you're dealt overcast skies and flat light, or midday sun scorching you and your subject. At other times, you're shooting at twilight and need more light. Don't despair, because artificial light offers lots of solutions.

Why use flash in the first place? Many outdoor photographers are cautious using flash because it looks unnatural. This is a legitimate concern, and you (or your client) must be happy with the final image. But using flash effectively is a great photographic tool. Flash adds highlights to an image and directs the viewer to this part of the shot. Flash will add contrast, produce creative shadows, fill in shadows, punch up color, add catch lights in the eyes, brighten overall exposure, add motion streaks ... the list is long. If any of these aspects are important in the shot you're trying to capture, then using flash may be the right approach (**FIGURE 4.7**).

Artificial light saves my photographic day, and makes my images stand out from the pack. When I'm on an assignment, I can't just put my camera away if the light isn't what I want. I need to use my photographic savvy and create my own light. Understanding artificial light technique using speedlights and strobes is crucial for the adventure sports photographer. And today's flash technology is opening up new image possibilities that were impossible just a year ago.





4.7 Using flash punches up color in this image.

Speedlight flash

Flash photography at its most basic begins with oncamera pop-up flashes and speedlights, which are larger flashes that attach to the camera hot shoe. Both of these flash options offer many benefits to adventure sports shooters, including small size, TTL metering, and high-speed sync. If you've been intimidated by flash photography in the past, this is your starting point.

Pop-up flashes are handy because they're an integral part of the camera. You pop them up when you need them, and close them when you don't. Pop-up flashes can add catch light to eyes and fill in shadows under a hat. But pop-up flashes have limited power and can't be used off camera. Speedlights are the next choice. Every adventure sports photographer should have one.

Speedlight flash modes

Speedlights offer many advantages for shooting adventure sports. They are small, operate on AA batteries, and can easily be carried into the field. Another big advantage of speedlights is the compatibility of the flash with your DSLR camera. The flash will work with different metering modes and relay focal-length information. Speedlights have a variety of shooting modes, but there are two in particular that work great in adventure sports photography: TTL and Manual mode.

In TTL mode, speedlights use TTL metering to control the flash output. This means the light is measured *through the lens*, resulting in accurate flash exposures. This approach works very well in fastmoving situations where you don't have time to set up manual flash exposures. Mountain bikers and kayakers don't wait on you and your flash; you need to be able to aim the flash at the subject wherever they are and get a decent exposure. TTL flash does the trick (**FIGURE 4.8**).

Sometimes TTL flash is too powerful in the shot, resulting in "over-flashed" images. Try reducing the flash output 1–2 stops for a more balanced flash/ ambient light exposure. Some speedlights offer Balanced Fill Flash mode, which nicely blends flash and ambient light. I use SB900s in Balanced Fill Flash mode for nice fill light and a good background exposure.

Sometimes TTL mode doesn't work well. If you encounter a tricky metering situation, your flash exposure may be off or inconsistent. This is when Manual flash mode is the right choice. Manual flash exposure allows you to set the speedlight output for consistent results, eliminating TTL flash output metering. Most speedlights allow you to adjust the flash output from full power downward in 1/3-stop increments. Once you have your flash power dialed in, you get consistent flash output for each shot (**FIGURE 4.9**).



4.8 Using flash in TTL mode allows you to shoot very quickly in the field.



4.9 Using manual flash mode to ensure consistent flash output on each shot.

LIGHT PAINTING

You don't need flashes to illuminate every scene. Try buying a small flashlight at your local hardware store and light painting a scene. Light painting involves illuminating a dark scene with a continuous source of light such as a flashlight or rechargeable spotlight. Set your exposure to Bulb, your aperture to f/5.6, and your ISO to 200 for a starting exposure. A locking cable release works well to hold the shutter open in Bulb mode. Autofocus doesn't work in the dark, so you'll need to manually focus. Shoot at twilight so the sky will have some color. Any object will work, from small flowers to large desert arches. Add light in small bursts from side angles to create shadow and interesting highlights in the shot. The key is to illuminate certain areas of a scene, not flood the whole shot with light (FIGURE 4.10). Experiment with different white balance settings for different looks. Light painting is addictive. Be careful or you will be out all night-not a bad thing!

Triggering flash off camera

Once you've decided what speedlight mode to use, the next question is how to use it effectively. If you attach your speedlight to your camera hot shoe, you're using it in a manner similar to a pop-up flash. You can add some nice fill flash and punch up the colors, and some fast shooting situations are best photographed with on-camera flash. But your creative choices are very limited with the flash on the same axis as the lens. Take your speedlight off camera for some real drama (**FIGURE 4.11**).

Using your speedlight off camera will give you many more options to modify the light. One huge advantage is that you can create shadow and contrast by shooting the flash at an angle to your subject. You can transform a two-dimensional scene into a threedimensional scene. Simply put, using your speedlight off camera is one of the best ways to improve your flash photography.







4.11 Using a speedlight off camera allows creative lighting angles and gives you the ability to create shadow.

BOUNCE FLASH

Bounce flash can simulate off-camera flash but uses the flash on camera. Speedlights have an adjustable flash head that can be aimed at a surface to bounce light back onto a subject. The most common scenario is bouncing light off a white ceiling to illuminate a subject. Instead of the light hitting the subject straight on from on-camera flash, the light bounces off the ceiling and hits the subject from above. You can also bounce light off a wall to create side lighting on a subject. An important point to remember is bounce flash will produce light with the color of the bounce surface. White walls are great. Green walls produce alien portraits.

You don't need to be inside to use bounce flash. Frequently, I bounce flash off reflectors to add soft, diffused light to my subject. Bouncing flash off a soft gold reflector produces a nice, warm light for a portrait.

There are many options to trigger your flash off camera. Almost every flash can be used off camera using a dedicated cable between the speedlight and camera hot shoe. These cables allow full control of all the speedlight's functions just as if they were attached to the camera. I use SC-29 cables to trigger my SB900s. These 9-foot cables can be tethered together for more length. Cables are inexpensive, reliable, and the easiest way to use your flash off camera. The downside is the cable limits the range of where you can use your speedlight. For even more flexibility, I use a wireless transmitter.

Wireless transmitters relay flash information from the camera to a flash with a wireless receiver. Many camera systems have a dedicated wireless system where the speedlights have a receiver built in—all you need is the transmitter. I use a Nikon SU-800 transmitter to trigger my SB 900s wirelessly. The SU-800 uses an optical signal to control three separate groups of flashes. Flashes can be used in many modes including TTL mode, and output is controlled at the camera from the SU-800. This is very handy when you're working alone (**FIGURE 4.12**).

Other wireless systems use a radio signal to control speedlights. Radio wireless systems can trigger speedlights from farther distances and work well in bright sun (sometimes direct sun interferes with optical signals). Pocket



4.12 Using an SU800 wireless transmitter allows control of three different groups of speedlights.

Wizard and Radio Popper systems use radio signals and offer control similar to a dedicated optical system. You need both a transmitter and receiver to use these systems.

Modifying the quality of light

In Chapter 3, we discussed the three important principles of light: direction, quality, and color. Now that you can use flash off camera and control direction, the next consideration is changing the quality of light coming from your flash. You have lots of options.

Many photographers like to use soft, diffused light on their subject. Diffused light is very forgiving, fills in skin imperfections, and gives people a healthy glow. Since the light coming from a speedlight is very directional and harsh, you need to diffuse it to soften the light quality. The easiest way to diffuse a speedlight is to put a diffusion dome on top of the flash. Most flashes come with this dome included. A diffusion dome will spread the light and take the harsh edge off it, which may be all that is needed for some images. But one rule holds true when diffusing your flash. The softness of the light is directly proportional to the size of the light source and how close it is to the subject (FIGURE 4.13). Since the diffusion dome is small, it doesn't diffuse the light much, even if it is close to your subject.

There are many small softboxes designed for speedlight use that work well. I use Lastolite Ezyboxes. What I like about these softboxes is they use an inner and outer diffusion layer for very soft light, similar to a studio-sized softbox. The Speed-Lite model attaches directly to your flash using Velcro straps, and is the smallest of the bunch. This softbox is great when you want to soften the light in fast situations or precarious spots. For more diffusion I use a Lastolite 54 cm Ezybox. This softbox requires a bracket to hold the speedlight, and produces very soft light. I can handhold this softbox while shooting, but it's easier to set it on a stand or have a friend hold it.



4.13 Using a softbox will soften the light on your subject.



4.14 Justin Clamps allow easy speedlight fastening to light stands and anything you can clamp.

Another option for producing soft light is shooting speedlights through diffusion material. Many reflectors have translucent material that will soften flash. You can also shoot multiple speedlights through a larger diffusion panel for a very soft light. I attach my speedlights to the crossbar of my diffusion panel using Manfrotto 175F Justin Clamps. These clamps have a cold-shoe mount to attach your flash, and are very handy for putting flashes on light stands and difficult spots (**FIGURE 4.14**).

What if you don't want to soften the light, but want to focus the area where the light hits? This requires snoots and grids, which are also available for speedlights. I use Rogue Flash Benders to control the angle of light. These units attach to your flash head using Velcro. The snoot has flexible metal bars that allow you to shape the opening from a narrow slit to as wide as your flash head. If I don't want my flash that narrow, but still want to keep the light from spilling into a scene, I use grids by Honl or Rogue. These grids come in a variety of sizes and are great for controlling light in small spaces.

Changing the color of light

The last aspect of light you can control is the color of light. Heat-resistant acetate, or *gels*, is used to change the color of flash. Some gels color correct light sources to precise color temperatures while other gels add theatrical effects. I use Nikon gels that came with my SB900s. These gels fit in a plastic holder that attaches to the front of the flash. I also use gels by Rosco, a company that offers a wide selection of colors, and has gels sized for speedlights as well as larger studio lights. Gels can be attached using gaffer tape to larger flashes.

My favorite use of a gel is putting a full CTO (orange) on my flash, and setting my camera white balance to incandescent. Incandescent white balance turns daylight blue. Since my flash is approximately daylight in color temperature, the flash would be blue without a gel. But the orange gel will counter the incandescent white balance. Anything the flash hits will be neutral in color. This is a great technique for cloudy skies. The blue color makes the sky moody, and the illuminated subject really stands out in the scene (**FIGURE 4.15**).

High-speed sync

One shooting mode is especially important for the adventure sports photographer: high-speed sync. Since so many of the subjects I photograph are moving, it's very important to be able to freeze the action in a fill flash mode. If the daylight is



4.15 Using an orange gel and setting your camera white balance to incandescent can result in dramatic effects.



4.16 High-speed sync allows you to use fast shutter speeds and flash.

underexposed by 2 stops or more, then the flash duration will freeze the action, not the shutter speed. But if I'm using flash and the daylight exposure isn't underexposed by much, then the shutter speed will stop the action.

High-speed sync allows you to shoot at speeds faster than your normal flash sync speed, generally around 1/250. Using high-speed sync I can shoot at shutter speeds all the way to 1/8000 to freeze any scene I encounter (**FIGURE 4.16**). In high-speed sync mode, speedlights emit a pulsating beam of light to ensure that flash is present no matter how fast the shutter is moving.

High-speed sync also offers another advantage: It allows you to shoot at wide-open apertures in the middle of the day. Imagine attempting to photograph a fly fisherman in the middle of a sunny day and using fill flash. If you choose f/2.8 as your aperture, set your ISO to 100 (the lowest ISO setting on many cameras), you'll need to set your shutter speed around 1/2000 or faster to get the right exposure. High-speed sync will allow you to use flash and this fast shutter speed. Using fast shutter speeds in the middle of the day also lets you underexpose the daylight and create dark, dramatic backgrounds for portraits.

The one limitation of high-speed sync is that your effective flash distance is greatly reduced. To improve the range of speedlights in high-speed sync mode, I use multiple units. I use a Lastolite Triflash bracket to attach three speedlights, which greatly improves the flash range. This bracket can be placed on a light stand or handheld (**FIGURE 4.17**). I often place my Triflash bracket on the pointed end of my ski pole to use as a light stand when I am shooting skiing. I also attach multiple flashes to light stands using Justin Clamps.

Triggering multiple flashes wirelessly in high-speed sync mode is similar to triggering one. I will use my Nikon SU800 to trigger my speedlights when I am working close to my flashes. If I need to trigger my flashes from a distance, then I will use Radio Poppers or the Pocket Wizard Flex system to trigger the flashes. You need to attach a receiver to each flash in order to use all the flashes in high-speed sync mode. Radio poppers have an impressive range; you can trigger flashes around 1/4 of a mile away.



4.17 A Lastolite TriFlash bracket and Radio Poppers increase the range of speedlights.

DON'T LET THE TECHNICAL INHIBIT THE CREATIVE

Learning flash technique can be intimidating at first. Instead of relying on the sun, you're now creating your own light and controlling all aspects of it. When most people are learning flash technique, their creativity goes out the door. Photographers become much more focused on getting the lights set up, figuring out exposure, and setting channels on their wireless transmitter. Meanwhile, your subject has fallen asleep and you've barely considered the creative aspects of the shoot. Practice will reduce the amount of time you spend deciding how to light a subject. Your lights will be ready to go, and you'll be able to connect with your subject and focus on the creative aspects of the shoot.



4.18 Studio strobes allow the use of larger softboxes to project very diffused light on your subject.

Large flash systems

Speedlights are great portable units for shooting adventure sports, but sometimes you need more power and faster recycling times. When I photograph kayakers in the middle of a rapid, I need a very powerful light to reach the kayaker. I could use multiple speedlights, but I'd soon reach the point where using one big light would be more practical than using a bunch of small lights. Large flash systems offer lots of power and the ability to use bigger light modifiers on your shoot (**FIGURE 4.18**).

Functionality in the field

Most of your adventure sports shooting will take place in the backcountry where you won't have AC power close at hand. On my backcountry shoots I use a battery-powered flash system by Elinchrom. I use the 1100-watt Ranger and 400-watt Quadra flash packs. These lights have lots of battery power, quick flash-recycling times, and are very durable in the field. My Ranger pack has survived blizzards, desert heat, and heavy rain, and it's never missed a pop.



4.19 The Elinchrom Skyport system allows flash triggering and power control of the Ranger pack from the camera.

A big advantage of the Elinchrom system is its ability to control flash output from a wireless transmitter attached to your camera. This system, called Skyport, is very handy when you place your flash packs in hard-to-reach spots. I sometimes place a Ranger on the side of the river opposite the one I'm shooting from when I photograph kayakers. Since I can control output at the camera, I don't have to keep crossing the river to adjust my lights (**FIGURE 4.19**).

Pack size is the real concern for the adventure sports shooter. The Ranger packs weigh around 17 pounds, which limits how far you might bring them in the field, but the advantage is all the power you get. The Quadra pack isn't as powerful, but it weighs only about 6 pounds, making it a great choice when weight is a big concern.

Using large flash systems

Large flash systems like the Elinchrom Ranger and Quadra work differently from a speedlight. These flashes work in manual mode; there is no TTL metering or automatic fill flash. Also, you need to choose what reflector to use with the strobe head for your shoot.

I always start by establishing my ambient, daylight exposure. Sometimes I like the daylight exposure to be right on target, and use my flash to add some fill light to shadow areas in the image. But more often I like to underexpose my daylight exposure 1–2 stops. When I add flash to this underexposed scene, everything the flash illuminates will pop off the canvas, creating separation of my subject from the background. Underexposing your background will also add some mood and drama to the image. How you expose the daylight in your shot should relate to what you're trying to create in the final image. Some shots are all about high-key bright scenes and shouldn't be underexposed. Other shots work great with the background underexposed, adding tension to the final image (FIGURE 4.20).

After I've established the background exposure, I add flash to the image. I decide what reflector or softbox to use on the head, and how many lights I need for my image. I don't use a light meter since many of my subjects are far away or in precarious positions. I simply trigger the flashes and see how things look on my LCD. I adjust the light output until I get the right exposure. I use my highlight (blinkies) indicator on my LCD screen to help determine my flash exposure. Since I'm using the Skyport wireless system with my flash packs, I can adjust my lights very quickly right at the camera.

Flash heads are bigger than a speedlight, so I use light stands to position my lights. Manfrotto makes a wide variety of stands that will take years of use (or abuse). I use Manfrotto 367B 9-foot stands for most of my shooting. These are light enough to carry into the field, and collapse small enough to fit in a suitcase for travel. If I'm using large softboxes and need a stronger stand, I use the Manfrotto Alu Master 12-foot stand.

A big advantage of using studio lights is the wide variety of light modifiers the flash heads can use. I use many types of softboxes, ranging from square softboxes and strip banks to large octabanks. I will use standard reflectors when I need hard-edged light in a scene (**FIGURE 4.21**). These reflectors also accept grids to help control the spill of light. I also use a sports reflector on my flash head when I need to project my flash as far as I can into a scene.

Ranger high-speed sync

My Elinchrom Ranger syncs at 1/200 of a second. This means that I can't shoot any faster than this or







4.21 Hard-edged light works well to add highlights to an image.

I will clip the flash. Clipped flash appears as a dark band across your image where the shutter clipped part of the flash. Can you freeze action at 1/200? Absolutely, but it is your flash duration, not the shutter speed, that will do the job.

In order to freeze action, you need to reduce or eliminate the daylight in your shot. The daylight exposure is tied directly to the shutter speed, so a fast-moving skier will not look sharp at 1/200. But if you darken the daylight exposure so that the flash is the main light illuminating your subject, then the flash will become the light source that will freeze the subject. My Elinchrom Ranger A-heads have a very fast flash duration—1/2300 and faster—that's more than fast enough to freeze a skier. Always consider the flash duration of the light when you're purchasing a studio flash system.

Can you use high-speed sync with studio lights? Yes, yes, yes! Until recently, studio packs couldn't operate past their maximum sync speed, but with Pocket Wizard's Hypersync technology, you can shoot at shutter speeds of 1/800 and faster. Hypersync is a utility that recalibrates the shutter and flash timing, allowing faster sync speeds. You need one of their MinTT1 or FlexTT5 transmitters and a dedicated receiver for your flash unit. Results will vary depending on your flash system and the camera you are using (**FIGURE 4.22**).

With my Elinchrom Ranger system, I use the S-heads for the best results. These heads have a slower flash duration, which gives Hypersync more latitude to time the shutter and flash. And the results are staggering. I can sync my Nikon D3 around 1/800, much faster than 1/200. With my



4.22 High-speed sync is available using large flash packs. Elinchrom Ranger shot at 1/2500.

D300s, I can sync all the way to 1/8000! I get a tiny bit of flash clipping at this speed, easy to crop out in post-production. And I still get a lot of flash power and distance at this shutter speed. Remember, this high speed is good not only for stopping action, but also for shooting with a wide-open aperture in the middle of the day (**FIGURE 4.23**). The Quadra can also sync faster using Hypersync, a FlexTT5 as a receiver, and an S-head. Since the Quadra has a built-in wireless receiver, the FlexTT5 is plugged into the sync port of the pack.

Effective outdoor flash: Two scenarios

What is the best light for an image? To answer that question, you need to consider what the image concept is, and what direction, quality, and color of light will best illustrate it. To create a flattering portrait, using a single large softbox at a slight angle to your subject should work fine. But if you want to add some edgy highlights to a mountain bike shot to increase the tension in the image, a hard-edged light



4.23 This image was shot at 1/3200 and f/4.8 using high-speed sync and an Elinchrom Ranger. High-speed sync enables you to use f/4.8 and selective focus in sunny conditions.



source is the right choice. Your shooting distance may also influence your decision. Diffused light sources don't have much range, while a bare-bulb speedlight can shoot light far into a scene.

Let's look at how to put all this lighting technique to use. Below are two typical adventure sports shooting scenarios, and how I would go about lighting them.

Scenario #1: mountain biker

Imagine you're photographing a mountain biker on a sunny day in the mountains. The rider will pass right in front of you on a single-track trail. He is moving fast, and wearing bright colors and a helmet. First, consider the light. Since the sun is high overhead, the light falling on the subject will come from directly overhead, resulting in some shadows under the helmet and areas on the bike. This subject needs some fill light to "snap" the colors and fill in some shadows.

One choice would be setting up a large 78-inch white Skylite reflector to bounce light back on the rider. Since you're shooting close to the subject, the reflector should bounce plenty of light into the scene. Do a test shot with the rider stationary (or an assistant standing in) on the trail and see how fast you can shoot. Use a shutter speed of 1/500 or faster to freeze the action. If it's windy outside, or if you don't have a way to anchor the Skylite, then use a speedlight instead.

The way to use a speedlight in this situation is to put it in TTL mode and make sure high-speed sync is turned on. In Nikon systems, high-speed sync is turned on in the camera custom functions; in Canon systems, high-speed sync is turned on in the flash unit. I could also use my Elinchrom Ranger at fast sync speeds using the Pocket Wizard Flex system with Hypersync. You could use your flash on camera, but for a better image, put your flash in front of the rider, aimed at his front. With the light in front of him and the sun lighting him from above, you'll get some nice cross lighting. Since you're using a speedlight close to the rider without any diffusion, high-speed sync with one flash should produce enough light. If it doesn't, add another speedlight in the same location using a Triflash bracket. Depending on the rider's speed, you should shoot at 1/500 or faster.

The final consideration is the flash-to-daylight ratio. Underexpose the daylight around 1 stop in this situation. To do so, use your camera in manual mode, set the daylight exposure to -1, and then add TTL flash triggered wirelessly using an SU800. If the distance to your flash is more than your camera can reach, use Radio Poppers as your wireless system. This would result in a fill flash lighting ratio, and the sun would still add some highlights to the top part of the rider. Don't eliminate the sun as a light source; use it as accent light in your image.

Scenario #2: half-pipe skier

In this scenario, you're hired by a ski resort to photograph a skier in the resort super pipe. They want you to capture a dramatic shot that will attract skiers to the resort. You show up and the day is partly cloudy. Your pro skier model will be at least 30 feet away from you when he does his aerial moves. He's wearing bright colors and a helmet.

As always, you begin by considering the light. If you photograph him in partly cloudy light, it will be inconsistent sun, so using a reflector is out. And aiming the reflector would be a challenge.

This means you need to use flash to add some impact to the shot. Since the skier is going to be flying through the air and you want to freeze the action, use a fast shutter speed. This means using high-speed sync flash or darkening the daylight exposure so the flash duration will freeze the action.

If I were shooting in this scenario, I would use my Elinchrom Ranger and one head with a sports reflector attached. This light setup has plenty of power to reach the skier, and will recycle fast enough so I won't miss a shot. I can choose to shoot my Ranger using Hypersync and an S-head, or underexpose the daylight 2 stops and use an A-head where the flash duration would freeze the skier. Both choices would make dramatic images in this situation.

If I'm shooting in the bottom of the pipe, I would place the light at an angle to illuminate the skier from slightly in front. Since the light will be close to me, my wireless system should have no problem



working. I might also add another light with a standard reflector on the lip of the pipe to illuminate the skier from behind. Backlighting skiers and snowboarders as they jump will add sparkle to the flying snow.

After determining my daylight exposure, I would set my main light hitting the skier to normal exposure, and the backlight to 1 stop brighter. This will result in an image with some contrast from the different intensities of the strobes. To determine my exposure, I would have an assistant stand on the lip and shoot a test shot. This would get my lights pretty close to the right exposure, although if the skier is flying high, I might have to increase the power. I might also add a blue gel to the backlight for a more creative look.

Here's great principle to follow with your lighting: Don't illuminate the subject; *light it*. Anyone can blast light straight at a subject and illuminate it. Experiment with different angles, colors, and lighting ratios to create a masterfully lit shot, not an illuminated one. In later chapters on shooting mountain sports, winter sports, and portraits we'll look at other lighting setups.

Ondex

24-120mm lens, packing, 23 70-200mm f/2.8 lens, 15 110-120V, use of, 30 220-240 volts, use of, 30

A

AC power supply, international differences, 30 Adobe Lightroom adjusting contrast, 248 Apply During Import setting, 235 Attribute search option, 242 Brush size option, 245 Clone removal action, 245 database, 230 deleting photos, 239 Destination for downloading, 236 Develop module, 243-245 editing capabilities, 239 File Handling properties, 235 File Renaming, 235 Filter window, 242 Heal removal action, 245 image search results, 231 Import dialog, 234 Library module, 237 Metadata box, 236 Metadata search option, 242 modules, 237 Opacity option, 245 Radius slider, 248 Render Previews box, 235 searching for images, 241-242 set white/black points, 246-247 sharpening images, 247-248 Text search option, 241 using, 232-233 Vibrance slider, 247 White Balance slider, 246

airports, navigating, 32, 35-38 Alaska Bridal Veil Falls, 159 canoeing, 108-110 Exit Glacier, 50-51 fly fishing, 105 Hatcher Pass, 69 Matanuska Glacier, 62, 72 off grid in, 4 Prince William Sound, 52, 120 range in distance, 28-29 Valdez, 159 American Society of Media Photographers, 40 Annapurna, 161 AquaTech underwater housing, using, 102, 117 Arches National Park, 55-56 artificial light, 76, 78-86 Astmann, Mark, 151 athletes, working with, 38 audio external microphones, 217-218 in-camera, 216-217 lavalier mics, 217 portable recorders, 218 recording, 216-218 recording tips, 218 shotgun mics, 217 Aurora Borealis. See also star trails photo tips, 156 shooting, 156-159

В

backcountry photography keeping extremities warm, 8, 10, 12 layering clothes, 4, 6–8, 10–12 staying dry, 8 backing up images, 248-251 archival DVDs, 250 external hard drives, 250 multiple hard drives, 250 online third-party services, 250-251 backing up in field, 30-32 external hard drives, 32 on flash cards, 31 on laptops, 32 portable drives, 31-32 backlighting, 57-58 backpack including in standard kit, 18 waterproof, 99 backup data storage, checklist, 43 Bahamas assignment in, 35-36 sea kayakers, 120 Baja photos, 8-9, 26-27 batteries bringing, 28 Brunton Sustain, 30 carrying spares, 161 checklist, 43 getting through airports and customs, 32 lithium, 30, 32 rechargeable, 28 recharging, 30 battery power, saving, 28 Bay Isles, Honduras, 121 beauty dish, using for kayaking shot, 192-193 Belize, "office" in, 228-229 blisters, preventing on feet, 8, 10 blue, symbolism of, 54 body heat conduction loss, 6 convection loss, 6 evaporation loss, 6 radiation loss, 6 respiration loss, 6 boots choosing, 8, 10 insulated pac by Sorel, 10 bouldering, 144, 146-147 bounce flash, using, 82, 147-148 Brooks Range photo, 48

Brunton lithium batteries, 30 Solar Rolls, 28, 30 Sustain batteries, 30 Bulb exposure, using with star trails, 129

С

cable release substitute for, 130 using in mountain biking, 140 cables, using with flashes, 82 camel photo, 34 camera bodies including in standard kit, 18 including in underwater kit, 19 camera buffers, capacity of, 113 camera gear carrying, 23-25 checking, 24 checklist, 43 keeping dry, 98-102 minimalist kit, 16-17 mountaineering, 166 planning, 12-13 tripods and heads, 20-22 camera kit camera bodies, 18 flash cards, 18 lenses, 18 photo backpack, 18 prime lenses, 17 speedlights, 17-18 standard, 17-18 transmitter, 18 tripod, 18 underwater, 19 camera manual, reading, 69 camera-mounting rig, using, 140 cameras cases, 15-16 choosing, 13-14 durability, 14 filters, 21-22 flash cards, 15-16 lenses, 14-15

materials, 14 Nikon 35mm, 14 Nikon P7000, 14 pro-level, 14 shaking, 69 speed, 14 weight, 14 camping photography, 126-131 fisheye lens, 126-127 photo tips, 126 shooting exterior images of tents, 127-128 speedlight flash, 128 star trails, 128-131 Canoe and Kayak magazine, 35 canoeing photography getting close to water, 106 getting in water, 108 photographing, 106-110 taking paddle position, 106 wide-angle lens, 106, 108 Canyonlands National Park, 47, 141 Caribbean, paddling in, 35 cases Pelican, 24 waterproof, 98-100 cell phones, recharging, 30 checklists backup data storage, 43 batteries, 43 camera gear, 43 documents, 43 studio flash equipment, 43 underwater camera gear, 43 Chugach Mountains photo, 10-11 circles, considering in design, 49 clamshell lighting, using for portraits, 192 climbers. See rock climbing climber's chalk, capturing, 147 Clone removal action, using, 245 clothes avoiding cotton, 6-7 down, 7 fleece, 7 Gortex, 8 layering, 4, 6-8, 10-12

lightweight, 7 nylon, 7-8 Patagonia Synchilla jacket, 7 preferred fabrics for backcountry, 7 synthetic insulation, 7 wool, 7 cold weather, working in, 10 Colorado Eldorado Canyon, 124-125 Great Sand Dunes National Park, 52-53 hiking in, 132 paddling in, 64 colors absence of, 55 black, 55 blue, 54 complementary, 55, 69 considering in design, 54-55 creating mood and feeling, 54 green, 54 orange, 54 red, 54 symbolism, 54 white, 54-55 vellow, 54 compact flash cards, 15 composition colors, 54-55 elements of design, 46-50, 53-55 focusing on color, 67 form, 49 getting close, 67 learning, 46 lens tip, 67 lines, 46-48 patterns, 53 perspective, 61, 63-64, 66 photographing stars, 67 practicing, 69 reading camera manual, 69 rule of thirds, 60 shaking cameras, 69 shapes, 49 shooting at home, 67 taking implied portraits, 69

composition (continued) texture, 50, 53 tips, 67, 69 using flash, 67 using intuition, 58 viewing images, 59 conduction heat loss, occurrence of, 6 convection heat loss, occurrence of, 6 Coombs, Colby, 44-45 Copper Mountain, skiing at, 171 cotton clothes, avoiding, 10–12 countries, researching, 36 creativity, developing, 46 crevasses, shooting in, 166-168 cultures, working in, 35-36 customs, navigating, 32, 35-38

D

D300s lens, packing, 23 deleting images in Lightroom, 239 Denali National Park camping near, 127 camping on Denali, 164 mountaineering rangers, 37 depth of field, considering for portraits, 197 desert, hiking in, 46 design elements color, 54-55 form, 49 line, 46-48 pattern, 53 shape, 49 texture, 50, 53 diffused light, 58, 83 dive housings, groups of, 102 documents, checklist, 43 dog sledding photo, 10-11 down clothes, pros and cons, 7 dressing in the field, 4, 6-8, 10-12Drift HD170 headcam, using, 119, 143 dry bags, using, 99 Dryzone 200 backpack, 99 DSLR video. See video dust spots, removing, 245

Е

Easy Release app, 40 editing images, 237-242 Eldorado Canvon, Colorado, 124-125 elements of design color, 54-55 form, 49 line, 46-48 pattern, 53 shape, 49 texture, 50, 53 Elinchrom flash systems advantage of, 88 Freelite head with reflector, 115 Quadra flash pack, 35, 92 Skyport system, 88, 122, 151 using, 87 emotion, capturing, 63-64 environmental portraits, creating, 181-182 Epson P7000 portable drive, using, 31 evaporation heat loss, occurrence of, 6 Ewa-Marine underwater housing, 102 Exit Glacier in Alaska, 50-51 external hard drives, backing up on, 32 extremities, keeping warm, 8, 10, 12

F

feet, keeping warm, 8 filters Singh-Ray graduated ND (neutral density), 21 Singh-Ray LB Color Combo Polarizer, 21 Singh-Ray Vari-ND, 21 Final Cut Express timeline, 227 fisheye lens. See also lenses using for sea kayaking, 119 using in camp photography, 126-127 fisheye port, including in underwater kit, 19 fishing images, over/under images, 103 flash. See also outdoor flash; speedlight flash; studio flash adding to water shots, 102 pop-up, 78 using, 67, 70-71, 77-78 using reflectors with, 84

flash cards capacities, 15 cases, 16 choosing, 15 durability, 15-16 Gepe cases, 16 high-capacity, 15 including in standard kit, 18 MB/s (megabytes per second), 15 SanDisk, 16 size, 15 speed, 15 storing, 16 using for backups, 31 "X" speed, 15 flash systems 400-watt Quadra flash pack, 87 1100-watt Ranger flash pack, 87 battery-powered, 87 Elinchrom systems, 87 functionality in field, 87-89, 91-92 light stands, 88-89 Ranger high-speed sync, 89, 91 using, 88-89 flash technique, learning, 86 flashlight, using for light painting, 80 fleece clothes, wearing, 7 fly fishing over/under images, 103 photo tips, 105 tilt-shift lens, 65 using fly line, 104 foreign countries. See also travel getting work permits in, 38 photographing in, 35-36 form changing perspective, 49 considering in design, 49

G

gaucho, photo of, 184 gear carrying, 23–25 checking, 24 checklist, 43

keeping drv, 98–102 minimalist kit, 16-17 mountaineering, 166 planning, 12-13 tripods and heads, 20–22 gels, using, 84 Gepe cases, using with flash cards, 16 Gitzo tripods, using, 17, 21 glaciers, hiking toward, 135 gloves, wearing, 10, 12 glowing tents. See also tents shooting, 131 under stair trails, 130 on tundra, 129 glowing-boat shot, 122-123 GoPro Hero head cam, 119, 143 Gortex clothes, wearing, clothes, 8 Grand Canyon whitewater, 111 Great Sand Dunes National Park, Colorado, 52-53 green, symbolism of, 54 grids and snoots, using with speedlights, 84

Η

half-pipe skier, 94-96 hands, keeping warm, 10, 12 hard drives backing up images on, 250 external, 32 multiple, 236 Hatcher Pass, Alaska, 69 hats, wearing, 12 HD (high-definition) video resolution, 207 head, keeping warm, 12 head cams Drift HD170, 119, 143 GoPro Hero, 119, 143 using for mountain biking, 143 using for sea kayaking, 119 headcam angles, shooting in mountaineering, 166 Heal removal action, using, 245 health, maintaining abroad, 35 Helly Hansen raingear, wearing, 8 helmet cams, using for mountain biking, 143 Herzog, Maurice, 161

high-speed sync. See also Ranger high-speed sync advantages of, 85-86 flash distance, 86 limitation of, 86 shooting in, 84-86 triggering flashes, 86 underwater, 115-118 using in rafting and kayaking, 115 hiking photography, 131-135 compressing scenes, 134-135 in desert, 46 dramatic effects, 135 dynamic perspective, 134 shooting from low angles, 134 trails, 135 Honduras, Bay Isles, 121 housings including in underwater kit, 19 sport, 102 underwater, 101-102 hypothermia, defined, 8

I

IATA (International Air Transport Association), 32 ice climbing carrying spare batteries, 161 crampons, 160-161 ice tools, 160-161 photo tips, 167 photographing, 159-161 safety precautions, 161 shooting, 159-161 Iditarod Trail Sled Dog race photo, 6 image optimization adding vibrance, 247 adjusting curves, 247 adjusting white balance, 246 dust spot, 245 optimizing, 243-248 set white/black points, 246-247 sharpening images, 247-248 images backing up, 248-251 backing up in field, 30-32 captioning, 231-232

combining, 175-177 deleting in Lightroom, 239 editing, 237-242 high-contrast areas in, 59 increasing tension in, 92-93 keeping vs. discarding, 240-241 order and simplicity in, 59 organizing, 231-232 over/under, 117 searching, 231, 241-242 sharpening, 247 storing, 31 viewing, 59 implied lines, 48 India, Nanda Devi, 162-163 international travel, AC power supply, 30 IS (image stabilization), 20 ISO camera performance, 20-21

J

JPEG format versus RAW, 113 Justin Clamps, using, 84

Κ

kayaking and rafting, 111–118 adding fill to flash, 115 adding flash, 114–115 AquaTech housing, 117 freezing action, 115 high-speed sync, 115 predictive autofocus, 113 shutter speed, 113 underwater high-speed sync, 115–118 using multiple speedlights, 115 wearing PFD (personal floatation device), 112 whitewater, 111–114 kayaks in Valdez, Alaska, 53 Kelby Training website, 227

L

laptops backing up images on, 32 recharging, 30 Lastolite products Ezyboxes, using, 83 Skylite reflectors, 75 Triflash bracket, 86 TriGrip reflectors, 74, 149 lavalier mics, using, 217 layering clothes, 4, 6–8, 10–12 lightweight, 7 tips, 12 LCD, using to focus video, 215 lens port, including in underwater kit, 19 lenses. See also fisheye lens 70-200mm f/2.8, 15 fast, 15 including in standard kit, 18 including in underwater kit, 19 optical quality, 14 packing, 23 pro-level, 14 specialty, 15 speed, 14 tilt-shift, 222-224 weight, 14-15 wide-angle, 17, 106, 108 zoom, 17 zoom range, 14-15 liability waivers, getting, 40-41 light backlighting, 57-58 color, 58 creating shadow, 57 diffused, 58, 83 direction, 57 evaluating, 73 front lighting, 57 modifying quality of, 83-84 quality, 57–58 side lighting, 57–58 softness of, 83-84 using intuition, 58 light painting, 80 light stands, using, 88-89 lighting. See also speedlight flash determining, 92 subjects, 95

Lightroom adjusting contrast, 248 Apply During Import setting, 235 Attribute search option, 242 Brush size option, 245 Clone removal action, 245 database, 230 deleting photos, 239 Destination for downloading, 236 Develop module, 243-245 editing capabilities, 239 File Handling properties, 235 File Renaming, 235 Filter window, 242 Heal removal action, 245 image search results, 231 Import dialog, 234 Library module, 237 Metadata box, 236 Metadata search option, 242 modules, 237 Opacity option, 245 Radius slider, 248 Render Previews box, 235 searching for images, 241-242 set white/black points, 246-247 sharpening images, 247-248 Text search option, 241 using, 232-233 Vibrance slider, 247 White Balance slider, 246 lines considering in design, 46-48 curving, 47 diagonal, 47 horizontal, 46 implied, 48 trails, 47-48 vertical, 46-47 as visual handrails, 47 lithium batteries. See also batteries getting through airports and customs, 32 using, 30 local guides, hiring, 36 loupe, using to view LCD screen, 215

Lowepro photo bags carrying, 23 Dryzone 200 backpack, 24–25, 99 Flipside 400 AW skiing pack, 171 Pro Roller cases, 24–25 Toploader Zoom 55, 23 Vertex 300, 24 waterproof backpack, 99

Μ

Manfrotto products 269HDBU super-high stands, 152 light stands, 88-89 MPRO 535 tripod, 212 super clamp and magic arm, 140, 142-143 Matanuska Glacier, Alaska, 62, 72 MemoryKick Si portable drive, using, 31 metadata, downloading and adding, 234-236 microphones lavalier, 217 shotgun, 217 midnight sun photo, 54 minimalist camera kit camera body, 17 case, 17 flash cards, 17 lens, 17 mittens, wearing, 10, 12 M-LCD7-HDMI monitor, using, 215 Moab slickrock, 136-137 model releases, getting, 38-40 Monet, studying, 50 Mongolia, local guide in, 37 Mount Lemmon, climbing Steve's Arete, 144 mountain biking, 93-94, 136-144 angles, 136 cable release, 140 camera-mounting rig, 140 considering flash, 136 at Hatcher Pass, Alaska, 69 helmet cams, 143 Manfrotto super clamp and magic arm, 140, 143 photo tips, 142 POV shots, 140-143 shutter speed, 136 triggering cameras, 140 wireless transmitter, 140

mountain sports, 122 camping, 126-131 choosing tents, 126 hiking, 132-135, 144-153 mountaineering, 161-168 appeal of, 162 camera gear, 166 incorporating landscape, 162 key to success, 165 Nanda Devi, India, 165 photo tips, 167 shooting, 161-168 shooting headcam angles, 166 shooting in crevasses, 166-168 shooting while walking, 166 wide angles for wild places, 166

N

Nanda Devi, India, 162-163 natural light, 72 overhead silks, 76 reflectors, 73-75 ND (neutral density) filter, using, 21 Nikon cameras D3. 14 D300s, 14 P7000, 14 Nikon products 24-120mm VR lens, 17 gels, using, 84 SU-800 wireless transmitter, 82 noise, occurrence of, 129, 131 NOLS (National Outdoor Leadership School), 26, 119 Northern Lights. See also star trails photo tips, 156 shooting, 156-159 nylon clothes, wearing, 7-8

0

office backing up images, 248–251 in Belize, 228–229 editing images, 237–242 optimizing images, 243–248 setting up workflow, 230–236 online photo databases, 250 orange, symbolism of, 54 outdoor flash. *See also* flash half-pipe skier, 94–96 mountain biker, 93–94 overhead cranes, using for video, 225–226 overhead silks, using, 76, 220 over/under images, 103, 117, 121

Ρ

packs, waterproof, 98-100 paddle sports, shooting, 106, 108, 112 Patagonia Synchilla jacket, wearing, 7 pattern, considering in design, 53 Pelican cases, using, 24-25, 98-100 perspective, 61, 63-64, 66 capturing emotion, 63-64 developing style, 64, 66 perspective, changing, 49 Petzold, Paul, 26 PFD (personal flotation device), wearing, 112 photo backpack, including in standard kit, 18 photo bags. See Lowepro photo bags photo databases, online, 250 photo list Adobe Lightroom, 230 Alaska, 4 Alaska range, 28-29 Alaskan stream, 105 angles for rock climbers, 147 aperture for depth of field, 198 AquaTech speedlight housing, 102 Arches National Park, 55-56 available light for portraits, 190 background in portrait, 183 backing up images, 31 Bahamas, 36 Baja, 8-9, 26-27 Bay Isles, Honduras, 121 beauty dish for kayaking shot, 193 Blackbird stabilizer, 214 bouldering, 146 bounced fill flash, 148 Bridal Veil Falls, Alaska, 159 Brooks Range, 48

photo list (continued) Brunton Solar Roll, 30 Brunton Sustain battery, 30 camels, 34 cameras, 14 camping near Denali, 127 camping on Denali, 164 canoeing in Alaska, 108-110 Canvonlands National Park, 47, 141 Chugach Mountains, 10-11 climbers on rope, 165 combining images, 175-177 complementary colors, 55, 69 cooking in backcountry, 128 Coombs, Colby, 44-45 crampons, 160 crane system, 226 crevasse interior, 168 crevasse rescue, 167 cross lighting rock climber, 152-153 Denali National Park, 37 Develop module in Lightroom, 243 dog sledding, 10-11 dry bags, 100 drying out gear, 7 Easy Release app, 40 Eldorado Canvon, Colorado, 124-125 Elinchrom Freelite head with reflector, 115 Elinchrom Skyport system, 88 environmental portrait, 181-182 evaluating light, 73 Exit Glacier in Alaska, 50-51 fill flash, 150 Filter window in Lightroom, 242 Final Cut Express timeline, 227 flash, 78 flash in TTL mode, 79 fly fishing tips, 105 fly-fishing, 65 freezing action, 113 front lighting subjects, 57 gaucho, 184 gear checklist, 42 Gitzo tripod, 21 glowing tents, 129 glowing-boat shot, 123

photo list (continued) Great Sand Dunes National Park, Colorado, 52 half-pipe skier, 95 hard-edged light, 90 Hatcher Pass, Alaska, 69 head cam, 143 headcam for POV image, 120 high-contrast subjects, 59 high-speed sync, 85, 91 hiking in Colorado, 132 hiking in desert, 46 hiking on alpine ridge, 134 hiking toward glaciers, 135 ice climbing, 159 ice formations, 160 ice tools, 160 Iditarod Trail Sled Dog race, 6 image optimization, 244 Justin Clamps, 84 kayaking, 118 kayaking with fill flash, 116 Lastolite TriFlash bracket, 86 lavalier microphone, 218 LED for lighting video, 221 lenses, 15 liability releases, 41 light painting, 80 lighting ratio, 89 local guide in Mongolia, 37 loupe for viewing LCD screen, 215 Lowepro Dryzone 200 bag, 25 Lowepro Pro Roller bag, 25 Lowepro Vertex 300 bag, 24 Manfrotto super clamp and magic arm, 142 manual flash, 79 Matanuska Glacier, Alaska, 44-45, 62, 72 midnight sun, 54 midnight sunset, 129 minimalist camera kit, 17 mixing video angles and perspectives, 211 Moab slickrock, 136-137 model-released images, 39 monitor for focusing video, 215 Mount Lemmon, 144 mountain biker, 93 mountain biker's POV, 141

photo list (continued) mountain biking, 69 mountaineering shots, 164 Nanda Devi, India, 162-163 natural reflectors, 74 Northern Lights, 157 orange gel, 85 overhead crane for video segment, 202-203 overhead silk, 76 overhead silk for video, 220 paddlers, 112 paddling in Colorado, 64 Pelican cases, 25, 99-100 portable audio recorder, 218 portable storage device, 32 portrait in familiar setting, 187 portrait using multiple flashes, 195 portrait with underexposed background, 194 posing subject of portrait, 186 Prince William Sound, Alaska, 52, 120 rails system, 225 Ranger high-speed sync, 92 Redrock Micro Stubling, 213 reflector, 75 reflector for portrait, 191 rock climbing, 144-145 rule of thirds, 60 sea kayaker shot from below, 121 sea kayakers in Bahamas, 120 sea kayaking in Virgin Islands, 26-27 sea kayaks, 53 Search Metadata in Lightroom, 242 Search options in Lightroom, 241 sequence images, 175 shutter speed for portrait, 199 side lighting, 58 Singh-Ray Vari-ND filter, 22 ski resorts, 170-171 skiing frozen action, 174 snowboarding, 172-173 softbox for portrait, 191–192 softbox used for portrait, 178-179 speedlight off camera, 81 Spot Removal work, 245 standard gear, 18 star trails, 130

photo list (continued) Steve's Arete, 144 studio flash packs, 32 studio strobes, 87 SU800 wireless transmitter, 82 sun stars, 138-139 surf and whitewater, 22 tilt-shift lens, 223-225 TriGrip reflectors, 75 tripods, 20, 213 underwater camera kit, 19 underwater housings, 101, 102, 104, 117 use of softbox, 83 video editing, 227 video light sources, 219 video quality, 207 wake surfer, 70-71 West Buttress on Mount McKinley, 7 wetsuit in watersports, 116 white balance for portrait, 200-201 whitewater background, 113 whitewater in Grand Canyon, 111 Wrangell Saint Elias National Park, 132 Photo Mechanic image browser, 233 photographers, pros versus amateurs, 73 photos backing up, 248-251 backing up in field, 30-32 captioning, 231-232 combining, 175–177 deleting in Lightroom, 239 editing, 237-242 high-contrast areas in, 59 increasing tension in, 92-93 keeping vs. discarding, 240-241 order and simplicity in, 59 organizing, 231-232 over/under, 117 searching and finding, 231 searching for, 241-242 sharpening, 247 storing, 31 viewing, 59 Photoshop, combining images in, 175-177 Picasso, studying, 50 pipe shots, shooting, 172-174

planning checklist, 41-43 plug configurations, checking outside U.S., 30 Polarguard synthetic insulation, 7 polarizers, using, 21 polarizing filter, using for sea kayaking, 121 pop-up flashes, 78 portable drives, 31-32 portable power, 28, 30 portraits available light, 188-190 clamshell lighting, 192 Cloudy white balance setting, 200 creating separation, 198 depth of field, 197 diffused speedlight, 191 direct sunlight, 189 downplaying background, 183 environmental, 181-182 establishing rapport, 183-187 formula, 180 highlights, 189 implied, 69 lighting, 58, 92, 188-196 location, 181-183 multiple strobes, 195 natural diffusers, 189 noticing gestures, 187 posing subjects, 185-187 researching subjects, 183–185 shadows, 189 shutter speed, 198 single large strobe, 192–194 single reflector, 191 speedlight and reflector, 191-192 technique, 197-201 white balance, 198, 200 power, portable, 28, 30 predictive autofocus, using with whitewater, 113 PrimaLoft synthetic insulation, 7 Prince William Sounds, Alaska, 120 professional athletes, working with, 38

Q

Quadra cross light, using in rock climbing, 152

R

radiation heat loss, occurrence of, 6 radio wireless systems, using with flashes, 82-83 rafting and kayaking, 111-118 adding fill to flash, 115 adding flash, 114–115 AquaTech housing, 117 freezing action, 115 high-speed sync, 115 predictive autofocus, 113 shutter speed, 113 underwater high-speed sync, 115-118 using multiple speedlights, 115 wearing PFD (personal floatation device), 112 whitewater, 111-114 rails system, using for video, 225 rainy conditions, working in, 8 Ranger high-speed sync. See also high-speed sync freezing action, 91 Hypersync, 91 S-heads, 91 using, 89, 91 using with studio lights, 91 RAW format versus JPEG, 113 rechargeable batteries, using, 28 rectangles, considering in design, 49 red, symbolism of, 54 Redrock Micro Stubling, 213 reflectors advantages of, 75 collapsible, 74 controlling intensity of light, 75 ease of use, 75 Lastolite Skylite, 75 Lastolite TriGrips, 74 making, 76 sizes of, 74-75 throw, 73 tips, 75 using, 73-75 using in rock climbing, 149 using with flashes, 84 releases, getting, 38-40 Rembrandt, studying, 50 respiration heat loss, occurrence of, 6

rock climbing, 144-153 360-degree shooting, 147 ascending lines, 149 battery-powered strobes, 151 big strobes, 151 bouldering, 144, 146-148 bounce flash, 147-148 capturing climber's chalk, 147 collapsible reflector, 149 cross lighting, 152 fifth-class, 144 flash packs, 151 Lastolite TriGrip reflector, 149 lighting climbers, 152 Manfrotto 269HDBU super-high stands, 152 photo tips, 152 photographing climbers from above, 150 Ouadra cross light, 152 on ropes, 149-151 sandbags, 152 storyboard, 206 TTL flash, 151 using Quadras, 151 Rogue Flash Benders, using, 84 Rosco gels, using, 84 rule of thirds, 60

S

safety, importance of, 41 SanDisk flash cards, using, 16, 31 SC-29 cables, using with flashes, 82 SD (standard-definition) video resolution, 207 sea kayaking Elinchrom Skyport transmitter, 122 fisheye lens, 119 glowing-boat shot, 122-123 over/under images, 121 polarizing filter, 121 POV shots, 119-120 shooting creative angles, 119-121 shooting from below, 121 Skyport Universal receiver, 122 using headcam, 119 Valdez, Alaska, 53 Virgin Islands, 96-97

seaming up shots, 175-177 sensor cleaning, using, 245 shadow, creating, 57 shapes circles, 49 considering in design, 49 rectangles, 49 squares, 49 triangles, 49 shotgun mics, using, 217 shutter, holding open, 130 shutter speed, choosing for portraits, 198 side lighting, 57–58 Singh-Ray filters graduated ND, 21 LB Color Combo Polarizer filter, 21 Vari-ND, 21 single-frame action sequences, photo tips, 176 skateboard dolly, using for video, 225 skier, half-pipe, 94-96 skiing backcountry, 169 Copper Mountain, 171 cross-country, 169 downhill, 169 fill flash, 172 flash duration, 174 half-pipe riding, 172–173 heli-, 169 photo tips, 172 pipe shots, 172-174 powder pockets, 171-172 resort, 169 shooting, 169-177 Skyport Universal receiver, 122 sliders, using for video, 225 snoots and grids, using with speedlights, 84 snowboarding photo tips, 172 shooting, 169-177 two-light setups, 174 sock system, choosing, 8, 10 softboxes, using, 83 software Adobe Lightroom, 232–233 browsers, 232

choosing, 232-234 databases, 232 Photo Mechanic image browser, 233 solar-powered panels Brunton Solar Rolls, 28, 30 recharging electronics with, 28, 30 Sorel boots, wearing, 10 speedlight flash. See also flash; lighting advantages of, 78-79 AquaTech housing, 102 bounce flash, 82 changing color of light, 84 diffusing, 83 gels, 84 high-speed sync, 84-86 including in standard kit, 18 including in underwater kit, 19 Manual mode, 79 modes, 78-79 modifying quality of light, 83-84 off camera, 81 radio wireless systems, 82-83 shooting through diffusion material, 84 snoots and grids, 84 softboxes, 83 triggering flash off camera, 80-83 triggering off camera, 82 TTL (through the lens) mode, 79 using, 17, 78-86 using cables with, 82 using for rafting and kayaking, 115 using rechargeable batteries in, 28 using in camp photography, 128 using Lastolite Triflash bracket with, 86 using wireless transmitters with, 82 squares, considering in design, 49 stabilizers, using for video, 213-214 star trails. See also Northern Lights Bulb exposure, 129 cable-release substitute, 130 exposure, 129 long exposure noise reduction, 129-130 photo tips, 130 photographing, 128-131 stars, photographing, 67 steadicams, using for video, 213

Steve's Arete, climbing, 144 stills vs. videos, 204-208 storyboards, creating for video, 204-207 strobes, using in rock climbing, 151 studio flash. See also flash equipment checklist, 43 packs, 32 studio lights, advantage of, 89 studio strobes, using, 87 SU-800 wireless transmitter, 82 subzero weather, photographing in, 12 sun stars jump shots for mountain bikes, 139 photo tips, 139 shooting, 138-139 speedlights, 139 strobe packs, 139 surf and whitewater photo, 22 surfer photo, 70-71 synthetic insulation Polarguard, 7 PrimaLoft, 7

Т

tents. See also glowing tents choosing for camping, 126 shooting exterior images of, 127-128 texture, considering in design, 50, 53 tilt-shift lenses, using for video, 222-224 transmitter, including in standard kit, 18 travel. See also foreign countries in different cultures, 35-36 hiring local guides, 36 researching countries, 36 security concerns, 36 staving healthy abroad, 35 work permits, 37-38 triangles, considering in design, 49 TriGrip reflectors, using, 74-75 tripods Gitzo GT1550T, 17 and heads, 20-22 including in standard kit, 18 for video, 212 TTL flash, using for rock climbing, 151

U

underwater camera kit camera body, 19 checklist, 43 fisheye port, 19 housing, 19 lens port, 19 lenses, 19 speedlights, 19 wireless triggers, 19 underwater high-speed sync, 115–118 underwater housings, 101–102, 117 U.S., traveling outside of, 30 U.S. State Department website, 36

۷

vaccinations, getting, 35 vibrance, adding, 247 video artificial light, 221 changing focus plane, 222 creating storyboards, 204-207 cutaways, 210 DSLR camera support system, 207, 209, 212-213 editing programs, 226-227 extreme close-ups, 210 focusing shots, 214-215 frame rate, 207 HD (high-definition), 207 keeping simple, 209-210 LED for lighting, 221 lighting, 219-221 miniaturizing scenes, 222 M-LCD7-HDMI monitor, 215 natural available light, 219-220 overhead cranes, 225-226 overhead silk, 220 rails system, 225 resolution and quality, 207-208 SD (standard-definition), 207 shooting tips, 210 short-duration clips, 210 skateboard dolly, 225 sliders, 225 stabilizing cameras, 212-214

steadicams, 213 vs. stills, 204–208 techniques, 210–211, 222–226 tilt-shift lenses, 222–224 tools, 210 training for editing, 227 tripod head, 212 using variety of shots, 210–211 wide shots, 210 viewing images, 59 Virgin Islands, sea kayaking in, 26–27 voltage configurations, checking outside U.S., 30 VR (vibration reduction), 17, 20

W

waivers, getting, 40-41 wake-surfer photo, 70-71 Walkabout Travel Gear, 30 water shots, adding flash to, 102 waterproof bags, using, 24 waterproof cases and packs, 98-100 watersports canoeing, 106-110 fishing images, 103-105 keeping gear dry, 98-102 rafting and kayaking, 111-118 sea kayaking, 96–97, 119–123 underwater housing, 101-102 weather, subzero, 12 websites American Society of Media Photographers, 40 Kelby Training, 227 U.S. State Department, 36 Walkabout Travel Gear, 30 West Buttress on Mount McKinley photo, 7 wetsuit, wearing in watersports, 116 white, symbolism of, 54-55 white balance adjusting, 246 considering for portraits, 198, 200

whitewater fast flash card, 113 frame rate setting, 113 freezing, 113 paddling, 113 photographing, 111-114 photography tips, 113 predictive autofocus, 113 safety concerns, 112 wide-angle lenses, 17, 106, 108 winter sports Aurora Borealis, 156-159 ice climbing, 159-161 mountaineering, 161-168 Northern Lights, 156-159 skiing and snowboarding, 169-177 wireless transmitters Nikon SU-800, 82 using in mountain biking, 140 using with flashes, 82 wireless triggers, including in underwater kit, 19 wool clothes, wearing, 7 work permits, obtaining, 37-38 workflow adding metadata, 234-236 choosing software, 232-234 downloading metadata, 234-236 setting up, 230–236 tips, 231 Wrangell Saint Elias National Park, 132

Y

yellow, symbolism of, 54

Ζ

zoom lenses, Nikon's 24-120mm, 17