

A decent image, only the colors do not cut it. A classic color problem easily corrected by retrospective white balance. Do not delete.

Text and photos by Rico Besserdich Translation by Peter Symes

The more photos we shoot, the more we also have to sift through the numerous images, and the more challenging it becomes to pick out a selection that represents a specific location or subject matter well. Which ones to keep and process and which ones to bin is the question. Rico Besserdich gives you some pointers.

Opportunities are there to be seized. For most divers who do not have the opportunity to dive every day but go on just a few trips every year, it is about making the most of it when you have the chance. And on a typical dive trip, there are only so many opportunities to capture great images. So, just go for it when you have the opportunity, as you may not get another try.

In the earlier days, underwater photographers would usually run out of film before they ran out of air, but present-day still photographers would be hard pressed to fill a memory card before the dive is over, even if they tried.



Nonetheless, or perhaps for that very reason, it is only too easy to accumulate hundreds or even thousands of images from diving on weekends at the local beach or lake, or going on a two-week liveaboard in some remote area. Memory cards and hard drives have never been so cheap, resulting in the

price for storage falling to only a few cents per gigabyte. For example, an 8Tb hard drive, which I have seen on sale recently for 250 to 300 Euros (US\$279-335), can store hundreds of thousands of images. So there you have it.

In the bigger picture, it is clearly not the price of storage that is holding us back. In turn, it begs the question of whether it is really worth it to hold on to vast quantities of images, most of which are of secondary quality or outright outtakes. Obviously when it comes to what should be presented to other people, a selection should be made. Not even your most ardent fan will endure sitting

Beginners have a propensity for keeping most, or sometimes even all, of their images. Professionals, on the other hand, go over their images very rigorously and hit the delete button extensively, striving only to keep what meets the highest quality requirements.



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image files. As a minimum requirement, the viewer should be capable of 100 percent magnification zoom. Presentday screens are often capable of at least the classic HD resolu-

with a 10.1 megapixel camera in pixels, which is significantly larger than the display size of the moniin detail, it must be zoomed in to

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Goliath Grouper

tic Goliath Grouper (Epinephelus itajara) and to further their Federally protected status, the South Florida Underwater Photography Society (SFUPS) is holding the first international photo competition in support of the species.

Atlantic Goliath Groupers were on a fast track to extinction but thanks to conservation efforts they thrive in South Florida waters. Every year from August through October hundreds return to local waters off West Palm Beach County for a mating ritual of collective spawning. Start planning your underwater photographic expedition to swim with one of the friendliest fish in South Florida.

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One photo series in (below)

At the high end, procome at a price. As for Viewer (www.faststone. ora), which will display Negative). It is also posdisplaying RAW or DNG

tion, which is 1920 x 1080 pixels. In comparison, a photo taken 3:2 format will have 3888 x 2592 tor. Thus, to evaluate the image 100 percent. Use the mouse or arrow keys on the keyboard to

• Personal preferences, e.g., sentimental value or other emotional connections

Selection and storage

For starters, your camera is definitively not the right place to store your selection of images. Whether submerged at a safety stop, on the boat, on the lakeside or in the waiting hall of the airport, the small size of the LCD display on the camera and its limitations in color and contrast range make it unsuitable to properly assess images, let alone make any final

selection. You should only use it for deletion of completely blurred or vastly under- or overexposed images and images you took before the dive to test lighting and exposure settings if you need to free up space on the card.

Images are best viewed on a computer screen when making a selection. Sometimes, positive surprises will stand out that quite simply were not visible on the small camera display, and images that may appear botched at first glance may turn out not to be.

Requirements and preparations

1) Transfer the images to a computer (ideally a desktop) and place them in a folder from where they can easily be accessed.

2) Ideally, you should already have an image editor or viewing software on your computer.

look at specific areas of interest. The devil (and sometimes, an angel) is in the details, and therefore, it is essential to take a closer look.

3) Ensure your monitor is calibrated. This is very important! Your screen must be adjusted to

Selecting means making choices and most of them are rejections, but whether you choose to keep 10, 100 or 900 out of 1,000 images is down to both technical criteria and personal preferences such as:

It is, however, not just a matter

of how strict your selection crite-

ria should be set. The process of

selectina images should also be a

time for reflection and self-critical

analysis, as well as an aid to iden-

tify weak points, potentially lead-

ing the way to improvement and

than just being frustrated over less

optimal images, you should view

the results as pointers as to what

time. Photography does not, by

no means, end when the shutter

can be done better the next

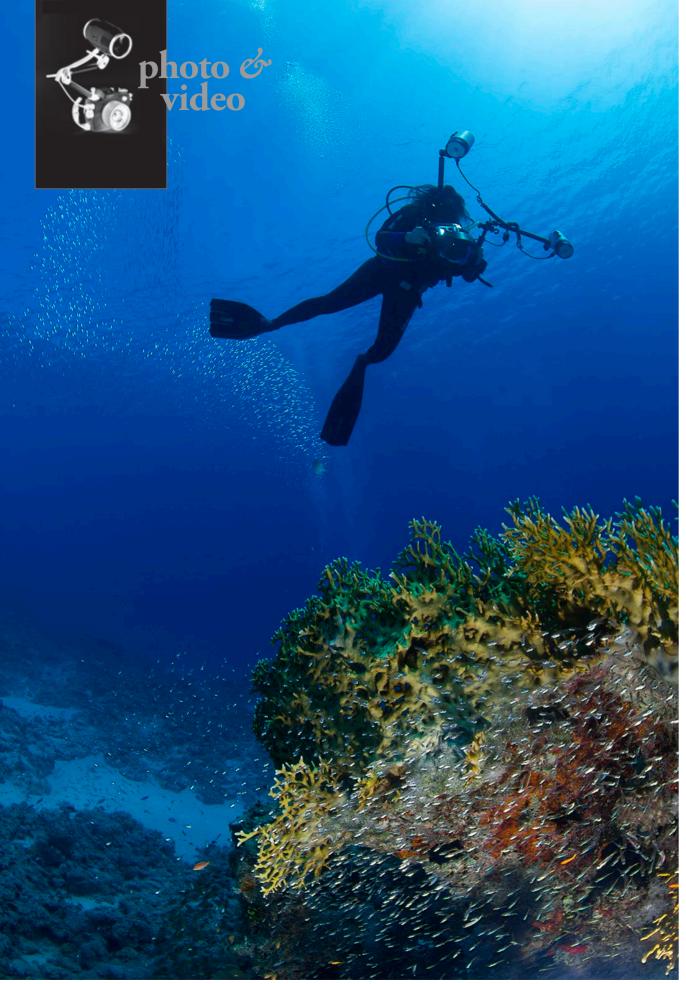
button has been pressed.

creative development. Rather

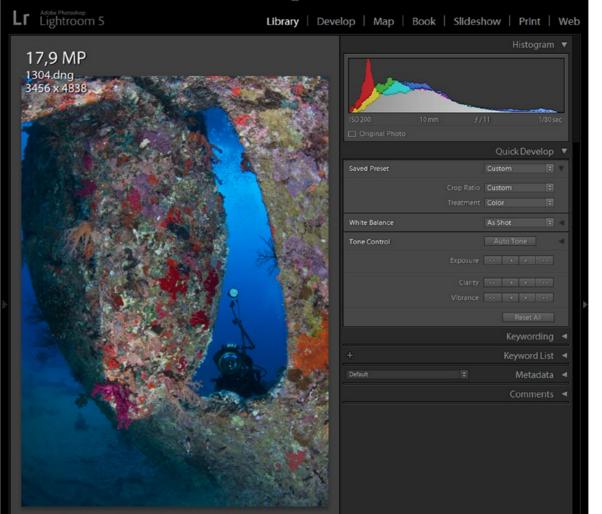
• Technical criteria, e.g., exposure, sharpness, composition, etc.

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With an image like this (unedited RAW image directly from the camera) there's not much to quibble about. Of course, it is selected and retained for future use on the hard drive



displaying color, brightness and contrast correctly. Do not assume that the factory setting of a computer screen means it is correctly calibrated.

Ideally, the monitor should be calibrated with the use of an external calibrator, such as the Spyder4Pro Datacolor or the Pantone Huey Pro, which are relatively inexpensive. There are also free, but less precise, online calibrators that can be found by googling "monitor calibrators". Once the monitor has been calibrated, the viewing, judging and selecting of images should then take place under the same light conditions under which the monitor has been calibrated. Note that monitor calibration should be repeated regularly, ideally every four to five weeks.

4) Take your time and enjoy it. Mindful of the often considerable investment in terms of time, money and effort put into taking the images in the first place, this process deserves your undivided

attention and that you set aside the time required. Working in a hectic or noisy environment is rarely conducive for creative processes, so it is better

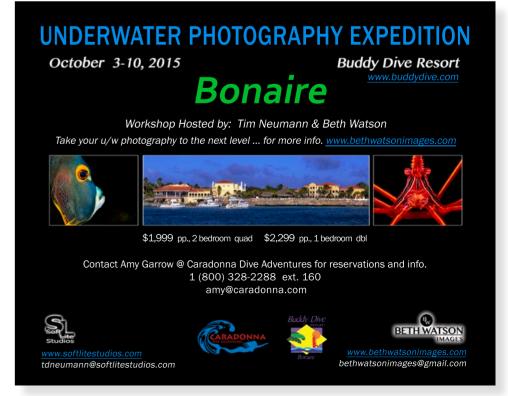
to wait until you can find some peace and quiet, and you feel up to concentrating on the task at hand.

Don't expect to be able to select more than 100 images out of 1,000 in an hour. In fact, a serious selection process should take place over several rounds, for the following reasons:

Selecting Images

Lightroom offers in additional window in the image preview that shows the histogram, which facilitates an analytical assessment of exposure (left)

- While the purely technical aspects of a photo such as exposure or sharpness can be relatively easy to assess, the emotional evaluation and selection of images is subject to constant fluctuations. This is just human. The way we look at pictures and emotionally assess these changes from day to day, depends not only on personal circumstances and mood, but is also influenced by our immediate surroundings such as music, light, or perhaps a glass or two of red wine.
- Right after we return from a diving holiday or come up from a dive, we are all euphoric, which affects the way we view and select the recorded images. Shortcomings are generously overlooked because the positive memory of the experience overshadows the tech-



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nical deficiencies. However, it may also work the other way round. For example, a dive that was initially perceived as unsuccessful may dispose the diver to just erase the taken images in a bout of bad mood—even if they are good.

• Emotions are not the sole factor that affects our visual perception and judament. Photographic training does, too. Thus, images that we first found to be without significance can take on a completely new dimension once we have taken the time to delve into the composition, for instance, and perhaps discover altogether new qualities in an image initially destined for the trash bin.

It is nearly impossible for anyone to dissociate from emotions, but the understanding and recognition of the role that emotions play and how they affect our decisions in selecting images is a considerable insight that cannot be underestimated. Ideally, we should be able to set aside all vested emotions and assess images solely from a purely objective point of view, but in reality, getting even close requires a lengthy learning process and a lot of practice.

Therefore, whenever you find yourself tion.

Encounters (left)—an unprocessed RAW image directly from the camera. As part of a larger concept or idea, this image remains on the hard disk.

Hermit crab (below)—an unprocessed RAW image directly from the camera. Perhaps no winning picture, but homogeneous and harmonious. Maybe an article about hermit crabs will be written in the future; therefore this image will be retained until further notice.

in doubt, leave it for a while and come back to take another look later, be it the next day or even months later. At times. matters are better off left to simmer and mature for a little while. Classification Look at your images one after another. Don't hurry but make a close examination. For a sys-

tematic approach, use the following short checklist to make a crude sortina:

"Yes": Continue to the next image. "No": Delete image or mark for dele-



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"Don't know": Leave image and have another look at a later stage.

1) Is there anything of apparent interest in the image?

Interest can be aroused in many ways. Often, this is done by the subject matter (animals, wreck diving, underwater landscapes) or also by image statements (conservation, documentation) and image moods (light effects, color effects). Sometimes, it's even a combination of all. Obvious outtakes, such as shots taken with the lens cap on and test shots, should be deleted right

2) Does the image appeal to you?

Often, a purely intuitive first impression manifests itself before and independently of a more objective technical assessment. Sometimes, an otherwise technically perfect picture may not appeal to us, while a technically imperfect picture may immediately make an impression. An image with an emotional appeal should be retained, and if possible, be reassessed at a later stage (as per the fourth point above).

3) Does the image serve your intention?

This is aimed at photographers with a specific objective in terms of specific techniques of photography, or on photographing special motifs. These cases often produce a whole series of images, and it is up to the photographer to decide whether the results fulfill the preset criteria.

If a specific photographic approach has been followed on a dive, it often results in an extensive series of relatively similar images. This is normal. In these cases, it is often better to look at each series in isolation and pick out those





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individual images that best meet the objectives.

4) Is the image correctly exposed, and if not, can it be corrected? Evaluate the histograms to assess whether the image has been correctly exposed in relation to the photographer's intentions insofar as these are apparent. What is deemed correct exposure largely depends on these intentions, but while these cannot always be





Lens corrections are a useful tool. The photo (far left) has a typical error made with a fisheye lens. The photo (left) is the same image after the lens correction is applied (using Lightroom 5.3). It's still an unchanged RAW image, only the lens correction was applied.

Selecting Images

formats record and preserve the complete set of image information captured by the image sensor in contrast to the ubiquitous and popular but also 'lossy' JPG format, which compresses the file, reducing the available data. Consequently, images saved in RAW or DNG stand a significantly better chance of being successfully corrected than those saved in JPG format.

5) Are the colors what you intended, and if not, can they be corrected?

Unless they were intended to be shot using only ambient light, underwater images captured without flash (i.e. because of a misfire) or the use of artificial lighting, are usually lost causes if they are taken any deeper than 5m (15ft). If there are no colors present, there is none to be recorded, in which case, no software can ever put colors back into the image. A slight color cast is a different matter. This can usually be corrected by subsequent adjustment of the white balance, provided you work with RAW or DNG files.

6) Is the image sharp and the focus where you want it to be?
To properly assess the sharpness of the image, it should be viewed at 100 percent magnification, bearing in mind that even when the image fills the entire screen,

it is most often scaled down and

thus appears sharper than it really is.

How sharp a picture must be is to some extent a matter of personal taste and preferences. Completely blurred images belong in the trash bin, but if there are any sharp areas in the image, the auestion is whether this focus is where it matters. If the choice of focus area has been completely left

known, the histogram is generally a quite useful tool.

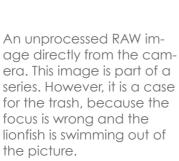
This is where Adobe Lightroom has one of its strengths. When viewing the images in the library module, the histogram is displayed for each image, allowing for a quick and easy assessment of how it is exposed.

Such software also

rect some exposure-related problems, which can be attempted, such as improving contrast. To what extent the issues at hand can be fixed and whether the image can be improved, also hinges on the dynamic range of the camera used, the overall tonality of the image itself, and in particular, on the file format with which the image was recorded. RAW or DNG

provides options to cor-

Malfunction of strobe flash (did not fire). As a result, blues and greens dominate the photo and there's no photographic information. Due to the 20m depth there is no color, nothing to save. A clear case for the trash.





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Sense or nonsense? This image was marked for deletion due to lack of significance. Still not deleted two years later, it ended up being published in a campaign to protect the oceans. The theme of the illustration: Corals are not very happy about what happens in your home. Image potential sometimes takes time to mature.

100 percent magnification to assess the image in detail. Noise artifacts may be reduced in software but often at the expense of overall sharpness, in which case it becomes a subjective choice as to striking the right balance.

Since no lens

errors such as chromatic aberration, distortion and vignetting. As these errors are known and generic in many cases, image editing software offer lens correction filters, which will amend some of these issues. Once again, these work primarily for images saved in RAW or DNG and offered mostly for dSLR and mirrorless cameras.

7) Are the noise, lens distortion and other optical errors within acceptable levels or can they be reasonably corrected?

for the camera to decide, the

prising.

plugin.com).

outcome can sometimes be sur-

Tip: A free plug-in for Adobe

Lightroom provides information

on whether and where in the

image the camera focused.

(www.lightroomfocuspoints-

Unsightly noise in the image may result from shooting with higher ISO-settings, the extent of which depends both on how high it has been set and the quality of the camera. As above, use

is flawless, it is also worth looking at correcting lens

8) Does the composition work? Is there a recognizable composition? Is it pleasing? Can the image be improved by cropping it in any way? Composition is a complex matter, and there is much more to it than the well-known rule of thirds. Suffice it to say skillful composition matters just as much as the subject matter itself.

Even in cases where you have answered "no" on the initial sorting checklist, I still recommend that you retain a copy of the image somewhere on a hard disk. Because over time, with experience and knowledge, you will come to view your images in a different light, and at times, discover previously unknown potentials and qualities.

Tip: Some photo viewers and editors provide the option to assign a grade to images i.e. by a number of stars. The more stars, the better the picture. This feature is useful to perform a crude first sorting of your images into, say, a first choice, second choice and third choice, thereby avoiding the risk of deleting some of them too hastily.

While some of the points on the checklist are relatively straightforward, other points will require a bit more effort in terms of critical review, consideration and perhaps even reflection on your own photographic work. The latter process is, however, a quite important one, as it will also enable you to evolve as a photographer, even with the camera sitting idle in the drawer waiting for the next dive. ■

Rico Besserdich is a widely published German photographer, iournalist and artist based in Turkey. For more information, visit: maviphoto.com.

Dehaze feature lets you rescue cloudy images

Text and photos by Peter Symes

The new Dehaze control in Adobe's Photoshop CC and Lightroom CC helps eliminate fog and haze in photos, including underwater shots.

Before the Dehaze feature, one would need to raise the contrast, clarity and saturation levels to get the image recovered to where they need it to be. For the best results, you'll want to set the white balance for the image

before using Dehaze. Then, in the Effects panel, move the slider to the right—to easily remove the haze from the original scene.

Photoshop's healing brush also gets an update—processina enhancements will now allow effects of the tool to be seen immediately. Also new is an update to existing lens blur effects that will make it possible to add noise back to a scene once blur has been applied and grain has been smoothed out.

Further to Rico Bessserdich's

article, "Selecting Images", in this issue, I subjected a couple of discarded images to a little Photoshopping in order to test these new features. In none of these cases did I spend more than a few minutes. The new Dehaze function is found under Camera Raw Filter (only works on RAW files) along with sliders for, among other things, colour temperature, tint, contrast and exposure, which I adjusted first before applying any Dehaze and, hey, presto! ■





Reef scene from Grand Bahama (left). There did not seem to be much particular matter in the water, but shootina straiaht into the sun could have



White grunt (left) shot in silty waters near Blue Heron Bridge in the U.S.

enhanced an existing haze or created artefacts such a lens flare.



French grunt shot near Blue Heron

Brigde in Florida, USA. The left image is a crop from the original ipas saved by the camera. On the right, contrast and saturation has been adjusted before applying the dehaze.

state of Florida. This image has been improved mainly by applying the Dehaze filter.

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Aquatica A5Dsr Housing

Aquatica has announced the imminent release of its new housing for the Canon 5Ds, 5Dsr and 5D Mk III. The A5Dsr housing features improved ergonomics such as a control extender arm for ISO control plus an oversized, brightly colored button for record start/stop. Available as an option with the A5Dsr housing is the integration of Ikelite's TTL circuitry. The new housing is available in July at a retail price of US\$3,400.





Nauticam NA-D7200 Housing

Nauticam has released its housing for the new Nikon DX D7200 DSLR camera. The NA-D7200 is said to be 15 percent lighter than its predecessor, the NA-D7000 housing, and features improved ergonomics, pre-installation of the electronics for Nauticam's vacuum system, a redesigned camera saddle with a vacuum system reset button and access to the camera's programmable Fn button. The NA-D7200 will retail at a price of US\$3,300.



Sea&Sea has announced the release of its new housing for the Sony A7II full-frame mirrorless camera. Also released with the MDX-A7II housing is a conversion ring that will allow the use of Sea&Sea's NX ports in addition to its standard ML ones. The MDX-a7II is fully compatible with Sea&Sea's internal Optical YS-Converter, which converts the camera's electrical flash triggering into an optical signal. It is available as an optional extra. The Sea&Sea MDX-a7II retails at US\$2,896.





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Mangrove MVHS-X70 Housing

Aditech has announced the release of its new housing for the Sony PXW-X70 and the HDR-CX900 camcorders. The Manarove MVHS-X70 housing uses a total of 12 electromagnetic external push-buttons to provide LANC control for 25 camera functions. It also features a 3.5-inch TFT LCD rear screen and an optional AUO 3.5-inch, 16:9 ultra-high resolution monitor. The Mangrove MVHS-X70 is available now at a retail price of €2,065.





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Sealux HC-X1000 Housing

Sealux has announced it is shipping its new housing for the Panasonic HC-X1000 4K camcorder. Constructed of aluminum and featuring a large 5-inch rear display and all-mechanical controls, the new housing ships with a flat port, but dome ports can also be used as required. The HC-X1000 housing also features internal close-up and neutral density "flip" filters.



Ikelite EM5 II Housing

Ikelite has released its housing for the Olympus OM-D E-M5 Mark II mirrorless Micro 4/3 camera. Manufactured using Ikelite's signature polycarbon-

> ate material, the housing features the company's TTL system and full compatibility with its magnified viewfinders. The polycarbonate material used for the housing allows Wi-Fi transmission so that images can be downloaded directly from the camera onto compatible devices without having to open the housing. Ikelite has a selection of ports available for many of the Micro 4/3s lenses popular for underwater photography. There is a pdf chart with full details of lens









Nauticam EM5 II Housing

Nauticam has also released its new housing for the Olympus OM-D E-M5 MII mirrorless Micro 4/3 camera. The NA-EM5II housing features one button access to the OM-D's Super Control Panel together with fiber optic strobe triggering plus the option of attaching 45-degree or 180-degree viewfinders for use with the camera's electronic viewfinder. The NA-EM5II housing is available now at a retail price of US\$1,450.

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