waters limit the shooting distance often to something in between 0.5 to 1.0 m.

Less colour noise in pictures taken under poor lighting conditions.

Colour noise is a matter of signal to noise ratio. The bigger surface one pixel, the bigger the signal. Colour noise is caused by diffraction of the light at the edge of each pixel, which is proportional to the side of the pixel. A pixel with 1.3 times the side of another one will have a noise ratio that is (1.3*1.3)/1.3 = 1.3 better than the other pixel.

Less shaken pictures.

A longer exposure increases the light the sensor captures, but also the risk of unsharp pictures when the camera is not held steady. An image stabilizer can bring some relief here, but is of no use when the subject is moving fast.

Post processing RAW files gives you more chances for a good end result than processing JPEG files.

RAW contains all the information that was captured by the sensor, without any post processing in the camera to enhance / influence the image and to compress the result before it is downloaded to the memory card. The compression is not reversible. Before you take pictures, you select settings based on assumptions of which conditions you expect to encounter. Inspecting a picture on the LCD panel is looking at a preview of what you may get after processing the RAW file in a certain way. Because the dynamic range in a RAW file is bigger than in JPEG, borderline underexposed pictures may be post processed with RAW converter software to a better end result, than tweaked by preset programs and compressed to JPEG in the camera, and post processed on your pc.

Post processing colours is a must for under water pictures as the light spectrum varies with depth, distance to the subject, mix of ambient and strobe light, dirt & matter in the water… But if there is no red captured, because there was no red available during the exposure, it is no use to try. That is what strobes & video lights are needed for.

The RAW files from the XZ-1 may be imported into Capture One from Phase One, the best RAW converter software around.

But the proof of the pudding is the eating. I am still familiarizing myself thoroughly with my new camera and exploring the way I get the best results.

Two comments though for the developers of UW cameras:

1.Use the KISS principle (keep it simple, stupid) for the settings. The onset of nitrogen narcosis (drunkenness of the deep) is that cognitive tasks become more and more difficult to perform with depth. Above water I can set up and capture a custom white balance without giving it a thought. At 15 m depth, I have to rehearse the procedure mentally 1 or 2 times before I can do it.

2.Stick to the body dimensions and the layout of the camera so that one can continue to use the same UW housing for the next upgraded version of the camera. This makes it less attractive to switch to another brand & type. A rugged body with an optically excellent lens and ergonomic knobs & switches, may only need a better sensor and better software to stay current, reducing the ecological footprint of the camera. With a better sensor I mean a higher signal to noise ratio, not more pixels.

The affordability of digital compact UW cameras has made them popular with scuba divers. They deserve specialized cameras designed with their needs in mind, instead of adaptations of “dry” cameras.

Koen vander Meulen

Humpbacks!

Whale Discoveries and Douglas J. Hoffman have three special live aboard trips scheduled for Tonga in 2012-2013. These trips will visit the special grounds of the Southern Hemisphere Humpback Whales.

The trips are created with photographers in mind and the focus is remote mating and birthing areas with clear water with a small, select group of guests.

Those taking part will benefit from 35 years of combined experience observing whales in the wild. This crew has a great appreciation and understanding of humpback behavior. They will put that experience to work for their guests to provide the adventure of a lifetime.

Each itinerary will visit remote islands of Tonga, mostly uninhabited, that are known to be extremely productive in terms of whale encounters. Being far off the beaten whale watching path, this ensures private and uninterrupted unmatched encounters.

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