

Fungi

UP CLOSE



Whilst fungi might seem ordinary subjects to the uninitiated, an expert like Michael Snedic can reveal wonders when he photographs them. Here he offers some of his tried and tested techniques for capturing strong images.

Australia is blessed with a wide variety of fungi, which come in every colour, shape and texture. They're found in different sizes, from minuscule specimens barely visible to the eye, to ones the size of a wheelie bin lid or larger! The majority of the species, though, tend to fall into the smaller size category and therefore macro photography techniques need to be used to photograph them. For digital 'point-and-shoot' camera users, I recommend

using the macro setting - often a flower symbol on your camera. For SLR users I prefer to use Aperture Priority mode (or your camera's equivalent setting) and to set the aperture according to how much of the fungi I want in focus and how much of the background I want blurred. If I'm shooting a tiny fungi specimen from a distance, I may only need an aperture of f/5.6 because this allows the focus to be on the fungi and it blurs out the background. If I'm quite close, I may need an aperture of f/16 or even higher to achieve a similar result, since the closer you are to your subject the less depth-of-field you will achieve.

Macro Lenses

Using a macro lens with your digital SLR is by far the best option for photographing fungi. Macro lenses are very sharp and they allow for much closer focusing than standard lenses. Focal lengths for macro lenses vary from 50mm up to 200mm. I prefer to use a longer focal length, as at this distance you can create a beautiful 'bokeh' effect (the quality of blur in out-of-focus areas). You can also get better depth-of-field using a longer focal length macro lens by being a bit further away from the fungi, yet still capturing it in-camera at a decent size. A lens used with an SLR camera which has a 'macro' symbol (typically a flower) on the side, isn't a true macro. In some cases you



can flick this switch on the side of the lens and it allows for a slight adjustment on the minimum focusing distance, but generally this offers poorer results compared to a properly dedicated macro lens.

Closer Focusing: Extension Tubes

If a macro lens is beyond your budget, there's a good alternative available for photographing fungi with an SLR. An extension tube (or multiple tubes) can be connected between the camera and the lens. This allows for a much closer minimum focusing distance. For those who don't know what an extension tube looks like, imagine the rim of a small lens without any glass! With extension tubes there's no quality loss

whatsoever because there's no added glass between the camera and the lens to adversely affect the image, which happens when you use a tele-converter. You do, however, lose light. If the aperture on your camera is set to f/16, f/22, or smaller, and more than one tube is used, either a tripod or flash will be required because the required shutter speed will be way too slow for you to hand hold the camera and still get a sharp image. Extension tubes can be used with a macro lens to achieve even closer focusing. If your intention is to achieve full-frame shots of tiny fungi, extension tubes added to a macro lens will allow you to achieve this. You need to be aware, though, that more tubes will result in less depth-of-field. You can also use close-up filters on lenses to achieve closer focusing,

ABOVE This clump of fungi at the base of a giant tree at Mt Glorious, Queensland, glowed beautifully because it was being backlit by the sun. I positioned my camera, lens and tripod at eye level and lay on my stomach on a poncho to take this shot. Nikon D700, Sigma 150mm f/2.8 macro lens, f/32 @ 1/6s, ISO 400. Gitzo tripod, cable release and Live View for pin-point focusing.

OPPOSITE This single fungi was growing on moss at Mt Nebo in Brisbane Forest Park, Queensland. A portable diffuser was used to stop the glare caused by the bright sky above and the shiny nature of the fungi. Nikon D700, Sigma 150mm f/2.8 macro lens, f/16 @ 0.6s. ISO 800 was used to increase shutter speed due to the wind moving the fungi. Gitzo tripod, cable release and Live View for pin-point focus.

but the image quality will be degraded due to the extra glass stacked in front of the lens. Personally, I'm not a fan of them.

If you're a beginner with a limited budget, close-up filters aren't a bad option, but from my years of experience in shooting this style of image, most people soon realise the loss of quality doesn't make it worthwhile in the long term.

Effective Lighting

Subtle lighting is one of the most important elements in creating successful shots of fungi. Since they're often found in dark places like rainforest floors, the camera's shutter speed is usually slow, especially when you're using a small aperture like f/16 or f/22. There are several ways to compensate for low light, including the use

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of flash and portable reflectors to bounce the available light around. The best flash to use is a dedicated macro or ring flash, which clips onto the front of your lens. The advantage of this system is that it gives you more freedom of movement. Since most macro flashes have a power adjustment, you can also control how much light is being projected onto your subject. This is very important in situations where you're quite close to the fungi. If the fungi are brightly coloured or shiny, then too much flash creates unsightly overblown highlights. By reducing the power of the flash, the end result is a much more evenly lit scene which is more pleasing to the eye. Use of subtle lighting will bring out better results. Many digital point-and-shoot cameras and SLRs have a pop-up flash which can be used to throw light onto your fungi. If you're using a point-and-shoot camera, I suggest using a pop-up flash diffuser which slides onto the hot shoe when the flash is raised. This type of diffuser softens the light and spreads it more evenly over the fungi.

Another method of lighting fungi - and my preferred option - is to use a portable reflector. I use a 45cm 'five-in-one' reflector/diffuser which folds neatly away into a small package and which travels with me everywhere I go in my backpack. The reflector throws natural light onto the fungi to give it a lift, without overpowering it with harsh light. This method is especially useful to add some extra light to the underside of gilled fungi.

Sometimes fungi grow in open, sunny areas where there's a lot of harsh light. By trying to photograph fungi in these bright conditions, these shots can end up looking completely washed-out. Try placing a portable diffuser between the sun and the fungi and it will lessen the intensity of the light dramatically. It makes for a much nicer image!

The Value Of Tripods

A tripod is a really important tool in getting good shots of fungi. It's impossible to handhold a camera effectively when the shutter speed is very slow. Using a tripod, combined with a remote or cable release, will give you sharp shots which haven't been blurred by camera shake or movement. By using a remote or cable release you can minimise movement created when you're



LEFT This cluster of cupped fungi is tiny and was found under a log in the rainforests near O'Reilly's Rainforest Retreat, in Lamington National Park, southern Queensland. I waited for the clouds to appear overhead, to throw diffused light on the fungi. Nikon D700, Sigma 150mm f/2.8 macro lens, f/22 @ 4s, ISO 800. Gitzo tripod, cable release and Live View.

OPPOSITE, TOP This single 'Gold Tufts' fungi grew at the base of a tree which had just started decaying. I lay on the ground and positioned my camera at eye level to the fungi so I could shoot the orange-coloured 'head' as well as the stalk. Nikon D300, Sigma 150mm f/2.8 macro lens, f/16 @ 6s, ISO 200. Gitzo tripod and cable release.

OPPOSITE These two tiny fungi which I found in Lamington National Park, Queensland were growing on a mossy log at waist level. I positioned my camera and tripod so the background was further away, which helped to blur the background, even though I used an aperture of f/40. Due to the tiny size, a couple of large extension tubes were required to allow me to focus much closer. I used an f-stop of f/40 for better depth-of-field, as I had fitted extension tubes which reduced depth-of-field when used at wider apertures. Nikon D700, Sigma 150mm f/2.8 macro lens. Shutter speed 2s, ISO400. Gitzo tripod, cable release and Live View. A portable reflector was carefully positioned to throw natural light under the gills.

pressing the shutter button down on the camera. I never take shots on a tripod without using a cable release.

Messy Backgrounds

One of the biggest mistakes people make when they're photographing fungi is to include a busy or distracting background. This automatically takes your eye from the most important part of the image - the fungi - and onto that background. Using a shallower depth-of-field such as f/4 or f/5.6 isn't necessarily the answer, as a good portion of the fungi can end up being out of focus. The best solution, if it's possible, is to move around your subject with your camera until the background is further away from your key subject, and in the distance. By doing this in combination with the right shooting distance you can create a natural, blurred-out background which focuses attention onto the fungi.

Another common mistake many people make is to leave distracting objects in front of, and around, the fungi. This problem can happen with most types of photography, but

it's particularly disturbing in macro shots. It doesn't take much effort to move a few bright leaves or twigs away or to carefully bend distracting foliage out of the way before taking your photo. It just requires considered thinking about your shot set up.

Keys To Composition

Composition is another critical aspect of shooting great fungi photos. You'll need to decide whether to focus on the whole clump or a single section. For a single fungi which might have a long stem, try shooting it in portrait format, and for a clump of fungi which stretches horizontally, use the landscape format. For portraits, it's important to leave room in the direction the fungi is heading, otherwise it can look too cramped up against the edge of your frame. If there are several fungi next to each other in a small clump, choose the most dominant or photogenic specimen and focus on that. By using a wider aperture (such as f/5.6) for a shallower depth-of-field, this can make the chosen fungi stand out and blur the others.

Keeping Focused

I usually focus on the 'leading' or forward edge of a fungi specimen when I'm shooting it, as this is where our eye is normally drawn to first. By simply varying the aperture several times and taking a number of shots, you will end up with a series of images that all look slightly different. In amongst the different apertures will be one which works exactly as you want, where the fungi is focused and the background is out of focus. While this is to some extent a scattergun approach, it does ensure you'll secure the image exactly as you want it, which saves you going back and having to set up all over again! The 'Live View' setting on digital SLR cameras is also useful, especially for fungi and other macro work. If your camera has this function available I recommend using it. With Live View you can zoom into the composition and see the specific parts you want sharply focused, without changing the composition of the image itself. Flick the camera to manual focus and then fine-tune the focus with pinpoint accuracy. This not only helps you to achieve more accurate focus, it's a great help

if you normally struggle seeing minute detail on your LCD screen.

Diffraction & Focus Stacking

Depending on the camera and lens you're using, some of the smaller apertures from f/22 and smaller (ie; a smaller aperture is a larger number) can cause some softness in the image. This is known as diffraction. You may wish to use much wider apertures from f/8 to f/16, which will generally give sharper results, and use a method known as 'focus stacking'. This is where a number of images are taken of the same subject and with each image the photographer focuses on a different part of that subject. Once this is done, you import your images and use a program such as Helicon Focus to 'stack' them together. The end result is an image which can effectively have great depth-of-field. The background isn't cluttered and the fungi is sharp. I don't use this technique because I aim to get the best results in-camera using the best gear and techniques, with minimal post-processing. I have,



ABOVE This cluster of 'Snow White's Bonnet' fungi caught my eye at Mt Nebo in Brisbane Forest Park, Queensland. Fortunately, the clump was in perfect condition. A portable reflector was used to throw extra light onto the fungi. Nikon D300, Sigma 150mm f/2.8 macro lens, f/22 @ 1s, ISO 200. Gitzo tripod and cable release.

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however, seen some great results using focus stacking, so if you enjoy post-processing and are willing to experiment, it's worth a try.

Getting 'Down & Dirty'

The best way to photograph fungi is to shoot them as closely as possible to eye level. In some cases, this can involve lying on the ground in a muddy rainforest! Rather than getting yourself and your gear covered in mud, buy a good quality poncho from an outdoor/camping store and spread this on the ground. You can lie down, use your camera, and still stay clean. I've used a poncho effectively for many years.

Finding Fungi

Fungi are found right across Australia and are prevalent in rainforests, in dry and wet sclerophyll forests, and also deserts. They're even common in mulched council garden beds and botanic gardens! Autumn seems to be the main season when fungi open up or

fruit, but they can be found all year round, especially after prolific rain. Some fungi, such as the massive plate or shelf fungi, can last for years, whilst other more delicate species may only fruit once a year and last for barely a few days. To find fungi walk slowly and check out all the decaying logs and branches, the sides of trees (fallen and still standing) and in amongst humus and mulch. You never know what you'll find. The reward of shooting creative images of fungi is well worth the effort it might take to find them. Apart from the images you score, you'll get to spend more time out amongst nature, away from the hustle and bustle of everyday life, and that is always a worthwhile experience! *

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