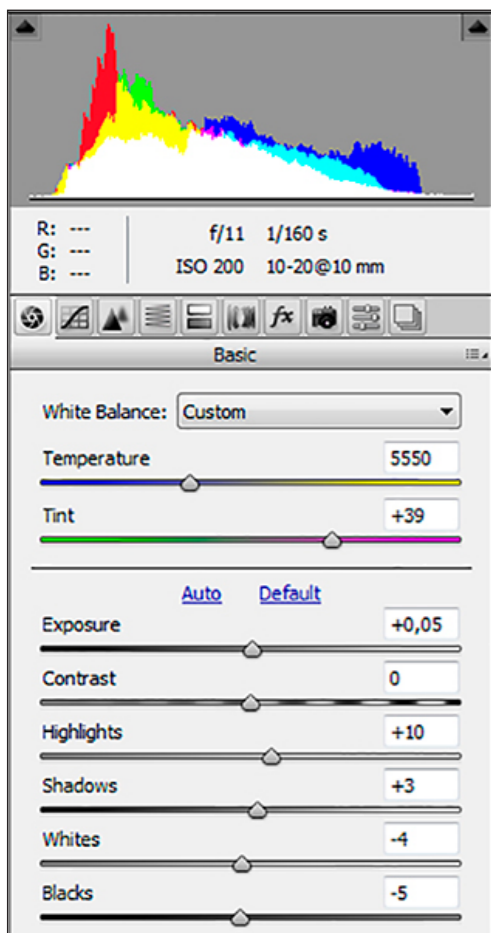


Image 1. Tutorial image (right); Histogram in ACR (below)

Text and photos  
by Rico Besserlich

Colour is often the key factor in underwater photographs. A keen photographic eye and a few fine adjustments in postproduction can improve colours and give your image the final touch.



# Essential adjustments of Colour in Postproduction of Underwater Images

The fine-tuning of our underwater images in postproduction requires a closer look at colours and a skilled photographic eye. Just aimlessly sliding sliders in Photoshop or Lightroom software and seeing what happens rarely

results in pleasing images.

The ideal starting point is to have an image in RAW or DNG format, a calibrated computer screen, proper lighting in your workspace and image-editing software such as Adobe Photoshop or Lightroom.

Ninety-five percent of image editing can be done in Adobe Camera Raw (ACR)—the RAW processor of Photoshop—or in Lightroom, which offers the same functions but has a user interface that looks a bit more fancy.

How you want your image to look after editing is your choice alone. It is your photograph and you can do with it whatever you want. But let's see how we can improve images with just a few basic steps!

The very first step in solving colour problems is always the white balance. I adjusted the white balance in the example shown (see Image 1 above) and applied a few subtle exposure and contrast adjustments (see the



Image 2. With slight adjustments to exposure and contrast and the Vibrance slider at +20 (below)



Image 3. With the Vibrance slider at +50 percent (left)

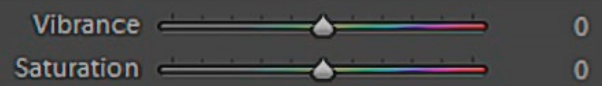
Image 4. With the Vibrance slider at +100 percent (below)

Adobe Camera Raw



Vibrance and Saturation sliders in Photoshop ACR and Lightroom (left)

Adobe Lightroom



regarding the colour.

On first impression, the easiest tools to use seem to be the Vibrance and Saturation sliders, found in ACR and in Lightroom's development module. However, with these controls in particular, a lot can be done wrong, especially when overusing them.

inserted screenshot from ACR above). After that, the image now looks like Image 2 (top left). The photo generally looks ok. There are lots of colourful subjects in it, and the histogram looks fine. But I believe that more can be done with it

**Vibrance**

Vibrance boosts the saturation of your lower-saturated colours.

This might sound nice, but let's have a closer look.

While a slight boost of +20 to the right brings slight improvements (see Image 2, above), a value of +50 results in unnatural colours (see Image 3, top right) and "full-power" at +100 almost destroys the image (see Image 4, right).

Let's look at the extreme version of +100 vibrance boost in Image 4 (right). We might think, "Wow, that really pops!" But actually, a lot of the colour details are wrong. In simple terms: it's too much of everything (I hope you agree with me).





Image 5. With Saturation slider at +25 percent (below)



Image 6. With Saturation slider at +50 percent (left)

Image 7. With Saturation slider at +100 percent (below)



Adobe Camera Raw



Vibrance and Saturation sliders in Photoshop ACR and Lightroom (left)

Adobe Lightroom



saturation to the image but when overusing it (+50 or even +100), things go nasty. Let's check the "+100" boost in Image 7 (right).

What appears as "colourful" in this image

actually consists of mercilessly oversaturated colours.

Conclusion: I would use the Vibrance and Saturation sliders extremely carefully, or even better, not touch them at all. The thing is, we do not want to "boost" all the colours in an image; we want to do subtle adjustments

to specific colours that we find could use a little help in postproduction. This means that we first need to see and understand what to fix by focussing carefully on all the colours in the photo. And secondly, we need to use a precise tool to work on those specific colours. By the way, this is the last call for calibrating your computer screen (which should be done before moving on to the next step).

Let's have a closer look at the tutorial image and mark a few colour areas that could use improvement (Image 8, next page).

Saturation

Now, our next try involves saturation. Saturation increases or decreases colour intensity across all channels. Let's have a look at Image 5 (above).

It is the same story here: A subtle move to the right indeed adds a little helpful

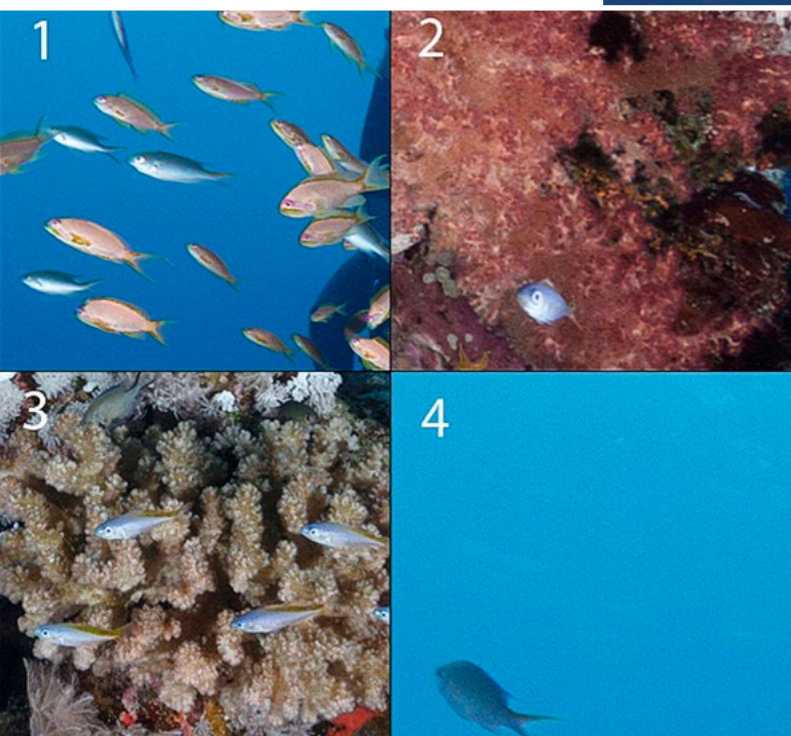
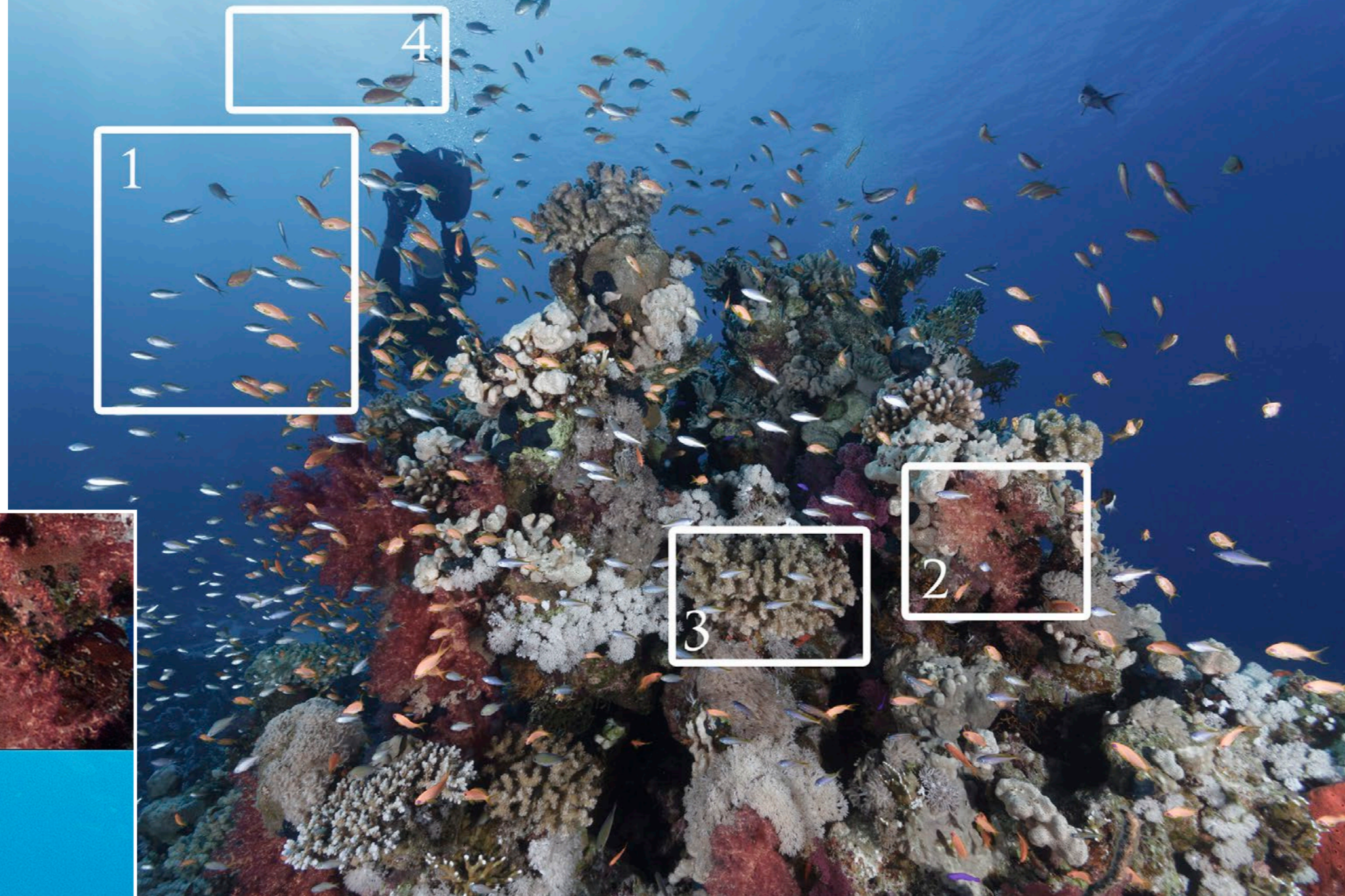




# photo & video

Image 8. It is good practice to zoom in to 100% magnification to scroll through and look around the image to find the "problem zones" (right).

A detailed close-up of each zone reveals specific problems with colours in the image (below)



As always, in proper post-production, it

is crucial to zoom in to 100% and then scroll and look around in the image to spot the finest details or

"problem zones."

As we are still working in the RAW processor, the most powerful tool

to use to work on fine adjustments of specific colours (in ACR and Lightroom alike) is the HSL control tab.

You access the HSL control tab by clicking on the fourth icon in the top menu bar of the ACR window (left). In Lightroom, it is in the development module, just below the tone curve control.

HSL stands for Hue, Saturation and Luminance, and the HSL tool provides the option to modify hue, saturation and luminance of ANY colour in our photos.

**H (Hue):** A gradation or variety of a colour

**S (Saturation):** The degree of chroma or purity of a colour

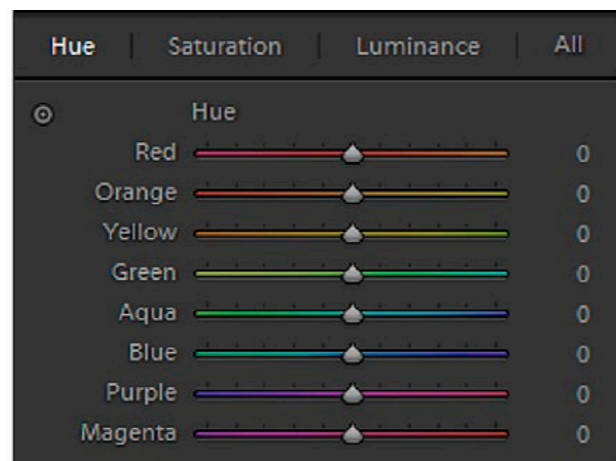
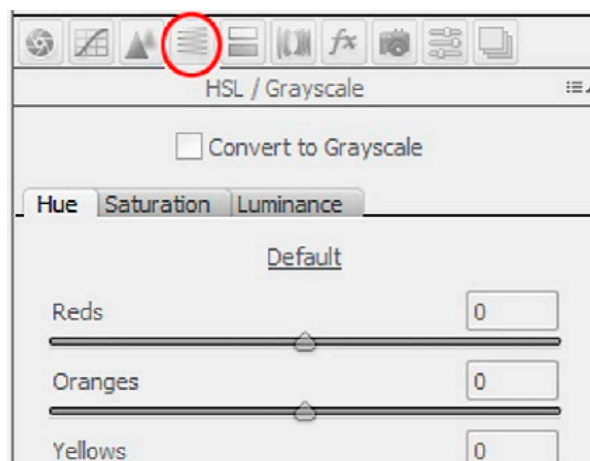
**L (Luminance):** The quality or condition of radiating or reflecting light

Zone 1: The orange colour of those fishes is pretty poor and flat.

Zone 2: The red and purple tones of this soft coral are slightly washed out.

Zone 3: The colours of this hard coral look flat.

Zone 4: All the blue tones of the water look a little flat.



HSL control tab in Photoshop ACR (left) and Lightroom (right)

**SeaLife**

**SEA DRAGON**  
Mini Dive Lights

**Mini 900S**  
900 lumens 14° Spot beam

**Mini 1300S**  
1300 lumens 8° Spot beam

**Mini 1000F**  
1000 lumens 130° Flood beam

SeaLifeCameras Instagram SeaLifeCameras  
[www.SeaLife-Cameras.com](http://www.SeaLife-Cameras.com)



Image 9. The final result after adjustments to hue, saturation and luminance (right)

Adjustments in the Hue control palette (below)

Adjustments in the Saturation control palette (above)

Adjustments in the Luminance control palette (below)

Hue	Saturation	Luminance
Default		
Reds		-4
Oranges		+39
Yellows		+37
Greens		0
Aquas		0
Blues		-6
Purples		0
Magentas		0

Hue	Saturation	Luminance
Default		
Reds		-15
Oranges		-27
Yellows		0
Greens		0
Aquas		0
Blues		-5
Purples		0
Magentas		0

Hue	Saturation	Luminance
Default		
Reds		-7
Oranges		-22
Yellows		+1
Greens		+1
Aquas		+25
Blues		+5
Purples		0
Magentas		+33

We can now optimise or alter specific colours in the image by moving the single colour sliders of the colours we want to edit (this means that if there is no problem with the reds, there is no need to play with the red slider). This counts for each colour and for each state (hue, saturation and luminance).

Back to the tutorial image: After focussing mostly on the orange, yellow,

red and blue tones and altering their hue, saturation and luminance values, the photo now looks like Image 9 (above).

The orange-coloured anthias are now in nice contrast and harmony with the blue water—and those soft and hard corals are looking fancier now as well.

Please bear in mind that all editing steps in Photoshop ACR or Lightroom are non-destructive, thus providing the welcome

option to alter specific editing steps or (in some cases) just go back to zero and start again from scratch. ■

*Rico Besserlich is a widely published German photographer, journalist and artist based in Turkey. For more information, visit: [Maviphoto.com](http://Maviphoto.com). See his latest book at: [Songofsilence.com](http://Songofsilence.com).*



### Ikelite DS Strobe

The new Ikelite DS strobe is likely to be released within this year. This successor of the well-known Ikelite DS160 and DS161 will feature improved energy savings (33%), a chrome-plated reflector for improved output, a fast recycle time, and an improved design for more field of coverage and softer fall off. The new DS strobe will work with the same batteries as the DS160/161. It is compatible with the Ikelite TTL converters and can be triggered by a fiber optic cable or electronic sync cable. [ikelite.com](http://ikelite.com)



### Godox Color Effects Set

Already well known in classical photography, the colouring of strobe lights can add some spice and artistic creativity to underwater images. The Godox Color Effects Set for round flash heads contains two each of 15 creative colour gel filters. Included in the set are Bastard Amber, Straw, Light Amber, Light Flame, Golden Amber, Light Red, No Color Pink, Middle Rose, Light Rose Purple, Surprise Pink, No Color Blue, Daylight Blue, Primary Blue, Moss Green and Blue Green filters. Each single filter has a diameter of around 6.5cm, which makes it possible to place it behind the diffusers of the most commonly used underwater strobes such as Sea&Sea, Ikelite and Inon. [godox.com](http://godox.com)



### Canon EOS R5

Still in development but likely to be released within the year, Canon's new mirrorless full-frame camera will include lots of useful features for underwater photographers and videographers alike. The EOS R5 will be able to shoot 8K 30p video at full width (no crop) with Dual Pixel AF in all 8K modes. Dual card slots, in-camera image stabilisation, 12 fps with mechanical shutter (20 when using the electronic shutter) and a new "animal detection" AF system are already confirmed features. Sensor resolution is expected to be in the 40-50 MP range. [global.canon.com](http://global.canon.com)



### Anti-Reflection Ring

To avoid the reflection and thus visibility of camera lens inscriptions and ring details in underwater images created with a wide-angle lens in a dome port, Ikelite offers a series of self-adhesive vinyl labels that can be easily mounted onto the lens. Reflection rings are available in different dimensions for the most commonly used wide-angle lenses underwater. [ikelite.com](http://ikelite.com)



### WACP-2 Wide Angle Conversion Port

Nauticam's WACP-2 is designed to work with 14mm lenses to produce a (maximum) 140° field of view while maintaining full zoom-through optical capability. It is designed for full-frame cameras. Since it can focus on air, it is suitable for split-shots as well. When used with wide-angle zoom lenses, i.e. from Canon or Nikon, the wide-angle conversion port provides a field-of-view range from 140-72°, depending on the lens model used. Its lens construction consists of four elements in four groups. Its weight at the surface is 7.06kg, while underwater it is 0.85kg (when using the included float collar). The WACP2 is depth-rated to 100m. [nauticam.com](http://nauticam.com)

## Stuck inside? Improve your underwater photography while at home

While divers around the world find themselves landlocked during the coronavirus pandemic, many are looking to online learning to increase and improve skills. California underwater photographer Brent Durand has announced he is developing a new series of free video tutorials for underwater photographers.

"Let's stay stoked on our underwater photography so that we're ready to join the next exotic dive trip and support our local dive shops," writes Durand. The first video in the series focuses on depth of field, exposure challenges, composition and creative lighting techniques.

### Image editing

Now may also be a good time to learn more about editing one's images. On Durand's YouTube channel, underwater photographers will find a variety of free helpful videos about postproduction tips in Adobe Lightroom, covering topics such as backscatter removal, white balance and how to speed up one's workflow.

### Get to know your gear

It may also be a good time to get to know your camera rig

better. Brush up on underwater photography camera settings and how to use camera gear with free video tutorials about lights, strobe positioning, black backgrounds, wet lenses and composition tips.

### Virtual photo lesson

You can even register for a virtual photo lesson, available to those who want individual custom instruction on specific aspects of underwater photography, gear and postproduction. "The lesson will cover exactly what YOU want to learn!" states Durand. Book your virtual lesson here: [tutorials.brentdurand.com/virtual-photo-lessons/](http://tutorials.brentdurand.com/virtual-photo-lessons/)

### About the photographer

An avid diver for over 20 years,

Durand is a widely published underwater photographer and dive writer who has served as editor-in-chief of the Underwater Photography Guide and imaging expert at Scuba Diving Magazine and Sport Diver. With a reputation for insightful-yet-simple reviews and tutorial articles, he has written for most of the top dive publications. Helping hundreds of divers "take their photography to the next level," Durand has led underwater photography workshops in California, the Bahamas, Indonesia, Mexico, the Philippines and Sri Lanka. ■

For more information, visit: [tutorials.brentdurand.com](http://tutorials.brentdurand.com). To watch the free video tutorials, go to the photographer's YouTube channel at: [youtube.com/brentdurand](http://youtube.com/brentdurand).



Click on the image to go to the free video



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