

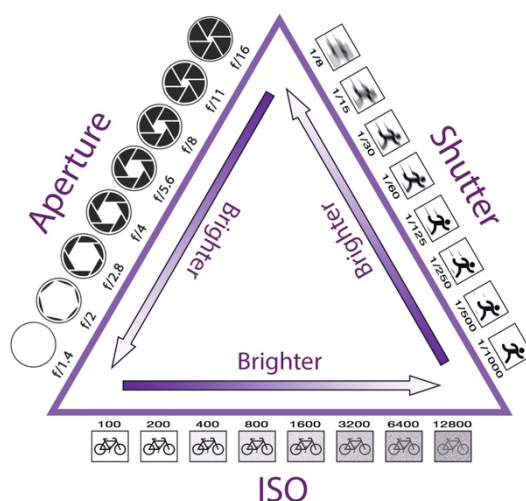


NATURE AND WILDLIFE WORKSHOP – 14 April 2024

Notes for Participants

The Exposure Triangle

- This relates to the relationship between aperture, shutter speed and ISO.



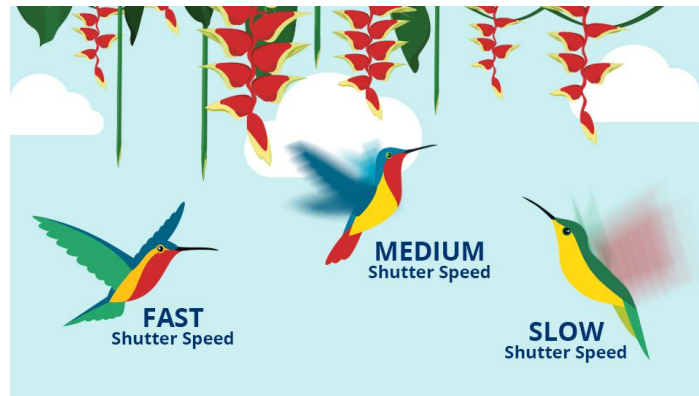
- Aperture, shutter speed and ISO make up the 3 sides of the triangle. They work together to create a properly exposed photo.
- If one variable changes, then at least one of the other variables must also change to maintain the correct exposure.
- Aperture refers to the size of the circular hole in the lens that lets in light. The bigger the hole the more light that reaches the sensor.
- Shutter speed is the length of time light is allowed to hit the sensor.
- ISO is the final variable in the exposure triangle. In simple terms, ISO refers to the sensitivity of the sensor. So with higher ISO values the sensor doesn't need to collect more light. With a low ISO value, the sensor will need to gather more light to make a correct exposure.
- Here's the catch. All 3 variables must work together. So for any correct exposure if you change one variable you must change either one or both of the other variables in the opposite direction. For example, if you decrease your shutter speed by 2 stops then you will have to increase your aperture or ISO by 2 stops or alternatively your aperture and ISO by one stop each.

Camera Settings

- The camera gives you setting options from fully automatic to shutter speed priority, aperture priority or full manual mode. It's your choice but there are some very important things to remember.



- The shutter speed must be fast for moving subjects. Here shutter speed priority may be your setting of choice. The trade-off is a wider aperture or higher ISO.



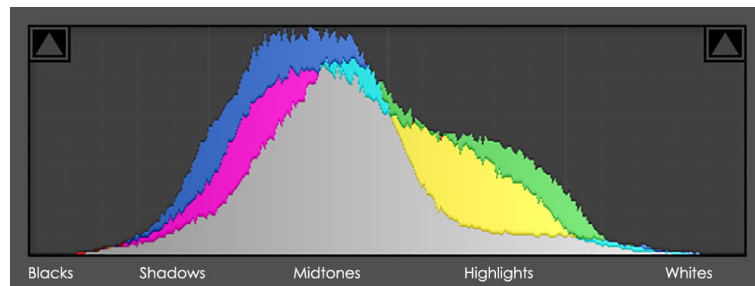
- For stationary subjects, a quite low shutter speed can be used. I believe 1/250 is as low as you might like to go. This again has a trade-off with the aperture and ISO. So for stationary objects aperture priority works well.
- I'm a fan of full manual mode as it gives me complete control over all 3 light sources.

Exposure

- Do not under expose in dark situations. You will then have to increase the exposure in post-processing and this will make your image even noisier than a lighter image taken with a higher ISO in camera.
- Look for lighter backgrounds as they show less noise.
- ISO is a very important factor here. Many use auto ISO but by doing this you're giving your camera control. For example, in very bright situations your camera will want to expose for the highlights and you will end up with a silhouette instead of a subject with lovely detail.
- For those with mirrorless cameras and/or some de-noise software application grain is no longer such an issue. I would much prefer some noise that can be corrected in post-production rather than a blurry photo that ends in the bin.
- A low ISO means slower shutter speeds, and this simply doesn't work for action shots or photographing the unexpected. If you're stuck on low ISO you'll have to sacrifice speed or aperture to get a correct exposure.
- A wide-open aperture isn't always the answer. f/8 will enable you a deeper DOF and you will get multiple birds or more of your subject in focus. An aperture wide open works if the light is very poor. In these situations, you can get creative and have blurred wings or show movement in your subject, however, the eye(s) should be in focus.

The Histogram

- A histogram is a graph showing the distribution of light in an image (the tonal values). The tonal values range from black (0% of brightness) to pure white (100% of brightness). The dark tones or 'Blacks' are shown on the extreme left of the histogram. As you move right the tones get lighter from 'Shadows' to 'Midtones' to 'Highlights' and 'White'.



- With mirrorless cameras, you can have a live display through the viewfinder.
- For those with DSL cameras, you can find the histogram in the menu.
- The histogram is an extremely important tool, especially in the field.
- Not all histograms need to be bell-shaped. Much depends on the actual scene. A histogram indicated to the left or right can be quite acceptable.
- However, if any part of the histogram is touching either edge there will be loss of detail called clipping and this cannot be recovered. This may indicate the need to alter the camera's settings.

Exposure Compensation

- This is a very useful tool. The camera doesn't always read the correct exposure in tricky situations. It's the perfect way of overwriting the camera's settings.
- For example, use it if the subject is dark and the background is light and you want detail in the subject. Move the compensation dial in the plus direction.
- If the subject is say a white bird and the background is dark the camera will expose for the background and your white bird will be spraying you with overexposed blinkies. Here move the compensation dial in the minus direction.
- You will need to have auto ISO turned on if you are in full manual mode otherwise exposure compensation will do nothing.
- With exposure compensation, all you are essentially doing is overriding the camera's settings.

Composition

- With any photograph, composition is very important. When photographing wildlife, get your documentary shot then look away from your camera and assess the scene.
- Look for distractions. Are there branches, twigs or leaves in the way? Can I move quietly to get a better view? Is the background noisy? How can I improve this image?
- BE PATIENT. Does the subject have its back to me? Wait, it will turn around (sometimes). Subjects' backsides or subjects walking/flying away do not make for good photographs.
- Make sure the eye is in focus.
- Action shots make for good images. If you are waiting for your subject to start moving zoom out to give the subject some space to move otherwise, you'll end up with half a wing or a backside and no head.



- The rule of thirds and the rule of space are as important in wildlife photography as they are in any other genre of photography.
- It's also good to get the background to fall into the rule of thirds.
- Use these rules when working out how much to crop.
- Horizons need to be straight.
- Water ripples need to run straight.
- Other considerations in composition include light, leading lines, texture and space. You don't always need to crop in tightly in camera. The habitat can be just as important to the story. Leave room around your subject. This gives you opportunities to tweak composition in post-production.
- Consider vertical orientations for tall subjects.
- With birds in flight shots try to get a horizon as this shows the bird in its environment.
- Framing is also an important aspect of a visually attractive image.

Light

- Early morning or late evening usually always makes for more appealing images. Harsh midday sun will cause burnt-out highlights and deep shadows.
- An overcast day will eliminate the harsh sun and enable you to photograph all day.

Perspective

- This is a very important aspect of wildlife photography often overlooked. Get down or up to eye level. This means lying down, climbing higher or stepping back.
- If your subject is say a bird high up don't stand under it but rather step away and you will have a much better perspective.
- If you get down at eye level you'll get a lovely blurry background which will show an impression of an horizon and give the subject perspective and a sense of environment.
- If the subject has a reflection in still water then this also makes for a lovely image and for this you will need to be a little higher.

Customised Settings and Back Button Focus

- I used to never use back button focus but now I'm a convert. Again, it's all about learning your camera and taking full control. I use 3 back button dials: one for eye focus, one as a spot focus and one for a larger focus area. This way you never miss focus especially for moving subjects like birds in flight.
- I also use the mode dial for ISO, the front wheel for shutter speed and the large back wheel for aperture.
- All settings are at my fingertips and can be changed quickly and easily.



Backgrounds

- We all love the milky blurred backgrounds. This is achieved simply by ensuring your subject is well separated from the background.
- Larger telephoto lenses will compress backgrounds. By being further away from your subject you are merely shifting perspective and giving the appearance of the background being closer. The further away you are and the greater the focal length you use, the more pronounced the lens compression will be and the closer your subject will appear relative to the background.
- Larger telephoto lenses also blur the background nicely making the subject stand out.
- Try to avoid cluttered, messy backgrounds. This isn't always possible but always keep it in mind when you're out in the field.

Perches and Feeding Stations

- Great for birds in your backyards and elsewhere.
- If you go down this path, be mindful of others who might also be photographing at your public location.

Art vs Documentary

- Stretch yourself. Get creative. Look for the pretty as well as the documentary image. Actions, expressions, and personality will all give your images life. Would I like this image on my wall? These are all things to consider. Multiple exposure and ICM are techniques that can be utilised to create a pleasing image.

Ethics

- Remember ethics and the safety of the subject ALWAYS come first.
- Never try for a photo at a cost to the health, welfare and safety of the subject.
- Sometimes you watch from afar and move on. Breeding sites are not made public or published for a reason.
- Have fun and love nature and wildlife.

Adelaide, South Australia

05 April 2024

© **AMANDA LUKER**

Acknowledgements

1. *The Exposure Triangle* – from www.bhphotovideo.com
2. *Shutter Speed* – from www.bhphotovideo.com
3. *The Histogram* – from www.naturettl.com