

A Guide to Big Cat Photography



Introduction

The purpose of this guide is to give you some top tips for getting great pictures. Big cats have a personality all of their own and each breed is quite different. This will affect how you photograph each species of cat. For instance some are quick and move rapidly, others will sit and take a more leisurely approach. This guide is set out into sections so you can dip into the bits most relevant to you.

So what do we mean by Big Cats, begin start with the rarest cats in the world, The Russian Amur Leopard, around 150 in captivity and only 30 in the wild, then we have the Snow Leopard, now only found in the inaccessible hills and mountains in Pakistan. On the Tiger front you have the Sumatran Tiger, then the Amur Tiger as it now know but better known as the Siberian Tiger. Then there are Lynx, Lion, Cheetah, Serval and Puma also known as the Mountain Lion or Cougar – they are all the same cat.

First of all don't be fooled into thinking that you need a top of the range film or digital SLR camera and lenses to get great pictures. You don't. Both compact and the intermediate bridge cameras are more than capable of capturing great images. Many people that have come on Big Cat Photo Experience Day have started with a compact camera and found that they can get great images. They have returned and some have even found that they got so much more from photography than they ever thought they could. Others just come and enjoy the close contact with such magical animals.

This guide is based upon many years as a [professional photographer](#) capturing some of the rarest cats in the world, all kept within a private collection for breeding purposes with the aim that they are returned to the wild, so long as the human race hasn't destroyed the original habitat. For the Sumatran Tiger, that I fear is a rare hope, but with new cubs born late 2008 there is a glimmer of hope.

Compacts / Bridge Cameras

The real benefit of these cameras is their size. Being small and compact they fit through the wire of the enclosure so that's one less thing to worry about. All you do need to do is watch what the cats are doing so they don't take your camera off you! And trust me if they get hold of it they will win – no negotiation!

Captive animals are quite nosey so you will find they get too close. Key settings would be close-up / macro or a sports mode if you are using pre-set shooting modes. More advanced cameras have Aperture Priority, Shutter Priority and Full Manual. If you are more comfortable with these settings then please read the sections below for Film and Digital SLRs as the same rules apply.

One main limitation of these cameras is what is called “shutter lag”. This is the time the camera takes to fire the shutter and capture the image after you press the shutter release. On slow moving subjects this won’t be so much of a problem, but on fast moving or erratic moving subjects this is where this will be noticed. You aim at the head and the camera takes a picture of ----- the tail!

ISO – Film Speed or Sensor Sensitivity

The speed of your film or sensor sensitivity as it’s really called on a DSLR will affect the camera settings in a given light. A typical sunny day will let you shoot on ISO 100 or 200, being the base setting of your camera depending upon the brand of camera or film you’re using. With a DSLR you have the ability to change your ISO or sensor sensitivity as the light changes, so you can go up and down from 100 to 200 or 400 (or more) as the light changes. With film you are fixed per roll. OK you can “bump it” up or down but only if your film processor knows what they are doing, automated developing just won’t hack it and will leave you with a ruined roll of film. As a commercial photographer I shoot digital and enjoy it – when all the technology works of course!

Using a second body is an option if you can afford it as it gives you another lens to shoot from or another roll of film different from the first body. Lenses of course are interchangeable.

With speed or sensitivity comes a compromise – noticeable pixels, noise, grain call it what you will. The higher the ISO the more noise or grain there will be. But, and a big but, under exposure will create more noise than high ISO – so make sure the shot is exposed correctly. Being a [commercial photographer](#) amongst other things, I shoot using Nikon cameras and with these I have to shoot slightly over exposed to get the shot right – Nikon metering seems to be slightly on the safe side in my experience.

White Balance

This is not an easy setting to explain, but it comes down to the colour of light. What I hear you say, but all light looks the same to me, yes it will, the human eye and brain is very clever, it shows you a white subject as white in any light so you can’t actually see what your camera sees.

Until that is you take a picture indoors, ever had a picture on a digital or film camera come out yellow, blue or orange? Light is measured as a temperature similar to that of heating a metal rod in a flame. The colour moves from orange to white and finally blue. Now this isn’t measured in degrees C or F but in the wider scientific range called Kelvin. Digital cameras use this Kelvin number to determine the colour of light.

For example Orange is at the warmer or lower end around 3400K the same as a household bulb with a tungsten filament, also known as incandescent– day light and studio flash is around 5200K to 5600K and fluorescent light is a real nightmare depending upon the type of tube and colour temperatures vary from 2700K up to 7200K – so pretty much the whole spectrum.

Tip - on a dull, flat grey day use the pre set white balance of Flash – it gives a slightly warmer shot.



Tip – don’t use and avoid Auto white balance for two reasons. While it might be fairly accurate light is not a fixed entity it changes all the time and so too will your cameras setting for White Balance when on Auto.

Secondly if you then go on and edit your images you have the potential for having to manually correct each image if you're not happy with the setting. And on a Big Cat Day guests regularly shoot 400 to 600 images – now that's a lot of time chained to your computer.

Tip – pick a pre-set value, even if it's wrong, some cameras allow fine tuning warmer or cooler. If then you want to edit the images at least you can batch process all the images in one go as the White Balance value will be the same – so too will be the adjustment. Just shoot RAW, then you can correct it, Jpeg gives you less control.

Tip – try taking a custom white balance measurement if your camera has this setting or function.

Tip – remember a Snow leopard is Grey and White – it should not be cream.

Film and Digital SLRs

Camera bodies vary in design and my view is that megapixels aren't the be all and end all of good quality images. As an example a 6 mega pixel camera will get a more than an acceptable image, in fact many press photographers only until recent years used a high quality, robust 4 mega pixel digital camera body, like the Nikon D1H. Why, because other functions are more important.

Whereas the norm for many manufacturers is now, at the time of writing this [Big Cats](#) guide, is to offer 10 – 12 mega pixel camera bodies, other key features come into play.

Autofocus - General

AF-S , AF-C or Manual, Single point, Multipoint Dynamic or Closest Subject ?

AF-S will give you a function that shoots only when the cat or subject is in focus. AF-C gives you a continuous mode where by the AF systems tracks the subject adjusting focus all the time you have the shutter release pressed part or half way down and the focus point on the moving subject. This is good for fast / moving subjects, the shutter will however fire even if the shot is not in focus. 3D tracking found on Nikon cameras is good for some subjects as it tries to work out where the subject will be if it leaves the focus area or frame – try it and see how you get on, you may find you come back to a dynamic – movable – focus point chosen by the photographer – you!

Manual focus gives you total control but chasing a moving subject is harder} and takes time to practice.

Metering

Spot, centre weighted or matrix / average?



The main problem with Matrix is that it takes an average setting across the whole frame so you can end up with an under exposed or poorly exposed image especially if you catch some sky in the frame. This being brighter, normally, makes the camera close down the settings, leading to an under exposed subject.

For better and improved results with cats I find centre weighted works best as the camera metres from the centre of the frame and this is normally where the subject matter will be.

Spot metering would be best used for a close head shot where the cat is stationary being sat or lying down, as you'd find with the Lions in the afternoon after they are fed.

Part two continues with more settings and equipment discussions as well as common mistakes.

Lenses

Here you have quite a few choices, these points are discussed below.

Specific Lenses

Macro – a close focusing lens ranging from 50 to around 110mm in focal length – the longer the focal length the further away from the subject you can be. The drawback – foreshortened depth of field – you have just a few millimetres to get the focus point correct – so you'll need a still subject matter. But you can get some amazing close ups of teeth and paws.

Standard Close Focusing – this would apply to a 30mm or 50mm prime lens but one that has the ability to focus down to around 8 to 12 inches. These lenses can give you close dramatic pictures when on a Big Cats Experience Day.

Standard Zoom - for me this would be a lens similar to an 18 – 70mm or the 17 – 55mm. Similarly there are some longer standard zooms such as the 24 – 70mm or even a 24 – 120mm. The choice is yours and it comes down to which part of the zoom range you want to operate within, remember on a DX body the lens will be multiplied by a factor of 1.4 to 1.6 depending on which brand of camera body you have. So your 17 - 55mm multiplies up to around a 25 – 82mm when compared to a 35mm film camera or an FX digital body. On an FX body – being full frame the focal length is as stated. But remember if you use a DX lens on a FX body you'll get a darkening of the edges, called vignetting.

Fast Zoom Lens –by this we are talking about how much light the lens can let in at its widest aperture. For example a lens with a minimum aperture of F6.3 will let in far less light than one of F2.8. Remember the smaller the number the bigger the hole in the lens and the more light it lets in. This then gives you faster shutter speeds, which you need with longer focal length lenses, for example those over 200mm. Tip – you should always keep your shutter speed over your focal length – so if you're at 200mm, you need 200th of a second, but hang on you're using a DX body and lens so you need to add in the crop factor multiply by 1.4 to 1.6 so at 200mm you really need 320th or 400th of a second. Even some standard zooms with F2.8 aperture used by the professional photographer can still be expensive, for example the Nikon 17-55 F2.8 is around £900.

Standard Telephoto – this would be something like a 70 – 300mm lens or some of the more all day lenses – like an 18 - 200 or 55 – 200, all day lenses are covered below. You can get a 70 – 200 F2.8 but these are pricey, most standard telephotos range from F4 to F5.6 in terms of speed and are good all round lenses, just watch the light levels. OK you can up the ISO but again remember the noise compromise.

Super Telephoto – this would apply to either a lens over 300mm or one that I feel is a prime lens, fixed focal length, that sits around F4 or F2.8. These are {very expensive | not cheap} lenses and entry levels are around £2,000. Personally I like to use the 200 - 400mm VR lens from Nikon, now {selling | checking in | priced} at a suggested selling price of £5800, but I didn't pay that for mine, I got in before the 2009 price rise.

All Day lenses

A Definition – by this we are discussing an all in one lens, a lens that will cover from wide angle to standard telephoto, for instance an 18- 200mm.

The Benefits – it gets you all the shots you need, no swapping lenses no down time. Often light and compact they are not much to carry about.

The Compromise – optical quality! You're asking this lens to do a lot. A prime will always out perform a zoom. And an all day lens has to do a job at all levels through the zoom range, the edges of the image will suffer and so too will the speed of the lens, remember the F number and the amount of light it needs. You don't find professional lens made at F2.8 or faster that cover that wide a range – and there has to be a reason for that – optical quality – Pros carry 2 or more camera bodies with a shot and a long lens set up using matched equipment.

Depth of Field

Depth of Field (DOF) - if you are fortunate enough to own f2.8 maximum aperture lenses then be mindful as to how short the DOF can be, especially if the subject comes within the zone where the distance to subject is under the focal length – for example, the DOF on a 200mm lens will be further foreshortened if the subject is inside a 2m (2000mm) range in front of the lens. Some 200mm lenses will focus as close as 1.5 – 1.8m so the impact of this is that you may focus on the nose of say a tiger only to find the eyes are blurred, or out of focus.

Shutter Speed

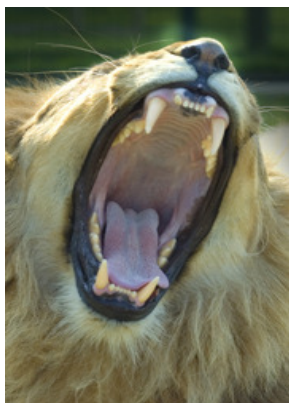
Remember this guide as we mentioned earlier – keep your shutter speed above the focal length of your lens, e.g. 200mm shoot at 250th sec or more, allowing for the crop factor I'd suggest at least 320th sec on a 200mm lens especially when shooting head shots on a Big Cat Experience Day.

RAW or Jpeg

This is probably as much discussed on the camera forums as brand names, each has its advantages and disadvantages. Personally I shoot RAW as it gives you an insurance policy if the shot is slightly out. Added to that I personally think it gives you more editing options. The choice as they is yours. I do shoot Jpeg for press work but only because you don't have the time for post production.

Image Composition

Detail – this is great option, stripes, spots, eyes, ear noses and tails – there is so much choice.



Action – running, jumping, pawing for food on the ground or in the air, lost of options. And when it all kicks off with the three male lions make sure you're ready.

Portraits – sitting, lying down with a full belly and a low sun in the sky and the lions look great. Contrast that with an angelic Tiger that just can't be bothered. All of these give you great options for images.

Close up – teeth, paws and claws, similar to the details shot but much closer, using macro photography.

Use of flash - this is an option, watch out for green or yellow eye, this is the same as red eye in humans and it's a lot easier to get and harder to get rid of due to the size of the cats eyes. Also watch out for the cage, make sure the flash gun is a fill to the available light and close to the wire else you get wire stripes.

Common Errors

Wire – while the gauge of wire will have an effect on what can be done, I still see many shots with the wire right through the middle of the image. It's best to get the centre of the lens lined up with the square of the wire – i.e. the hole. Ensure you don't have a vertical or horizontal wire passing in front of your lens or worst still a join, giving a big cross in the shot.

Background – try to get the background as natural as possible use head shots or a short depth of field to blur the background. Also use any landscaping in the enclosure to mask the cage behind or above. Remember to get down low, take the cats perspective.

Machine gunning! – is the photographer that presses the shutter button for extended periods of time, shooting continuously without checking the shots back. This will fill up your memory cards very quickly and give so many similar images to edit, when all you really need are short bursts of 3 to 6 shots. Take your time.

Metering – Try and avoid matrix metering and use spot or centre weighted, remember to metre off the subject. Matrix metering is too general for Big Cats.

Accessories

Tripods – these are not really suitable around Big Cat enclosures as they are awkward and you don't have the flexibility to move.

Monopods – these are very useful on longer lenses and have the ability to be more manoeuvrable.

Laptops – if you have one it's a good idea to download your shots half way through the day. Alternatively use the laptop to check shots back, say at lunchtime, and see how you are getting on. Also remember to back up your cards – the last thing you want is a card failure and no images.

Extra cards – a very good idea, keep them smaller, now-a-days around 4GB. 16GB cards are all well and good but if it fails, that's a lot of lost data. 1GB used to be {thought of as | considered} large, a while back, now using this card in a modern DSLR and it more resembles the number of shots you'd get on a roll of film.

Clothing – Check the weather before you go. Take a few options to allow for a change in the weather or for getting down on the ground.

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