Techniques for Photographing Reptiles and Amphibians in the Field: How to Tell Better Stories (second edition). L. Lee Grismer. 2021. Cicak Books, Temecula, California. ISBN 9798887570051 63 p. Free (ebook).—Lee Grismer is a well-known North American herpetologist who holds the post of Professor of Biology at La Sierra University, California. He has more than 50 years of experience finding and photographing amphibians and reptiles in the field. In fact, in 1999, during the period Lee was working in Baja California, México (1980s–1990s), I spent time with him in the field whilst filming an episode for the Discovery network series O’Shea’s Big Adventure. Since 1996, Grismer has focused his research on Southeast Asia, notably Malaysia, Myanmar, Thailand, Cambodia, and Vietnam, but he has also conducted fieldwork in China, Mongolia, Japan, Honduras, Venezuela, Ecuador, and Argentina. His fieldwork, and that of his international team of dynamic herpetologists, has proven extremely productive. A quick search of the websites Reptile Database [https://reptile-database.reptarium.cz] and Amphibian Species of the World [https://amphibiansoftheworld.amnh.org] reveals that he is a coauthor on the descriptions of 201 lizards (including 148 new geckos), 16 snakes, 61 frogs, two salamanders, and three caecilians, and it is almost certain that additional new species are in the works.

Readers may also be familiar with Lee Grismer’s photography, particularly in his lavishly illustrated Amphibians and Reptiles of Baja California (2002), but also in his two other titles, Amphibians and Reptiles of the Seribuat Archipelago (2011a), and Lizards of Peninsular Malaysia, Singapore and Their Adjacent Archipelagos (2011b). Grismer has also shared his images with other book authors, e.g., Pianka and Vitt (2003) Lizards: Windows on the Evolution of Diversity, O’Shea (2018) The Book of Snakes, and Rodda (2020) Lizards of the World: Natural History and Taxon Accounts. It is clear from his photography that Lee Grismer takes his art very seriously, as do I, which is why I was asked to review his ebook.
Techniques for Photographing Reptiles and Amphibians in the Field: How to Tell Better Stories, now in its second edition, is also illustrated with Lee’s excellent photography. However, this book’s purpose is not as eye-candy for other herpetologists, but to illustrate particular aspects of the image-capturing process enabling others to achieve similar results. Importantly, Grismer is demonstrating that high-quality images can still be obtained with minimal equipment, resulting from budget constraints or what one can comfortably carry into the field. Here, the author explains the methods he has used to obtain high-quality images, sharing techniques that clearly work for him. If followed, they should work for the reader too, but capturing images of live animals can be a very personal process and different photographers can produce similar results using a diversity of equipment and techniques. The byword is “experimentation,” using different techniques and equipment to determine what results are produced and then tweaking them to create even better images. But Grismer’s ebook is a very good starting point for beginners, and also the source of useful hints and tips for more seasoned field photographers.

The Introduction considers what message photographers are trying to convey when pressing the shutter button and capturing a moment in the life of a reptile or amphibian. Also covered here is the basic equipment (e.g., camera body, three lens types, flashgun, and tripod) that may be required to obtain high-quality, memorable images for posterity and potentially for publication.

Chapter 1 is devoted to understanding ISO, which used to be called DIN or ASA. This was essentially the speed of the film in the old days, which was a fixed number that could not be changed from one shot to the next, as it can on digital cameras today. In general, the lower the number, the higher quality the image, and the higher the number, the less light the film required to expose the image, but also, potentially, the poorer the results (see below). For high-quality macrophotography in the predigital era, the standard was Velvia 50 or
Kodachrome 64 film, but for low-light conditions we typically used Ektachrome 400 film. The higher ISOs had larger “grains” (roughly equivalent to pixels today), which would be visible if the image was enlarged (i.e., the picture would be said to be “grainy”). With modern digital cameras, users can, on a frame-by-frame basis, select the best ISO depending on the desired effect and available light.

Chapter 2 covers composition and the type of story the photographer is trying to convey. Grismer’s trademark panoramic photographs are introduced here but this chapter also covers the composition of specimen portraits, where the subject almost fills the frame. This chapter also demonstrates how to introduce some movement into the image, whether it be in the form of a waterfall or a rattlesnake’s rattle. The author discusses how to position the subject so that its body fits well into the geometry of the background, thereby conveying a more balanced and pleasing image, rather than one where the very posture of the subject is at odds with its surroundings (next chapter).

Chapter 3 is about Background. If the subject is a cryptically patterned gecko, for example, the last thing needed in the image is something bright in the middle distance that draws the eye away from the true subject. The background is almost as important as the subject. Accordingly, photographers should take time to consider everything the camera will see and record. The author shares the example of a photograph he had seen of a Desert Iguana (*Dipsosaurus dorsalis*) on a grass lawn. Such a photograph would never be more than a “happy snap” of a pet lizard because it fails to convey any information about the biology of that species.

Chapter 4 is about lighting, which is very important. Perfectly shot images in natural light are masterpieces but they are difficult to obtain because natural light changes as clouds or leaves affect the amount and quality illuminating the subject. Although Grismer demonstrates how a dappled mixture of shadows and sunspots produced by overhead
vegetation can result in quite atmospheric images, a bright sunny day can produce really harsh shadows and forcing a small animal to pose in the direct sun for 20–30 min can be cruel and unethical. This is why many macrophotographers prefer to use artificial light in the form of one or two flash guns. This chapter discusses exposures, full flash, and fill flash combined with natural light.

Chapter 5 is about depth of field and differential focusing. I would have liked to have seen this topic introduced earlier, as it is one of the first things I explain to my students on field courses. The Depth of Field Rule is counterintuitive: the larger the f-stop number, the narrower the aperture, but the greater the depth of field achieved, and vice versa. I tell my students it is one of life’s great imponderables—the other being the off-side rule in soccer, but I explain only the first, and I do this through the medium of beer (see O’Shea, 2010a,b).

Chapter 5 describes how to control the subject. If you are interested in photographing rocks, you do not need to read this next section, but if you photograph live reptiles and amphibians, this is helpful advice because living animals are apt to move away from any potential threat, such as a human with a camera. In some cases, they may also pose an inherent danger to the photographer, such as venomous snakes or lizards when working within striking range. From my own experiences, I think there are additional aspects of controlling the subject that could be included in this chapter. When I was filming in the Komodo Islands, I captured a Spitting Cobra (Naja sputatrix), which I decided to bag and photograph during a break in filming. To prevent reptiles and amphibians from escaping during photographic sessions, I created an enclosure using a one-person pop-up tent comprised entirely of mosquito netting. I would build my imaging stage at one end and zip myself in with my supplies and bags of specimens, then settle the subject on the set and take my photographs confident that the farthest it could escape was behind me. With the Spitting Cobra, this required a little more finesse but I was merrily capturing images of it hooding
when I felt the tent shaking and the cobra’s attention was diverted from the lens to something behind me. It turned out to be a half-grown Komodo Dragon (*Varanus komodoensis*) attempting to get into the tent with us! A slightly more expressive version of “shoo, go away” was sufficient to send it on its way. Some discussion about how to protect the hands when photographing heat-sensitive pitvipers (e.g., gloves, transparent plastic shields) might also fit well into this chapter. At the end of the day the aim is to obtain excellent photographs without injury or stress to photographer or subject.

Up to this point in the book, most of the photography described by Grismer has been done with the subject positioned on a naturalistic set but Chapter 7 covers *in situ* photography, capturing images of the subject exactly where and when it was encountered. The results can be truly spectacular, but these shots require being at one with your camera and confident enough to know you will get the perfect shot before your subject exits stage left, or down a hole.

Chapter 8 is another one that I found absorbing, as it covers wide-angle photography, or the panoramic macrophotography for which Lee Grismer has become famous and to which I shall return later in this review. In this chapter, I especially liked the Red Diamond Rattlesnake (*Crotalus ruber*) facing away from camera so that it was gazing out over the La Sierra University campus, perfectly demonstrating the proximity of the author’s lab to nature.

Chapter 9 provides an annotated list of six steps to taking good photographs, or all the things photographers need to keep in the forefront of their minds while composing and preparing to take the photograph.

Finally, Chapter 10 briefly deals with post-production, cropping, sharpening and color adjustments, and the wonders of Photoshop and other applications that can transform a good image into something extra special. We are not yet at the stage where a rubbish photograph will ever be anything other than a rubbish photograph, as no amount of post-production effort
can add focus where none exists. Perhaps that is a good thing because it means the photographer must concentrate on taking a high-quality image that can be slightly tweaked later, such as the removal of the second flash highlight from the eye of a treefrog if lit by two flash guns (our planet has only one Sun, so only one highlight is usual). This last chapter is then followed by a section of additional reading.

Having read this book, I suppose the first question that must be addressed is why spend money on often-expensive photographic equipment, carry it through the jungle, across the desert, or up the mountain, and then spend valuable time taking fancy shots when you can just as easily pull out an iPhone or a point-and-click camera and click, job done? It is true that cellphone cameras have improved by leaps and bounds in recent times, as have compact digital cameras. Indeed, it may be that under certain circumstances these are the better options. Yet such fool-proof devices generally remove control from the person using them, and with it some of the creativity of photography. Especially when taking macrophotographs or panoramic macrophotographs, they just do not cut it. Autofocus is typically the default setting but is not ideal for macrophotography because the lens may spend ages zooming in and out in search of the proper focal point. During this time the shutter button cannot be depressed. Manual focus is definitely preferable for macrophotography. When Grismer takes his wide-angle panoramic photographs, he generally places his subject to one side of his photograph, rather than at dead center (he explains about the dead space behind the subject). When you entrust control of the settings to the camera itself, unless instructed otherwise, it will often focus on whatever is in the center of the frame. If the real subject is off to one side, it may be out of focus or over exposed because the camera requires more light to illuminate whatever it has focused upon in the center of the frame. Automatic settings are thus anathema for macrophotography because the photographer needs to be in control of the ISO, lighting, aperture (f-stop), depth of field, and the focus points manually.
I said I would return to the imagery that has become a bit of a Grismer specialty, which he considers wide-angle photography and I term panoramic macrophotography. In this style, the focal animal is in fine focus in the foreground, but offset to one side, while its habitat is gloriously displayed, also in focus, sweeping away into the background. This is one instance where the phrase “a picture is worth a thousand words” is true. Without writing a word, Grismer can convey the dank, claustrophobic atmosphere of the tangled secondary rainforest home of an agamid lizard, or the vastness and sheer emptiness of the desert where a species of semifossorial viper plies its trade. No words can compensate for the amount of detail that the eye gathers from that image in a millisecond. And added to that, the image is extremely pleasing to behold and will be remembered for its “wow factor.”

There has never been a better time to take up reptile and amphibian macrophotography and it need not be as expensive as might be imagined. There is wide range of good quality, affordable cameras, lenses, and flash guns available second hand from an array of outlets, and with Lee Grismer’s ebook on the laptop, the techniques and tricks of the trade are, like the images they produce, only a click away.

**LITERATURE CITED**


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