



## Photography techniques – Part I

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### Using a circular polarizing filter and ISO H

*Walk on, walk on, with hope in your heart,  
And you will never walk alone,  
You'll never walk alone.*

**Rodgers and Hammerstein**

During my stay at the Bayerischer Wald in September 2011, I worked on some small photography experiments in the field. One of these experiments was using my circular polarizing filter. I bought this filter when I went to Spitsbergen in 2010 to filter reflections from icebergs and glaciers. A polarizing filter can be used in many other cases as well.

A polarizing filter is a specially designed accessory that fits on the front of the camera lens. The filter controls the amount of polarized light falling on the lens. The glass of the filter only permits light rays that fall perpendicular on the filter. The effects of this technique are twofold: (1) a blue sky gets a much deeper blue colour, while other colours in the picture intensify, and (2) shine and glare on non-metallic surfaces such as foliage, rocks and water are reduced.

If you compare the two pictures below, you may notice the difference!



■ **On the left:** without circular polarizing filter.

**On the right:** with circular polarizing filter, slightly intensifying the colours of the landscape and adding a blue shade to the water.

**Dorr 77mm Digi Line  
Slim Circular Polariser  
Filter 315277**

I also used another technique in the field, relating to photographing animals in action in very low light conditions. It's possible to extend the sensitivity for light with the ISO-H

function on my professional camera, which is comparable to ISO 3200. In normal lighting conditions I use ISO 200, so using ISO-H is exceptional!

I decided to give it a try to photograph the actions of an European otter (*Lutra lutra*) on ISO-H due to shading and evening light. I needed a shutter speed above 1/500 seconds per minute to freeze the moment at the same time – lower shutter speeds will result in pictures with movement in it, only interesting if you want this as a creative perspective. The downside of using a high ISO is that noise becomes much more clear, though I am overall quite pleased with these first results. What a fascinating and hyperactive mammal to behold!



- **A real action picture!** Caught in the moment of trying to get a grip on the cone, which is now dipped under the water surface. ISO H and shutter speed above 1/500 sec.

## Low-key and red graduated filter

Another update on photography techniques during and after my stay at the Bayerischer Wald in Germany, September 2011.

I will start in short with the technique low-key photography. I got to know this technique in portrait photography. Mind you, it works pretty well in animal photography too!

Low-key photography consists of contrast effects, whereby the tones in the image create a unique design. Low-key images are mainly characterized by dark tones, while the luminosity parts light up within the dark tones. You create this effect by metering the lighter parts of your image, by setting the aperture high and/or speeding up the shutter speed.



- **European pine marter** (*Martes martes*) in low-key.

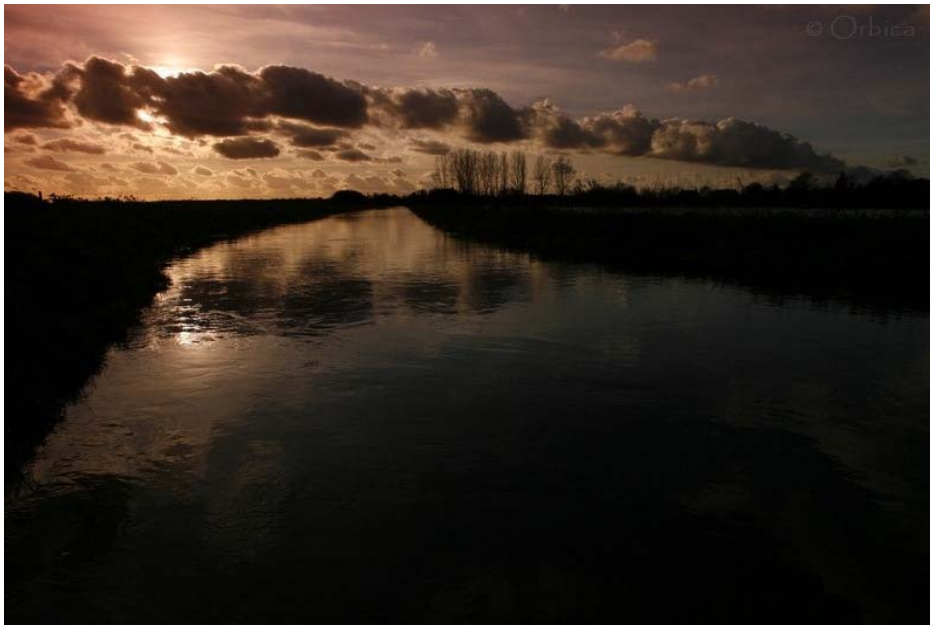
When I came back from the Bayerischer Wald, I was also very enthusiastic about the effects of a circular polarizer filter (blue).

My mind was set on finding another filter to clear up bland, washed up parts in a photograph: a red graduated filter. The filter consists of one half slightly darker tinted glass (red grad) and one half entirely clear glass. I chose a circular graduated filter instead of a linear filter: it's easy to use, and it doesn't alter the metering and autofocus as linear filters often do. You can shift the filter, rotating it to select the part of the scene that you want to give a more warm toned colour.

I heard some rumours that a red graduated filter has no effect on digital photographs at all. The red tone will be neutralized by the sensor using AWB white balance. The truth is, if you use the **clouded** white balance, the red graduated filter works perfectly well and sound. The clouded white balance uses a red tone itself. This is because an overcast sky creates a slightly blue tone. The clouded white balance will 'outbalance' the blue tone, back to an overall more natural colour of the scene.



- **Without filter:** Photograph taken with clouded white balance without using a filter.



- **With red grad filter:** Photograph taken with clouded white balance with B+W Digital Colour Grad Red filter. Notice the red tone of the sky and the details of the clouds in the scene.

Using the clouded white balance, the digital sensor also records more 'reds' available in the photographic scene. By means of the red graduated filter, the sensor will colour the part you want to colour with more red (slightly, up till quite strongly). The digital sensor will even so record more details, due to the decreased difference in brightness between the sky and the landscape itself.



- **As long as you don't 'over-do' the effect** of a colour graduated filter, the effect works out well and sound.

Photoshop can't beat the real image and include details which aren't there. So it's essential to get as much out of a scene as possible in capturing detailed photographic information **within the scene itself**, straight out **in** the field.

Of course the effect of a colour graduated filter needs to be kept at bay when it gives a really unnatural look to the scene. At the same time, you need to realize there is a difference between the technique of the camera and the human eye. Photographs often look dull in appearance, comparing them to reality. Enhancement of the standard technique of the camera is therefore needed to get as close as possible to the 'real deal'. Overall, these first results reveal the path to numerous potential usages in landscape photography.

## Creative visions

Most photographs are taken with the camera at eye level. They show scenes or topics that are clearly visible with the naked eye. If you closely examine your surroundings, you will find a whole new world to explore. You will also learn that you may be able to capture topics with a creative vision: the details of which most people take no notice.

If you love nature: flowers, plants, butterflies and insects are ideal topics, though even daily items can become stunning when viewed in close-up. For example, try to take pictures of a cracked pot where a piece of plant sticks out to reach for the light, or ice crystals on a car window. With close-up you can reveal patterns, structures and textures, which you could normally not see.



- **You may not believe it:** these structures are ice crystals! They form a consistent structure, except for the holes and the stream of moisture that left a 'path' on the window, captured with the camera set on F13. The golden light is created by the bright red sunrise behind the window on a very cold morning.

For the focus you need to keep in mind that the depth of field is limited. Therefore, in many cases I use an aperture ranging from F11–16 or higher. Depending on the lens quality, you can experiment which lens aperture proves best for capturing pin-sharp close-ups. The higher the aperture number doesn't always mean that you will get more sharpness. Bluntly spoken: the sharpness is spread out across the picture, but can be best on a lower aperture number.

My Tamron di macro 90mm performs best at F13–14, though the lens can handle up to F32. I once tested the same overall image, capturing it from a range of F8–32 in TIFF format (step by step like F8–F11–F13–F14–F16–F20 and so on). In Photoshop I zoomed in as much as I could and I gave every picture a score to find out the optimal aperture for this particular lens.

It's essential to realize how you can use the aperture for the effect you desire!

The effect can also be turned around to get as less sharpness as possible, using F1.4–5.6, to highlight an exact detail within the close-up: a detail within a detail!



- **This poppy is blown-up** by the macro lens. Only the stem and the centre of the flower (black) are pin-sharp, captured with the aperture set on F4.

Try to be curious, using every day materials. For lighting situations you can use a flashlight. Though daylight combined with aluminium foil wrapped around a cardboard works just as well. I used this technique numerous times when I wanted to photograph indoors with a more natural sense of light.

And even a golden coloured plate, which I normally use to burn candles on, worked as a reflector to create 'warm golden light'. In this case I used a tripod to keep my hands free for handling the reflecting material. Investigate and experiment!



Marta Demartean (1981) works as a Hydrobiologist in Phytoplankton for a Water institute in the Netherlands. She is also a very passionate nature- and travel photographer. Her photography is aimed at conservation photography, in a way that these images support an ethical approach to nature. An ethical approach means that integrity and respect to nature are key. She wants to make people wonder about the world in all its roughness, splendour and fragility.