The Nature Photography Cookbook

60 Easy, Fool-proof, Step-by-Step Recipes to Get You Shooting Like a Pro

Esther Beaton

This book is dedicated to my parents,

Elza and Otto Horvath

You taught me to love the outdoors, fresh air and sunshine.

The
Nature Photography
Cookbook

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Introduction

Welcome to your job as a nature photographer. It is to reveal the beauty of the natural world. Whether you enjoy photographing gorgeous butterflies and birds, scaly reptiles, furry mammals or tranquil scenery, they can all be interpreted to show a magnificence far beyond what the untrained eye can see. You have a special task, to use the gift of your camera's controls to bring the wonders of nature into the lives of your friends and colleagues, or even to people on the other side of the world. As human beings, our souls resonate with the beauty of nature. Who hasn't felt calmed after a walk in the woods? Little jewels of nature - your photos - can brighten up your living room or the desk of a chained office worker. Or maybe you want to bring home the memory of an exotic safari adventure or a memorable vacation. Whatever your motive in producing gorgeous nature photos, I'm here to make it as easy as possible for you.

It takes good camera technique to actually produce photos that are little jewels of nature and mastering your camera can take years. But with this book, I hope to shave months, or even years, off your learning curve. I have been a full-time, professional nature photographer for over 25 years. I started leading workshops two years ago and I discovered that participants wanted to get great results as quickly as possible. Years ago, I was taught the techniques the slow way; it took four years at a professional photography institute. But beginners, amateurs, and even semi-professionals don't have the time or inclination to grind away like I did. So I came up with my "cookbook" system. When you pick up a traditional cookbook, you just want to get the meal on the table - you don't want to become a triple star chef. So that's the mission I've adopted - how to get a fantastic shot - quicksmart.

But wait. Maybe there are a few readers who *do* want the "why" of a technique. Well, I've supplied that too. There is an explanation at the back, in the Glossary, of all the important terms and procedures used in this book. And best of all, there are links from the recipes to the specific term in the glossary. So the choice is yours. Either follow the steps without further ado, or follow the steps and click on the links for short explanation or deeper knowledge.

Who This Book is For

This book is intended for beginning and intermediate hobbyist photographers. The beginning section is not for absolute first-timers, but for those who have been using the camera for a while and want to start getting better or more consistent results. The intermediate section gets into some specialist techniques. If you are not sure what you would call yourself, here are a few pointers to help you assess where you fit in.

You might be a beginner if you:

- have a compact digital camera with a zoom and some manual overrides

- have an SLR camera with one or two basic lenses

- have a built-in flash

- are thinking about a tripod

- might have used filters

- don't know how to get good results.

You might be intermediate if you:

- have DSLR or SLR camera

- have more advanced lenses, either longer focal length or macro or wide angle, or bigger aperture or fixed aperture zooms

- have a separate TTL flash unit

- have a tripod

- have used filters and other accessories or attachments

- have used Photoshop or some processing / editing software.

The chapters, or recipes, start out with simple techniques and progress to more advanced ones. Usually, each technique is simple in itself. Often what makes a great photo is when _several_ simple techniques are combined in the one photo. As a beginner it's hard to think of more than one technique at a time, but towards the

end, you should see that when several techniques are combined, they result in great, high impact photos. And that's when you are becoming a great photographer: when you find yourself combining several simple techniques in the one shot.

In the intermediate section, that is, the last 28 chapters, some of the recipes might seem quite quite simple. However they are located there because they require more expensive ingredients like fisheyes or super telephoto lenses which beginners are unlikely to own.

Types of Cameras Required

There is not much difference between shooting film vs digital. The camera controls might be different and some of the terms might be different but the fundamental principles and techniques are identical.

Most beginning and intermediate digital cameras have a built-in flash so we'll assume you're using such a camera too. If not, a small TTL flash unit mounted on your hot shoe works even better, although the settings might be a bit more advanced.

For nature and wildlife photography, it is essential to have a camera without shutter lag. All SLRs and DSLRs fill this requirement whereas only the newest compact cameras have solved this problem. Another absolute must-have feature is an accurate viewfinder. You can't create great artworks if what you see is not what you get. Being able to view your scene directly, the way you can with an SLR, is critical. The new digital hybrid cameras can do this fairly well.

The Quality setting on the camera

Each recipe starts with setting the basics. The true basics are three: ISO, White Balance (WB) and Quality. (These are the characteristics on which you used to base your film choice.) However, I only give recommendations for two of them: ISO and WB. I'm leaving the choice of the Quality setting up to you because it depends on your camera. For me it is always the same: I set mine to the maximum quality that my camera is capable of. After all, that is why I purchased the camera, because of the quality of its output. I recommend that you do the same, otherwise, you are just throwing away all the dollars those extra pixels cost you. Just like with film, professional photographers would use the finest grained film that circumstances allowed. With digital I recommend using the "fine" or "large" file size, especially if you want to print your photos, and more so if you want to print them to a large size. If

you know you will only be viewing your images on a computer screen, then you can set the camera to a lower quality, or smaller size files, also called "basic" size.

Another aspect of quality is the file type. I always use the RAW setting because it results in the best quality, however only the higher end cameras have this setting. Otherwise, just use the TIF or JPG options offered by your camera. If you think you would like to do some enhancements on your computer with an image editing program like Photoshop, then TIF file will provide better quality than JPG. JPG is a handy file type if you know you won't be doing anything further. If you do use it, it is absolutely critical that you get the exposure right.

ISO
I have tended to recommend keeping the ISO in the low range for most of the photos because in nature photography the quality of the capture is paramount. New sensors coming on to the market are capable of producing excellent images even at high ISOs. If you're lucky enough to have one of these, do take advantage of the higher ISO settings and you might even be able to dispense with the tripod.

EFL or Equivalent Focal Length
There is an explanation of EFL in the glossary. Although the focal length of a lens always stays the same, the effect of that length changes with different film or sensor sizes. Over the years, people have become accustomed to 35 mm film cameras and are familiar with the effect of a certain focal length lens on this size of film. With digital cameras, particularly amateur ones, the sensors are smaller than 35 mm film and are not at all standardized in size. Therefore it's hard to tell what focal length lens to recommend in a recipe because I don't know what sensor size is in your camera. The easiest thing, then, is to refer to the "equivalent focal length" or EFL, as if you were using it on a 35 mm camera.

Here's how EFL works. Let's say your sensor is two thirds the size of a 35 mm or 'full frame' sensor. With a100 mm lens you get a certain effect (angle of view, depth of field, etc.) on a 35 mm sensor but if you put that 100 mm lens on your 2/3 size sensor, it would behave like a much longer focal length lens. It will behave approximately like a 150 mm lens would on the 35 mm camera. You can do your own calculations but a chart based on popular cameras and their sensor sizes is an easier way to figure it out. See EFL in the glossary also.

There is a corresponding effect on your aperture. An aperture of f4 on that sensor of yours will have the equivalent effect of an aperture of f6 on a 35 mm camera. Don't worry about doing all these calculations in your head for now. Just become familiar with the effects of focal length and aperture with *your* camera body, on *your* shots, and gradually you'll get the hang of it.

People

I have added a couple of recipes for working with people. Sometimes you find yourself doing some nature and wildlife shooting and an opportunity presents itself to tell a story. Many of these situations also involve people, especially when they are working with those animals and plants. Being able to take good photos of them too is a great addition to your photographic repertoire. In my case, it's essential for the magazine features I am assigned to shoot for my clients.

Spelling and measurements

I grew up in Australia, Canada and the USA, so I've had to swap back and forth a few times between different spellings and measurements. I have decided to use American English spelling for the single reason of the word "color". It occurs so frequently in photography and photographic programs like Photoshop that it seems silly not to go with the flow.

However, for measurements, I've decide to go with the metric system because it simply makes more sense. For me to go back to imperial measurements would be like stepping back into the dark ages. The metric system is definitely the better one and it is the most commonly used one in photographic equipment - as in a 200 mm focal length lens. (Now is 'mm' spelled millimetre or millimeter?)

Have Fun

This book is designed to get you quick results. That way you stay enthused with your hobby instead of getting bogged down or overwhelmed by it.

While you are developing new skills and gaining more confidence, I hope you also remember to take time to smell the roses and enjoy the beauty and wonder of the natural world. And in turn, may your friends, family and colleagues - all who see your photographs - be inspired by them in turn.

Ingredients

Subject / Location:

- a large, medium-toned leaf, either growing parallel to the ground like nasturtiums, or pick a leaf with strong markings and place it on the ground

Time of day / Weather:

- raining, or just after rain while still overcast; no sun

Equipment:

- normal lens, 40 - 80 mm EFL with macro mode

Method

Set the Basics:

WB	daylight or cloudy
ISO	100 - 400
Exposure Mode	A (Aperture preferred)

1. Handhold the camera and point it exactly downward, so the film plane is parallel to the ground.
2. Compose so that the pattern of raindrops are attractive, perhaps using the rule of thirds. Make sure no edges of the leaf are visible.
3. Select a wide open aperture, around f 2.8 to f4.5.
4. Let the shutter speed be what the camera selects. It will usually be fast enough so no tripod is required.
5. Use autofocus on your camera to focus.
6. Fire (release the shutter).
7. Check the preview. If it looks good to your eye, it is probably a good exposure.
8. Then check the histogram in order to get used to this more accurate way of evaluating exposure. If you have chosen a mid-toned leaf, it will be high in the middle. If your leaf is either light-toned or dark-toned, the histogram might be a bit skewed.
9. Use the plus / minus button [+/-] to increase or decrease the exposure and fire again.

Nasturtium leaves after rain

Why this photo works

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At first glance, we're not sure what we're seeing. Our eyes normally perceive a shrub or tree in its entirety - we rarely concentrate our attention on a single leaf. If we do, we expect a leaf to be somewhat upright, draining rainwater off its surface. But in this instance, we know water can only collect like this on a flat surface, so we're conflicted in our interpretation. This mystery, plus the attractive pattern and tones, holds the attention. Additionally, the beads of water are unusually spherical because of the highly waterproof coating of this type of leaf.

If the edges of the leaf had been included, it would have revealed the secret sooner and the photo would have been less interesting. Many close up subjects, lying flat on the ground, lend themselves to this type of photographic trickery of the senses. Sometimes it's the simplest things that can reveal the most beauty. That is our job as nature photographers.

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Ingredients

Subject / Location:
- single, large flower of a strong, single dominant hue

Time of day / Weather:
- full sunlight, at midday

Equipment:
- a longer lens, about 80 -150 mm EFL, with macro mode, or else a true macro lens

Method

Set the Basics:

WB	daylight
ISO	100 - 400
Exposure Mode	A (Aperture preferred)

1. Pick a blossom that is unblemished, facing the sun, with no strong or distracting shadows on the flower, and at the right height for easy working. Avoid distracting or strong shadows on the flower.
2. Compose with the camera hand-held until you've got a composition with radiating lines. (Most flowers have a centre feature with lines radiating outwards.)
3. Bring the tripod under the point you were holding the camera.
4. Fix or hold the diffuser between the sun and flower.
5. Choose an aperture of f4 to f8 and let the shutter speed be what the camera selects.
6. Focus on the tip of the stamen or style in the centre. Don't worry if anything else is in focus or not.
7. Fire.
8. Check your preview and histogram. The histogram should be a fairly normal bell-shaped curve, but will depend on the tones and colors in the flower.

Why this photo works

Radiating lines from a central point create a simple, strong composition. This type of image lends itself to a range of aesthetic applications from greeting cards to a huge blow up in your living room. The secret is the diffusing sheet which eliminates distracting shadows while still letting enough light through to create vibrant color.

This shot would simply not work as well on an overcast day. It's the presence of the sun that gives depth of color as well as some contrast.

Whenever you use harmonious colors (those that are close to each other and in this case it's blue-magenta-red) you tend to create an image that is called "atmospheric". The peaceful feeling generated is what makes such images suitable for wall art in the home.

Morning Glory Blossom

Chapter 8 Using Fog for Easy Atmosphere

Ingredients

Subject / Location:
  - birds at your local pond or water reservoir

Time of day / Weather:
  - foggy morning

Equipment:
  - quite a long lens, about 200 - 400 mm EFL
  - a tripod, preferably with a ball and socket head

Method

Set the Basics:

WB	daylight or cloudy
ISO	100 - 400
Exposure Mode	M (Manual)

1. Once you're at the pond, identify the subject by drawing an imaginary rectangle around it in your mind's eye, or to put it another way: compose the shot mentally.
2. Think carefully about a good composition, noting the reflections and avoiding distracting elements at the edges of your framing.
3. Bring in your tripod. After you've attached the camera/lens, loosen the head slightly so you can slowly pan if the subject moves.
4. Choose an aperture of around f5.6 to 8.
5. Using your camera's metering readout, set the shutter speed until the setting confirms a correct exposure (remember, you're in manual exposure mode).
6. Check the shutter speed; if it's slower than 1/125th, you'll definitely need a tripod.
7. Focus on a bird or group of birds; then fine-tune the focus on the closest bird in that group.
8. Fire.
9. Check the histogram. It will probably be normal, unless there is a great amount of fog, in which case, you'll need to compensate by increasing the exposure by about one stop.
10. Do this by manually adjusting the aperture dial, or the shutter speed, and try again.

Black swans and cygnets at a dam

Why this photo works

Fog has several benefits. As mentioned in Chapter 2, it diffuses and mutes the background, making the subject stand out. Another benefit is the sheer stillness during foggy conditions. Water surfaces are always calm and perfect for reflections. As the day warms up, a temperature differential is created and the air starts to move. Once you feel the first whisper of a breeze on your skin, you know you only have a few minutes before the fog dissipates. A third benefit is how fog mutes colors, rendering a scene into a harmonious or similar-colored palette. This is always an easy situation to work with and creates great results.

This photo especially works because of the punch in the overall soft scene created by the stark black figures, as well as the contrasting white shapes of the cygnets. And, with the help of the interesting subject matter, it is psychologically pleasing, drawing out emotions from us like togetherness, family, peace, protection, contentment, calmness and serenity.

Ingredients

Subject / Location:

- a landscape vista, preferably with no sky in the background
- with something in foreground, middle ground and background

Time of day / Weather:

- late afternoon of a sunny day

Equipment:

- moderate or normal lens about 40 - 80 mm EFL
- tripod (optional)

Method

Set the Basics:

WB	daylight, not auto
ISO	100 - 200
Exposure Mode	A (Aperture preferred)

1. Stand and look towards the sun - in other words, you're looking for backlighting on your scene.
2. Look over scene and scan for areas of interest: groupings of trees, diagonal fence lines, objects which can be placed in the foreground, etc.
3. Compose the shot roughly through the viewfinder.
4. Bring in your tripod.
5. Fine tune the composition, adjusting the focal length (by either zooming if you are using a zoom lens, or changing to a different lens if not) to crop off any distracting elements, like the sky.
6. Use the lens hood (or hold a card over the lens) to prevent light falling on the front element of your lens.
7. Set the aperture to a fairly small one, about f16 or f22.
8. Let the shutter speed be whatever the camera selects. If it's slow, like about 1/15th or 1/30, you'll need the tripod.
9. Focus about 1/3 of the distance into the frame, in this shot that would be the lump of ground to the left of the log. (You can also try hyperfocal distance focusing if you want more accuracy.)
10. Check the depth of field with the preview button before firing, or
11. Fire and check the depth of field on your preview screen by magnifying it and checking both the top and bottom of the frame. Both should be sharp.
12. If not, stop down to about f22 or f32 and try again.

Salvation Jane in woodlands, New South Wales

Why this photo works

The main reason this shot works, I think, is that everything is in focus. It's not so much the subject matter itself although, admittedly, the great mass of purple flowers is quite an amazing act of nature. It's up to the photographer to execute a scene, grand or otherwise, faultlessly - and it *would* be a fault in technique if any point of this scene was left out of focus.

Another aspect of why this shot works is the fact there is something in each part of the scene to hold the eye. The foreground, middle ground and background all have something of interest, helping the eye transit smoothly from one area to the next. The final touch is the backlighting which reduces the contrast between shadows and highlights and intensifies the purple hue. The small amount of flare on the right edge of the frame, due to not having a lens hood, is not too disturbing.

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Ingredients

Subject / Location:

- a suspended sign
- in a desolate landscape, no background visible

Time of day / Weather:

- sunny day, cloudless
- close to noon

Equipment:

- a short to normal focal length lens, about 24 - 50 mm EFL

Method

Set the Basics:

WB	daylight
ISO	100 - 200
Exposure Mode	A (Aperture preferred)

1. Notice where the sun is in the sky.
2. Look for a narrow branch, a small sign or some suspended object well off the ground and one that is preferably light-toned.
3. Position the subject between you and the sun and walk around until you find the exact point where the object covers the sun completely. At that point you'll be able to see into the shadow side of the object clearly.
4. Frame the scene. Be ready to move in case the sun moves, always keeping every bit of the sun hidden behind the object.
5. Set an aperture fairly open, about f4 to f8.
6. Let the shutter speed be whatever the camera selects.
7. Focus on the object.
8. FIre.
9. Check the preview - not the histogram or highlight flasher as the object will almost certainly be under-exposed.
10. Increase the exposure using the plus / minus button [+/-] by at least one stop (+1.0) and possibly even two stops (+2.0).
11. Fire again.

Homemade entrance sign to outback station, Queensland

Why this photo works

The unusual shapes of the homemade hanging sign is revealed clearly against the plain background of a startling blue sky. (Pointing the camera straight up always gets the clearest, deepest blue.) The unusual circular highlight in the sky is the sun and its glow. Any flare that should have occurred by shooting into the sun is blocked by the subject. Unless the sun is positioned exactly correctly and the exposure too is exactly correct, the excess light spilling around the branch would have blurred and softened it. This is a handy technique to pick out or highlight gnarly twisted shapes as well as creating an image that designers love: one based on simple, graphic elements.