

Mastering Shutter Speed

helping you to better understand your digital SLR camera

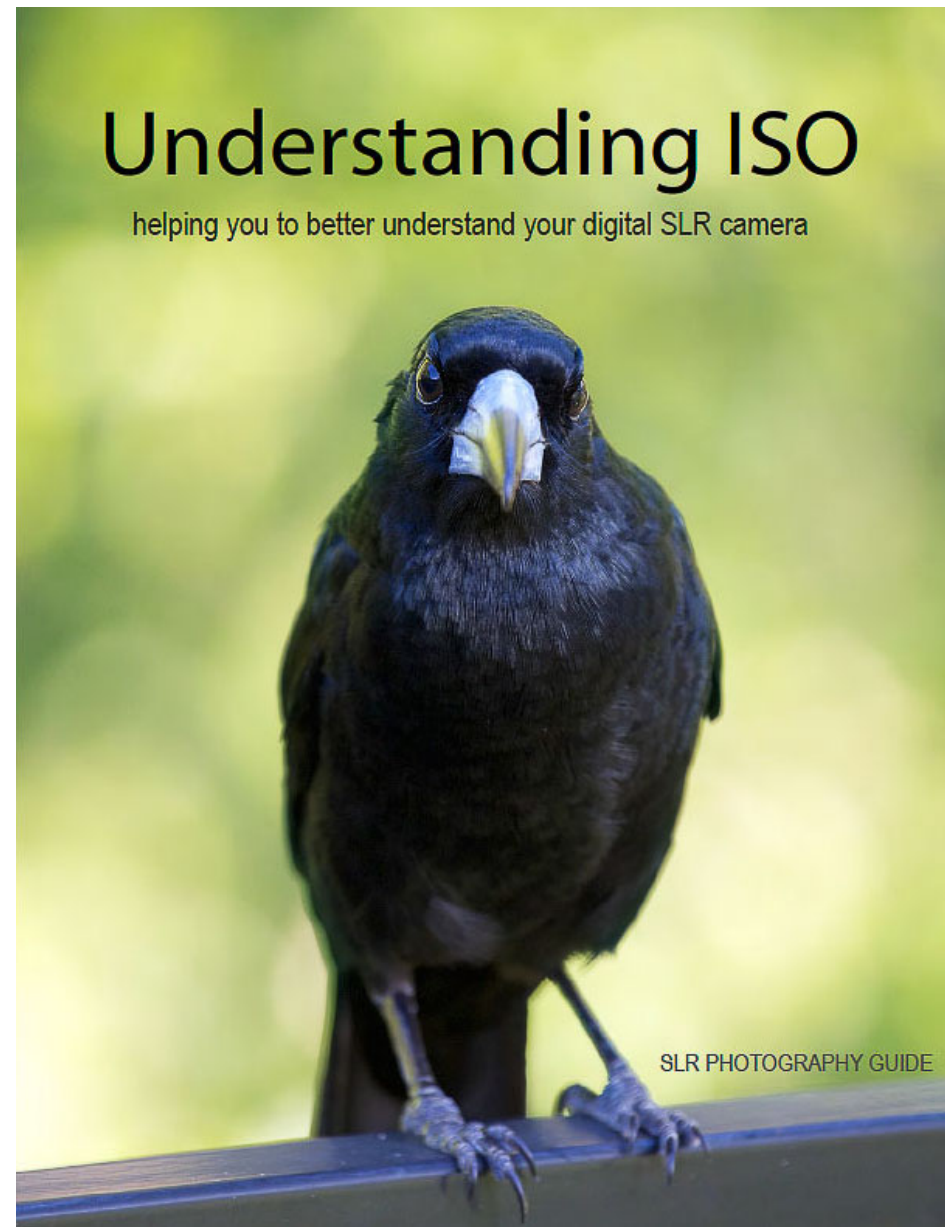
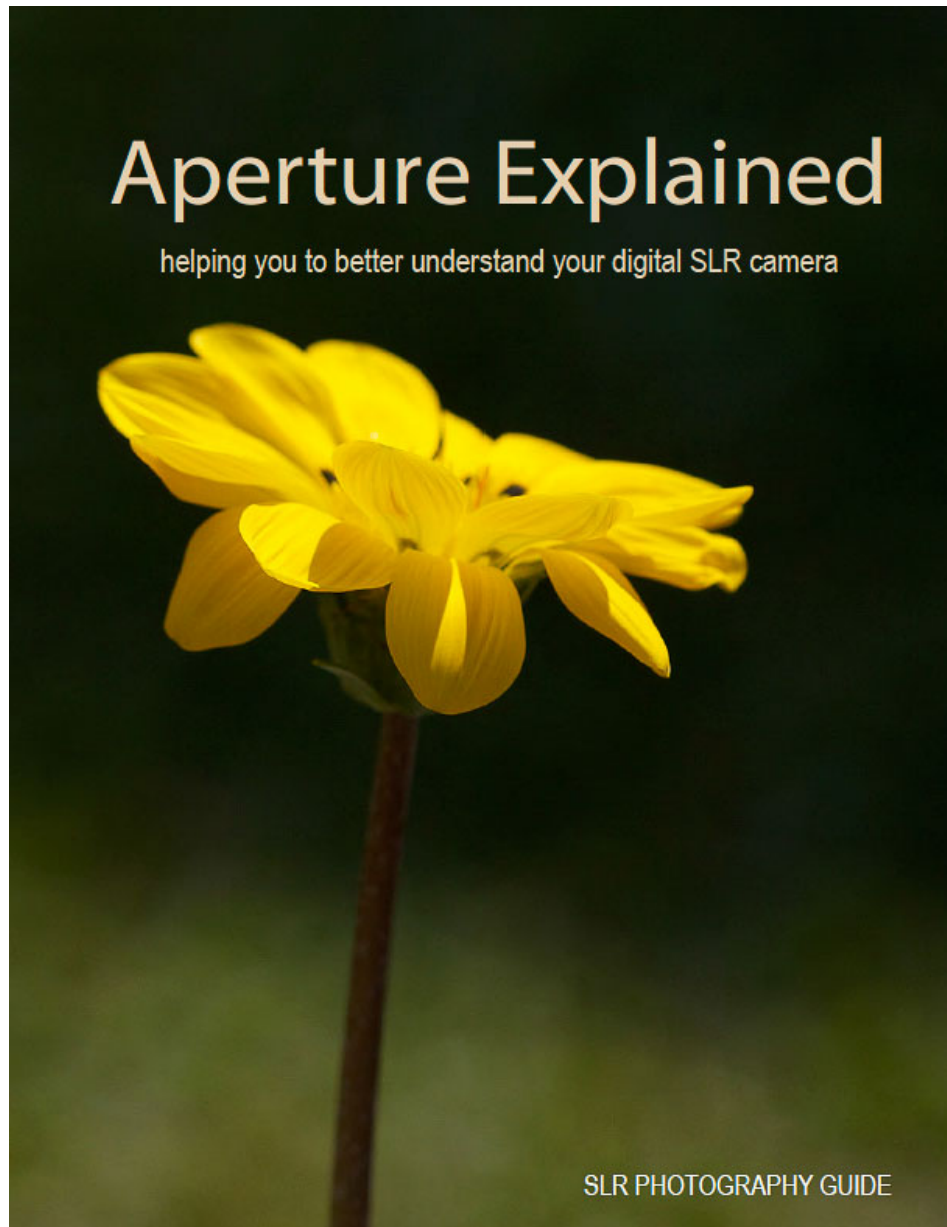


SLR PHOTOGRAPHY GUIDE

Welcome to our third ebook Mastering Shutter Speed. If you have not yet downloaded our first two ebooks called Aperture Explained and Understanding ISO you can do so from this link: <http://www.slrphotographyguide.com/ebooks.shtml>

Shutter speed is no doubt one of the main reasons for blurry images! I wish I had a dollar for every time a beginner asked me why their images are turning out blurry. Setting a fast shutter speed is the most effective way of getting sharp results. This ebook will explain why and hopefully have you understanding your digital SLR camera a little better.

Enjoy and feel free to pass it along!
Tanya Puntti - www.slrphotographyguide.com



SLR Photography Guide

*Dedicated to helping you
better understand your
SLR Camera*

iPhone App



*The faster your shutter opens and closes,
the less you have to worry about a
blurry image.*



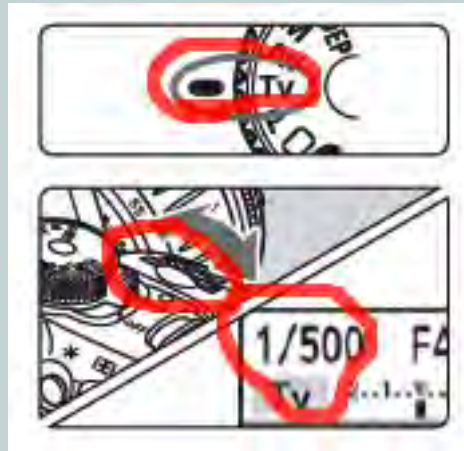
You'll recall from our first ebook 'Aperture Explained', there is a hole in your lens that allows light to travel through it and towards your camera sensor.

Shutter speed is yet another way of controlling how much light enters the camera. However instead of controlling the size of the opening like with aperture, shutter speed determines how long the hole is left open.

Leave it open for too long and your photographs will be overexposed. If you don't leave it open long enough, the image will be too dark.

Shutter speed is measured in fractions of a second, for example 1/60th of a second. The smaller the fraction, the faster the shutter speed. For example, 1/500 is faster than 1/4.





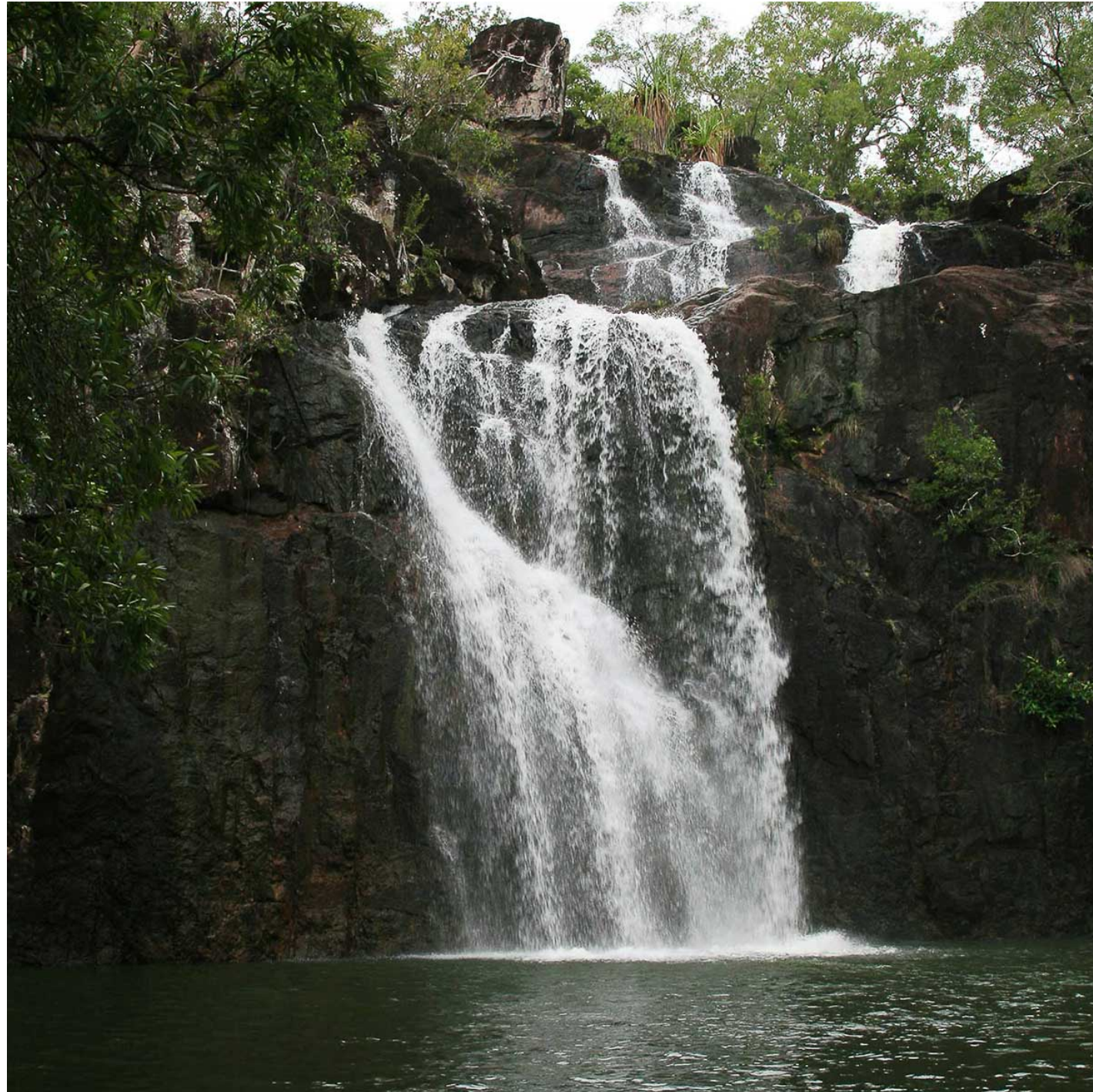
The best way to learn all about shutter speed, is to set your camera to 'Shutter Priority' then experiment with fast and slow speeds.

Unless you have a high end DSLR camera, you should see a setting that says TV or S (Nikon) on the top dial. TV and S are shutter priority settings. If you don't see either of these on your camera, check in your manual for how to set shutter priority.

Once you've done that, look on the back (or top depending on model) LCD screen for a setting that looks like a fraction. Some camera models don't use fractions, but rather numbers that refer to fractions. For example 200, meaning 1/200th of a second. You can also see this setting when looking through your view finder.

If you have your camera set to shutter priority and you rotate the main dial, you should see the fraction change. Once again, if you don't see this happening then check your camera manual on how to set shutter speed.

The main point being, make sure you know how to change the shutter speed on your camera before continuing on through this ebook.



Fast shutter speeds freeze action, whereas slow shutter speeds blur action. Furthermore, fast shutter speeds allow less light in, whereas slow shutter speeds allow more light in. Take these two images above for example. The photo on the left was photographed at 1/100th of a second. The photo on the right at a slower 1/5th of a second. The water seen in the image on the right is blurred more than that on the left because it was taken with a slower shutter speed. The rocks surrounding the waterfall is much lighter in exposure because the hole in the lens (called a diaphragm) was left open for a longer time. Therefore allowing more light in to the camera sensor.

A shutter speed that is set too slowly can result in either the subject or whole image to be blurry. When shooting with a slower shutter speed, it is more difficult to hold the camera still without a tripod. Hence a faster shutter speed helps to eliminate camera shake problems.

Furthermore, when the subject is moving you need to make sure your shutter speed is faster than the movement or you won't end up with a keeper! Take the image on the right for example. The image is blurry because the shutter speed was too slow for the moving subject.

For crisp sharp images set a faster shutter speed!





There are two situations when shutter speed should be your first priority:

1. When the scene has action / motion like the image to the left. In this case, the shutter speed was 1/1000th of a second. For smaller birds I like to keep the shutter speed to at least 1/3000th of a second. To achieve this you may need to increase your ISO and lower your aperture f-stop number.
2. When shooting in low light with no tripod you'll want to keep your shutter speed nice and fast so there is no blur from camera shake. In low light, do this by increasing your ISO number and lowering your aperture f-stop number. This will allow you to shoot with a fast shutter speed!

“If you see something that moves you, and then snap it, you keep a moment.” ~ Linda McCartney



Creative exposures - to blur or freeze? To blur, set a slow shutter speed. To freeze, set a fast shutter speed! $1/4$ of a second is usually slow enough to blur the ocean as seen in the image above. If I had wanted to freeze the motion of the wave I'd have set a shutter speed of $1/60$ th of a second minimum, then adjusted from there if needed. Often when it comes to using shutter speed for creative purposes its a matter of experimentation.



Panning is when you deliberately move the camera in parallel and at the same speed as the subject.

We recommend starting with a shutter speed of 1/60th of a second then adjust from there if needed. 1/60th to 1/8th is usually sufficient for most subjects.

Panning with a shutter speed set at 1/15th of a second



This time instead of panning we wanted to freeze the motion of the horses and dust with a shutter speed of 1/1000th of a second!

*Photographed with a
fast shutter speed
1/3200th of a second!*





Living in the beautiful Whitsundays of Australia, I'm fortunate to do a lot of aerals. For aerial photography I always keep my shutter speed at 1/3200th of a second or faster! For this shot above of Hamilton Island, I set a shutter speed of 1/5000th of a second.



To keep a shutter speed of 1/4000th of a second for this image, I also had to set an ISO of 800 and an aperture of f/5.6. A high ISO, low aperture number and fast shutter speed often go hand in hand.



For this image I wanted to show some movement in the water, yet not have the people appear like ghosts either, so I set a shutter speed of 1/6th of a second. Shutter speed is one of those settings we recommend experimenting with a lot to learn what effect it has on different subjects and sceneries. When first starting out in digital SLR photography, try slow, medium and fast shutter speeds on the same subject.



Slowing the water down with a shutter speed of two and a half minutes. This style of photography is best done pre-dawn or at dusk when there isn't a lot of sunlight, to avoid overexposing the scenery. It's always a good idea to use a tripod when shooting with slower shutter speeds to minimise camera shake.



For people walking at a normal pace we recommend starting with a 1/125 shutter speed then adjust from there if needed.

To achieve a nice sharp image, your shutter speed should also be faster than the length of your lens. For example, if you are using a focal lens length of 200mm then your shutter speed should be at minimum 1/250th of a second if hand holding the camera. If the lens length is zoomed out to 50mm then the shutter speed at minimum should be 1/60th of a second and so forth.



Did you know it's possible to shoot images like this in complete darkness?

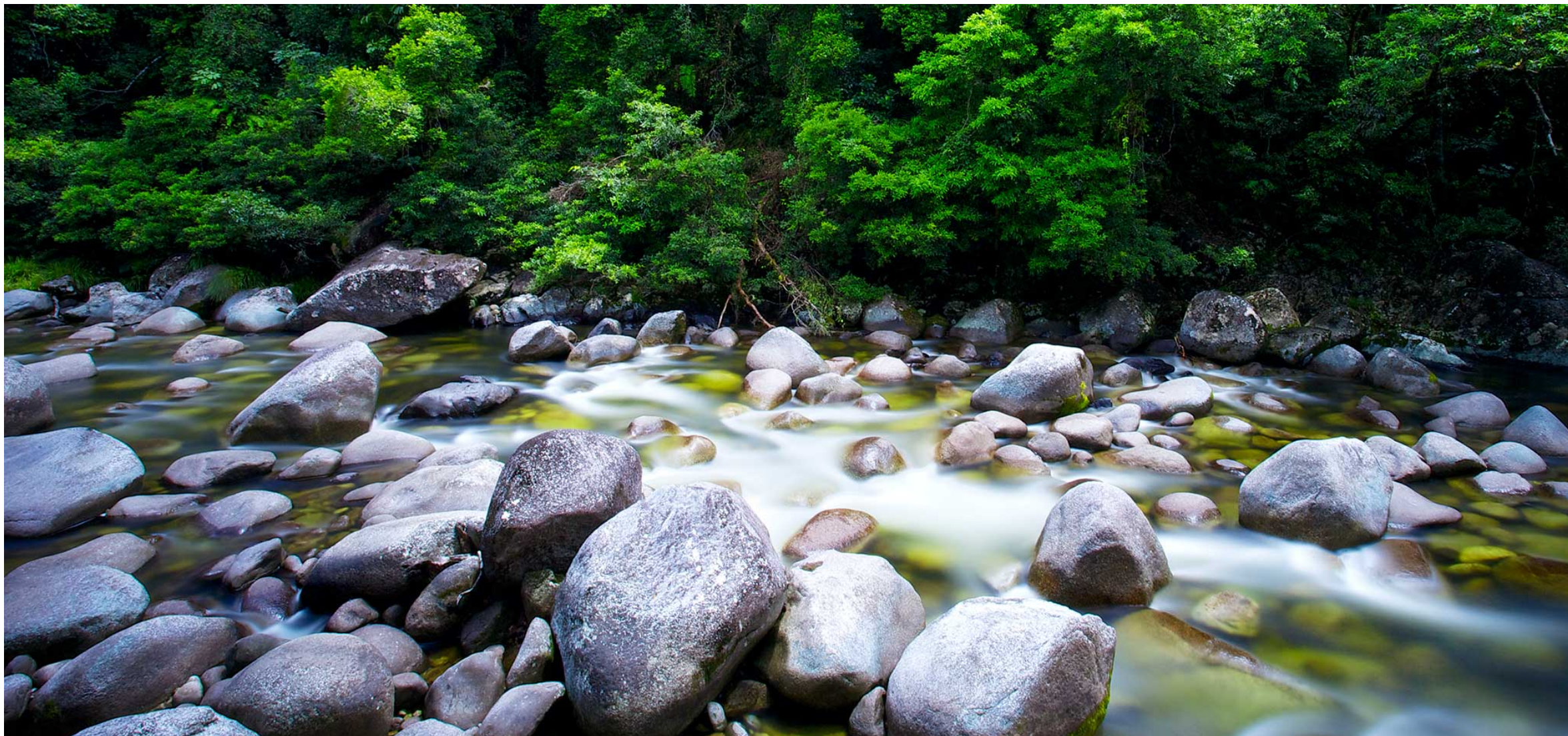
This image was photographed in complete darkness with a 521 second shutter speed. Yes that's correct 8 and a half minutes! It then took a further 10 or so minutes for my camera to process the result and display it on the LCD screen. Explaining the 'how to' of this image would take a whole ebook of its own. However I simply wanted to demonstrate that a camera can shoot through total darkness if the cameras shutter is kept open for a long period of time.

The rules are simple.

To blur, set a slow shutter speed. Use a tripod and shoot early morning or late evening when there is less light available. Alternatively you could use a ND filter to help block out light which enables you to shoot slower. However I won't go into that much here as we are planning a whole ebook on slow exposures in the near future that will include the use of filters.

To freeze motion or eliminate blurry photographs, set a fast shutter speed! When hand holding your camera always aim to shoot faster than the length of your lens. ie. If you are using a 50mm focal length, set a shutter speed of 1/60th of a second and so forth.

Experiment a lot just for the fun of it. Choose a moving subject and try both fast and slow shutter speeds to see what effect it has on the image. Don't worry about getting the perfect shot or how many are keepers. Experimentation is by far the best way to learn your camera settings.



80 second exposure!



Learn, share and grow as a photographer

Find us at: <http://www.slrphotographyguide.com>

Hang out with us at:

Facebook (where you'll find lots of great freebies)

<http://www.facebook.com/slrphotographyguide>

Twitter

<http://twitter.com/SLRPhotoGuide>

If you haven't checked it out already, you can also download our iPhone App from [iTunes](#)

*Look and think before opening the shutter.
The heart and mind are the true lens of the
camera. – Yousuf Karsh*