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Wildlife Photography in South-Africa

INTRODUCTION

This article describes the technical challenges in wildlife photography. Even though my experiences are based on South African parks they are valid for any kind of wildlife photography, either from the car, out of a camouflage tent or from a hide. The equipment used and the technique is in all cases not identical but similar.

APPROACH

Some of the biggest attractions in southern Africa are the beautiful parks well equipped for the nature lover. The parks are prepared for nature trips with the car or by foot. Even though the large number of parks might increase the wish to see everything on your first trip it is much nicer to stay longer in one location and see more of it rather than hunting from one park to the next one. The extra time spent for not having to travel to the next park is well spent in the nature seeking for new viewings. It's like in photography: less means more. We spent one week just in Krüger and even one week is not enough for his extensive area.

Almost all animals may be observed easily from nearby. Animals are not very shy of cars and the approach is very easy. The animals are even more used to the hides and sitting in a hide for some hours can be a very exciting experience. With a little patience you'll see many different species passing by and drinking a sip from the waterhole or even taking a bath. There are multiple ways to watch, observe and photograph animals in different locations such as:

- In the camp: Walking around the camp, the campground and the gardens will give you the opportunity to experience an extraordinary birdlife and also to watch out for small mammals.
- The car is the predominant vehicle to observe animals. Most of them are very accustomed to cars and show almost no fear. It is easy to approach the animals and take pictures out of the car.
- The Safaris offer an easy way to

find a wide variety of species. As the guides communicate to each other using walky-talkies they will instantly know where to go for a good sight.

- The hide is one of the best places to stay and to wait for the animals to pass by. The quiet surrounding will increase the nature feeling and you feel less like driving in a zoo but more like sitting in the heart of nature and experience the wildlife from a totally different side.
- The walking tours will give you the opportunity to walk on the same ground as all the animals. Even though you will probably see a smaller variety of species the ones you see will leave a deep experience. Standing on eye level with the animals is a totally different experience than watching them from the inside of a car.

The equipment is similar for all approaches but requires adaptation. The problem is that the different approaches will give you a different amount of time to opt for the best photograph. While you are on your own either sitting in a hide or walking in the camp, you will not have any time restrictions and can spend as much time as you like from dusk till dawn. Driving in the park is restricted to the daytime and the gates

will open and close at specific times, mostly after sunrise and before sunset, i.e. you will miss the best times as you need to get from the gate to a certain location and back in the evening. If you are on a safari either in a jeep or by foot you need to follow the guides and cannot stop as long as you like to opt your photographs. However, walking is most of the time much better than going on a safari with a jeep. The simple fact that most people feel more comfortable in the jeep will reduce the number of people participating on a walk. Most of the time we were alone with two rangers and could therefore influence the walking speed and observation times.

As mentioned above, the hide is also an extremely good location to photograph animals. Specially the time after sunrise and before sunset will be the times with the highest 'traffic'. As you are restricted to the hide you'll always have a similar angle of view towards the animals which might be restricting but largely depends on the hide and the view from it. Some hides have very narrow openings to photograph through and it might be problematic to use your flashlight mounted on the camera (more on the use of flashlights for wildlife photography in the text below). Decoupling the flash from your camera using a flashcord is solving this issue.



Cape Vulture, Marakele Nationalpark, camera handhold, EF 400mm f/5.6 L

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EQUIPMENT

Thinking of wildlife photography most people have huge tele-optics in their mind. Even though its also possible to shoot with normal or even wide angle lenses, a good tele lens is the base for wildlife photography. Increasing sensitivities of digital SLR sensors make the use of heavy lenses not a necessity anymore. In addition to that, SLRs with a certain crop factor will give you a more narrow angle with the same lens compared to a full frame camera. Newer models show less and less noise and even with older models such as the Canon 20D the 400 ASA setting can be used without a great quality drop. The big 12kg lenses have a huge price tag and it is therefore preferable to start with something smaller and still adequate for most situations. The smaller the lens the higher will be the likelihood that you will carry it along with you. A 300mm/f4 or 400mm/5.6 lens is a good starting point. All the photographs on this page were taken using a 400/f5.6 lens from Canon. Choosing the lens you should go for quality and check if the lens supports high auto focus speeds. My standard lens is the Canon 400mm/5.6L USM. You could also go for a zoom lens like the 100-400mm/5.6 but be aware of the quality drop between zooms and fixed focal length lenses. A nice comparison is found [here](#). The 400mm lens used on a camera with a crop factor will give you the same opening angle as a 640mm lens on a full frame camera. The aperture of 5.6 remains the same.

Even though a tele lens such as the 400mm lens mentioned above can be used handhold it is much more practical to either use it mounted on a tripod or on a beanbag. The tripod is not very useful in the car. In addition to that the handling of the tripod head makes it a little bit uncomfortable to use on moving subjects. I prefer to use a beanbag which can easily be put on the car door while the window is fully opened. The beanbag is a very stable base as a large portion of the lens is resting on the latter compared with a tripod where the lens is mounted on a relatively limited mounting platform. The beanbag allows to shift the lens

sideward and to follow the objects. It will absorb vibrations from the mirror and makes choosing the right framing very comfortable. The beanbag is also a good platform to be used inside the hide where a tripod again is very uncomfortable to use. I even use the beanbag when not taking pictures for my observation optics.

Be careful when positioning the lens on the bean bag. The focusing ring could be blocked by the bean bag. When AF is active, this is normally not an issue if the lens deactivates the focusing ring in AF mode. But

some lenses, like the EF 400mm I use, allows to override the AF by manual focusing. If you now move the lens it could be that the focusing ring is also moved by touching the beanbag resulting in a unsharp picture.

You can easily build a beanbag on your own. Just fill one or two kilos of dried beans into a bag and you are done. The bag should have a relatively flat size to make it foldable which allows using it in a much more flexible way. I used such a bag for some time but my first bag was too small to be used with a large tele on



Yellow Hornbills are widely spread and can easily be photographed walking around the camp

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A beanbag from Kinēsis

uneven surfaces. I therefore decided to buy a professional one from [Kinēsis](http://www.kinēsisgear.com). These bags are built from Cordura, a very robust material. The bag has a rubber bottom which makes it even more robust when positioned on rough surfaces. The

rubber also increases the grip. Two side straps allow it to change the form of the bag. These straps are especially helpful when mounted on the car door.

An electronic flash will complete

your equipment list. The flash will help to lighten deep shadows, i.e. it is not thought to completely enlighten the scene. The relatively long distance makes even the strongest flashlight useless if the emitted light is not focused into an angle in the proximity of the opening angle of the tele lens. Fresnel lenses mounted in front of the flashlight realises this. These lenses are made of a plastic Fresnel lens hold my two plastic mountings attached directly to the flashlight as shown in the picture below. If not used, the whole unit collapses into three parts and do not use much room. These parts are very light and can be carried everywhere. Fresnels for electronic flash can be ordered at Birds at Art. They offer various versions for different flash sizes. As the flash shall be used to lighten the shadows only, you need to dial in a negative correction factor. The TTL exposure is corrected depending on how much you like to lighten the scene and on the reflectivity of the animal you would like to photograph. Less reflective surfaces such as dark feath-



African Eagles in Krüger Park: I heard them calling when we drove underneath the tree.

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ers require more energy to lighten up than lighter surfaces. The correction factors normally lies between -1.5 and -0.5 apertures but in some cases even values outside this range might be required, i.e. you have to play around with the settings to get a feeling of how much is adequate for a certain situation.

If you are using a tele lens in combination with a flash light you need to keep in mind, that on a standard camera the fastest shutter time for full flash exposure is in the vicinity of 1/250th of a second. This time is the one where the curtains are fully open and the sensor is fully exposed to the light. Shorter time will require the second curtain to close before the first curtain has reached the end of the sensor, i.e. a kind of an open slit is travelling across the sensor. The thinner the slit, the shorter the exposure time. A rule of thumb tells us that you need a minimum exposure time to use a tele-lens handheld which is one divided through the focal length of the lens used. The 400mm lens would therefore require anything shorter than 1/400th of a second. As you can see, the minimal exposure time is too short for a normal flash exposure with a minimal time of 1/250th of a second. The solution is to emit multiple flashes during the exposure. The electronic flash needs to be capable of doing so, but most recent models are. The drawback of multiple flashes is that not the total power of the flash can be used during one exposure. The electronic flash is not capable of reloading the energy that fast from the battery and therefore only a fraction of the total capacity loaded from the batteries can be used for each flash of one exposure. A powerful flash is therefore required. I use the 580EX from Canon and its power was always enough to brighten the shadows. If you realize that the power is too limited during a shoot you may increase the ISO value on your camera to circumvent the problem. Longer exposure times are also helpful as less flash triggers are required (the slit between the curtains is wider).

As mentioned above, the limited opening that some hides offer do not allow mounting the flash on the cam-



The Fresnel lens and its holders together with the electronic flash are shown on the left, the whole assembly ready to use on the right.

era. You may therefore add a flash cord to your equipment to make it possible to use the flash decoupled from your camera. In this case you should carefully direct the flash as the light from it is now very directional and requires to be nicely aligned with the direction of your tele lens.

More details on how to use a flash to lighten shadows are found in the Book [The Art of Bird Photography](#) from Arthur Morris which I wrote about in the [Books](#) section.

Beside the tele lens you should always have some lenses with a smaller focal length ready at hand. Some objects require shorter lenses (think of a giraffe approaching you car!) and it might also be nice to show the animals in their surroundings. A

good secondary lens is a 70-200mm lens possibly mounted onto a second camera body.

Wildlife photography will lead to extensive shooting and therefore you'll end up with a huge amount of data at the end of the day. Besides having a large flash card in your camera and a spare one at hand you should think of a back up strategy before you travel to remote places. The easiest (but not lightest) way is to travel with a notebook combined with an external hard drive. The notebook has the big advantage that it allows you to already have a look at your photographs in greater detail and already do some selections and delete the unsharp photos for example. You will also have the opportunity to analyse the photos and learn from them, for example if the flash setting is correct or if your photos

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are sharp i.e. if there are focusing problems or if the exposure time is frequently offset. When using a notebook you'll first have to save the flashcard to your computer, make a backup on the external hard drive and then delete the data from your flash card by formatting it in the camera.

The problem with the notebook is, that you spend too much time in front of your computer even when travelling instead of relaxing and enjoying your travel destination. A dedicated back up device will solve the back up problem much nicer. You simply plug the flash card into the device and the device will save the data on its internal hard disk. If you have not enough flash cards with you, you need to have another device for backups, as you have to reuse the flash cards to take pictures. Or you simply take the risk and have the photos saved at only one location. The device should be capable of reading the data from the flash card at high speed and validate the data after copying. A good device which I own myself is the [Hyperdrive](#) which offers straight forward control, fast copying and preview even of RAW data files. The device is that good that I even use it

at home to make secondary backups. Beside the photo equipment you should carry binoculars and a spotting scope to make observations. Some animals will always be too far away to photograph but close enough to observe. A good guidebook about where to watch as well as field guides about birds, mammals and plant should always be at hand. Dedicated books are found in the shops within the parks but it's always nice to be prepared before travelling to a location, i.e. I recommend to buy some guidebooks before your journey.

TAKING PHOTOGRAPHS

As usual you should go for the RAW format to get the best quality of your pictures. The RAW format will not allow you to shoot as many pictures in continuous drive as the buffer will fill up much faster compared to the jpg mode. You will also fill up your flash card much faster than with jpeg. But the quality issue is more important to me and I therefore always shoot RAW. When shooting RAW you should expose to the light. This means that your histogram should show you well exposed exposures that make use of the high-

est light levels your sensor can work with. In this case, the levels should be distributed in your histogram as much to the right (where the light values are located) as possible (expose to the right). However you should be aware of not overexposing the picture (use the overexposure warning of your camera which will show you overexposed areas with blinking lights). A small issue with the histogram is its origin from a jpg based file. This means that the camera will take a camera internal jpg file as the base to calculate the histogram rather than the RAW file. The RAW file will however have a wider dynamic range than that jpg file, i.e. some overexposure can be tolerated and will be equalized using the highlight recovery tool in your RAW converter. You have to test how much overexposure is possible with your camera but in general 0.5 exposure values should be OK.

You also have to be careful using the fill in flash as described above. The camera display will normally give you the feeling that you still need to increase the fill in power. The fill in flash will show its highest effectiveness when not easily detectable in the picture which makes its use a little complicate. It's better to use



This photograph of a warthog was taken out of a hide in the evening hours. The animals approach the waterhole to take a bath

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less power than to overkill.

As mentioned above, the exposure time needs to be short to reduce vibration effects of your tele lens. Divide one by the focal length of the lens used to get an idea of how short the exposure needs to be for optimal sharpness. Sometimes this time will be too short to get a good exposure with the used ISO value. If the latter is already relatively high the only way to go is to carefully mount your camera and use longer exposure times. When using the

beanbag and using a pre-exposure mirror flip up exposure times can be increased dramatically. The beanbag gives a very stable platform. Be careful though that the animals will not wait for you and will not stand still for longer exposure times. In most cases their movements limit the maximum exposure time rather than you camera mounting.

Some tests about the maximal exposure time that is possible handheld is found in the article [tripod](#).

DAYTIME AND SEASON

The usual rules for photography apply when opting for the best time of the day to shoot. The morning and evening hours bring the soft warm light and lower contrast into the scene. Shooting over longer distances in warm areas could already cause problems with thermal air movement which causes decreased sharpness in the picture. The morning hours are the coolest and this problem occurs less. Zones



This hypo was captured during one of the walking tours. Mentioned to not touching the water surface as this equals entering the hypos territory...

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Impala Antelopes shot from the car.

with good vegetation also diminish this problem. During the daytime it's ideal to shoot in forests or other shadow areas. Birds are ideal to capture during the day as they hide in the shadow zones of trees.

Choosing the right season is heavily influenced by your personnel taste. The winter in South Africa is very dry with rare rainfalls. There is a lot of sunshine but days are short. It's getting dark quite early and you have to adapt yourself to getting up early and going to bed early too to get most of the daytime for shooting. This dry period of the year will cause yellow colours everywhere. The ground is dried out, the bushes will loose their leaves and in general, the vegetation is waiting for the water. The animals will visit waterholes more frequently and are relatively easy to spot because there is less vegetation to hide. The same applies for the birds which are much easier found in the thin vegetation of some trees. All this is good for pho-

tography, but you have to be prepared not to see too much green.

If you prefer the highly saturated colours of spring and summer, November is the best time to visit. But frequent rainfalls could be the downside. November is also the high season and you have to check for local holidays to circumvent overbooked camps. Myself, I like the dry and calm season. Walking in the yellow dry grass means being in Africa to me.

ABOUT THE AUTHOR

Bernd Margotte is an active photographer since more than 20 years. His focus areas are landscape and street photography.

Bernd's technical knowledge is based on a master in technical photography and years of experience.

On his web page www.berndmargotte.com you'll find a wealth of technical articles, photo galleries and folios.