

TECHNIQUES AND PRINCIPLES OF HERPTILE PHOTOGRAPHY

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INTRODUCTION

Since its invention, photography has been an important tool in all branches of science. I specialise in wildlife photography, of which herptile photography is a particularly rewarding field. Herptiles represent a rich range of wild subjects, sufficiently unique to demand a specific approach and exact techniques. There are many levels at which the subject can be tackled; this Bulletin being quite a technical publication, a fairly advanced knowledge of herpetology has been assumed but the photographic aspects are covered from the basics.

CAMERAS

The first consideration to be made is the camera body itself. Cameras are classified by their film format, 35mm being the size most commonly used although there are 'roll-film' and 'sheet-film' cameras which take larger sizes and 'disc' and 'cartridge' cameras which use smaller film. Most professional photographers accept the 35mm camera as offering the best compromise between image quality and ease of use. There are two broad categories into which all 35mm cameras fall - compact and single lens reflex (SLR). Satisfactory results can be achieved with the simpler compact and nowadays there are some quite sophisticated models available. However, with an SLR, what you see through the viewfinder is nearly 100% what you get. With a compact there is more of a difference. This effect, known as parallax error, is accentuated in close-up work, which forms the majority of herptile photography. At a more advanced level, SLRs are really the only alternative but, since they are rather bulky, I always keep a small, pocketable compact on me in case an unexpected opportunity arises. Neither the make nor the model of your camera particularly matter although those best known and higher in the price range are likely to be better - you get what you pay for.

LENSES

Of more importance than your choice of camera body is your choice of lens - the lens is the image. With a compact you are restricted to the standard option (albeit with macro mode on some of the better models). However, with SLRs the choice available is much greater. Lenses differ in what is termed their 'focal length'. Fixed focal length lenses are reputed to be of higher quality than zoom lenses which offer a spread of focal lengths although, due to recent advances, the difference is now minimal. I personally prefer zooms for the assistance they provide in placing your subject within the frame. However, zooms are only made for the popular ranges and it is rare to find a zoom for some of the specialist groups of lenses. For herptile photography your primary lens should be a macro as it will enable you to photograph at up to life-size reproduction ratios, which is imperative for the smaller species. These vary in focal length from 50mm to 200mm. Macros around 50mm require an extremely close approach to the subject, entailing obvious problems, but they are compact and offer completely natural perspective. Macros around 200mm permit one to be a fair distance away but are difficult to handle and have a noticeable effect of flattening perspective. I favour a 100mm lens for a good compromise although



Plate 1. – Grass Snake *Natrix natrix*



Plate 2. – Green Lizard *Lacerta viridis*



Plate 3. – Marbled Newt *Triturus marmoratus*



Plate 4. – Midwife Toad *Alytes obstetricans*

I do have both a 50mm and a 200mm to cover me for all eventualities. As a second lens, a telephoto (between 80mm and 300mm) is useful for the more timid species or those in physically inaccessible locations. Extreme telephotos (from 300mm to 600mm and beyond) are even more useful in this respect although often prohibitively expensive. After a telephoto, a third lens for your set could be a wide-angle (between 20mm and 35mm) which gives you the same view of the world that most herptiles have, although at the wider end of the scale distortion creeps in and can be misleading. So-called 'standard' lenses (from 35mm to 80mm) have no place in herptile photography other than to record colonies or for general habitat-shots.

FLASH

Light is the medium of photography, and being able to control it is as important as a brush is to a painter. Basically, if your camera has no built-in flash (professional ones usually don't) then buy the best you can afford. They are invaluable for freezing subject movement, enhancing clarity and contrast and for promoting correct colour rendition. With many cameras, several flashes can be connected simultaneously, enabling perfect night shots, of mating toads, for example. Specialist flashes are also available, such as ring flashes, which fit directly onto the end of a macro lens, thus providing absolutely even frontal light coverage and eliminating unsightly shadows (especially if equipped with modelling lamps). They also create an attractive catch-light in the eyes of the animal, particularly those with big, round pupils; this can really bring a picture to life. As the perfect partner to my macro lenses, I find one near essential.

SUPPORTS

The last items of hardware to be addressed are supports. There are many types available but they all have the same aim – to keep the camera motionless and thus eliminate camera shake. There are a few hand-held supports but the majority of supports are static; the most stable of all being the tripod. These come in a vast array of different designs. It is important to pick a tripod which offers you the best compromise between stability and weight. Once this has been decided, then attention can be turned to other gadgets such as built-in spirit levels. For low subjects, which often includes herptiles, a tripod with a reversible centre column is ideal or, if mobility is important, a small 'table-top' tripod or ground spike. With these lower supports, a right angle viewfinder attachment will save you having to stoop down. Personally, I have one large tripod (2m) in a case slung under my camera bag and a 30cm table tripod folded up in a side pocket but, with so many choices, the main thing is to pick a support that best suits your requirements.

FILM

The essence of the photographic process is, of course, the film. Nature is above all colourful. This limits the use of black-and-white film to subjects which have extremely strong pattern or texture or to publications such as newspapers which work mainly in monochrome. With colour, there are two basic types of film – negative (also known as print) and positive (also known as slide, transparency or reversal). Positive films undoubtedly produce better quality images than print films, both in tonal rendition and general portrayal of reality. The key difference between all films is their speed. These go from about ISO (International Standards Organisation) 25/15⁰ to 1600/33⁰, but as the film becomes faster (tends to 1600/33⁰) image resolution is lost and this becomes noticeable above 200/24⁰. It is best to use slower films unless lighting conditions restrict you to faster ones. I use Kodachrome 25 for amphibians in daylight, Fujichrome Velvia 50 or Kodachrome 64 for reptiles and Ektachrome 200 or Kodachrome 200 for amphibians at night, when I don't have my full complement

of flashes with me. Negative films worth consideration are Kodacolor Gold II and the new Fujicolor Super 6, a recent breakthrough with outstanding resolution. However, as everyone perceives colours differently, it pays to experiment with others before deciding on a limited number of favourites.

EXPOSURE

Two variables go to make up a photography – exposure and focus. Exposure is a product of shutter speed and aperture value. Under any one light condition, each can be varied in indirect proportion to the other but, to produce correct exposure, the product must remain unchanged. Different films have different ‘exposure latitudes’, that is to say their tolerance of inaccurate settings. Positive films have very narrow exposure latitudes and, when using them, it is better to err on the side of underexposure as this will produce more striking colours. Focus concerns the area of the photographic image that is sharply recorded, the maximum possible with any one lens under any one pair of exposure settings being known as the depth of field. Cameras can be autofocus, manual focus or switchable between the two. Automatic systems are obviously faster but the simpler mechanisms are not always efficient as they are easily confused. However, on the top cameras autofocus is virtually perfected and I rely heavily on my camera’s constant focusing system (up to 6 times per second); it can keep track of the fastest species. Focusing is critical when a large aperture (small number) is selected because depth of field is shallow. A small aperture (large number) means a greater depth of field and less emphasis on focusing but a slower shutter speed is needed which can cause blurring, created by either camera shake or subject motion. The depth required depends on the exact circumstances and having a depth-of-field check button on your camera is useful to help gauge just enough depth whilst still allowing a sufficiently fast shutter speed; some cameras, notably Canon, even have a special mode to assist with this decision. To give you a rough indication you are unlikely to need a shutter speed faster than 1/250 second.

THE SHOOT

It should be obvious that the usual rules for the handling of herptiles are still applicable when photographing them. However, I have seen many photos with signs of animal abuse. Anyone interested in wildlife photography must abide by the Nature Photographer’s Code of Practice, published by the Nature Group of the Royal Photographic Society. ‘The welfare of the subject and its surroundings is more important than the photograph’. As wildlife photography becomes increasingly more commercial, I am concerned that there may be a tendency for some to forget this most vital philosophy. Both the public and the media generalise and we mustn’t let individuals corrupt the profession as a whole. The best method of photographing herptiles is without any physical contact whatsoever. However, if capture is necessary, the stress to which the specimen is subjected must be kept at a minimum. With reptiles, I place them in a container with a soft, dry substratum and leave them in a dark, quiet place. When the specimen has cooled, I take it out and photograph it as it warms up. A cold reptile is easier to handle but a warm one looks more lively so I aim for the best compromise by photographing it until it becomes too warm to control. I then release it in the exact same spot it came from. Temperature makes little difference to amphibians and they are generally more docile anyway. I usually stalk them and only capture one if I need to move it to an area of ground with less obstructions to the lens. It is important to ensure that the background chosen is as completely natural as possible; an obviously artificial set-up can ruin a photograph. It is also important to consider composition carefully. The main point here is to avoid central placement of the subject which can be very dull. A good guide to

this is the 'law of thirds'. In your head, divide the scene, with lines, into thirds, both horizontally and vertically, and try to place your key subject at one of the four intersections.

CONCLUSION

So why photograph? I can think of four good reasons. For me, the main reason is the power my camera gives me to raise public awareness of wildlife, fostering interest in the species with whom we share this planet, to effect a change in people's attitudes. All of this helps to present conservation efforts. Secondly, photographs provide accurate scientific records of species which may be facing imminent extinction or give proof of newly discovered species or behaviour. High-speed photography can show, frame by frame, in perfect detail, events too fast for the naked eye to register, for example a chameleon catching a fly on its tongue. Thirdly, photography is the only method of conducting systematic research, totally without bias, for example a survey of head scale variation in lizards. Finally, photography can add a fascinating and absorbing new dimension to herpetology, an interest which we all share whether as a profession or as a hobby.

ACKNOWLEDGEMENTS

I would like to thank my long-suffering and dedicated assistant, Elisabeth Innes, for her practical help and constructive comments. I would also like to thank my father, Don Elkins, for checking this manuscript, as he does all my manuscripts.

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