



Backlight

Text and photos by Kurt Amsler
Translation by Peter Symes

Impressive backlit images do not necessarily require the use of a flash. Just aim towards the surface and use the sun. Often, that is all there is to it. If you understand how to get the exposure right, that is.

Under most circumstances, underwater photographers balance light from flash with ambient light to create a certain ambiance by adding illumination to the front, above, below or the sides of the subject. But there are a range of subjects that only work if they are taken against the light.

Sunlight

From macro to wide-angle photography, there are plenty of subjects that can be taken against the sun. If the subject covers at least two thirds of the sun, it will stand out as a silhouette. Where the sun is beside and not behind the motif, we speak of backlit subjects. In both cases, since the sun is included in the picture, the photographer must correct the exposure by three to four stops.

Imagine that you have the sun not

in front of you but behind you. In this case, your metering may, for example, show that you should expose the image with an aperture of f:5.6 and shutter speed of 1/30 second. But if you turn around and include the sun in the frame, the built-in meter may now show a suggested exposure of aperture f:5.6 and a shutter speed of 1/250 second. In the latter case, you should therefore know how to subtract the effect of the sun shining directly into your camera in order to get the exposure of the foreground right.

In the case of silhouettes (where the subject covers substantial parts of the sun), you would usually have to subtract one or two f-stops. An easy way to get the exposure right is simply to point the camera in the opposite direction, measure the light there, and lock the settings before pointing the camera back

towards the subject. Many cameras allow the user to lock the exposure setting—consult with your manual—by holding down a button or switch.

You can also use manual mode and use the readings from the camera as a guide to set the aperture and exposure. In this case, take a reading in another direction away from direct sunlight and set the exposure correspondingly. With this setting, you can now point your

camera back towards the subject and make a first shot. In order to make sure it is absolutely right, use *bracketing*—that is, make some additional shots with the exposure set both over and under the first image. In this day and age where memory cards are cheap, taking these extra images shouldn't be an issue of having enough storage.

Most backlit images are taken without flash. Most of the subjects (such as divers,

manta rays or sharks) often work better in high-contrast, black or dark blue silhouette, without additional flashlight.

Using the camera in automatic mode and leaving the calculating of the exposure to the electronic circuits, or an elaborate light meter, is the easiest way, and the result is often okay. The problem is that this approach only works when the sun is behind you and not in front of you.

The automatic system usually bases its

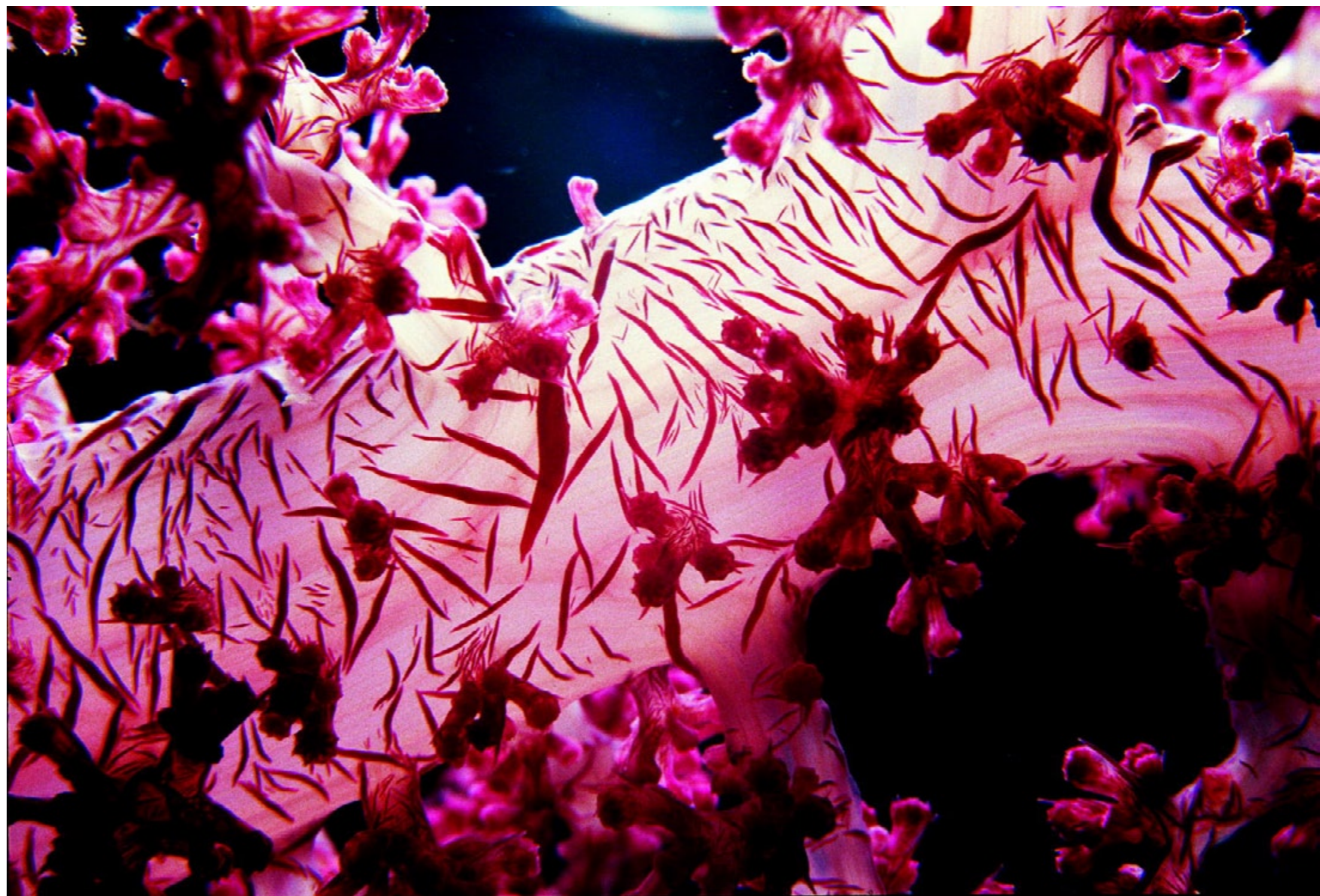




photo & video

These jellyfish are literally illuminated by the sun. Therefore, not only outline and colour, but also their inner workings are visible

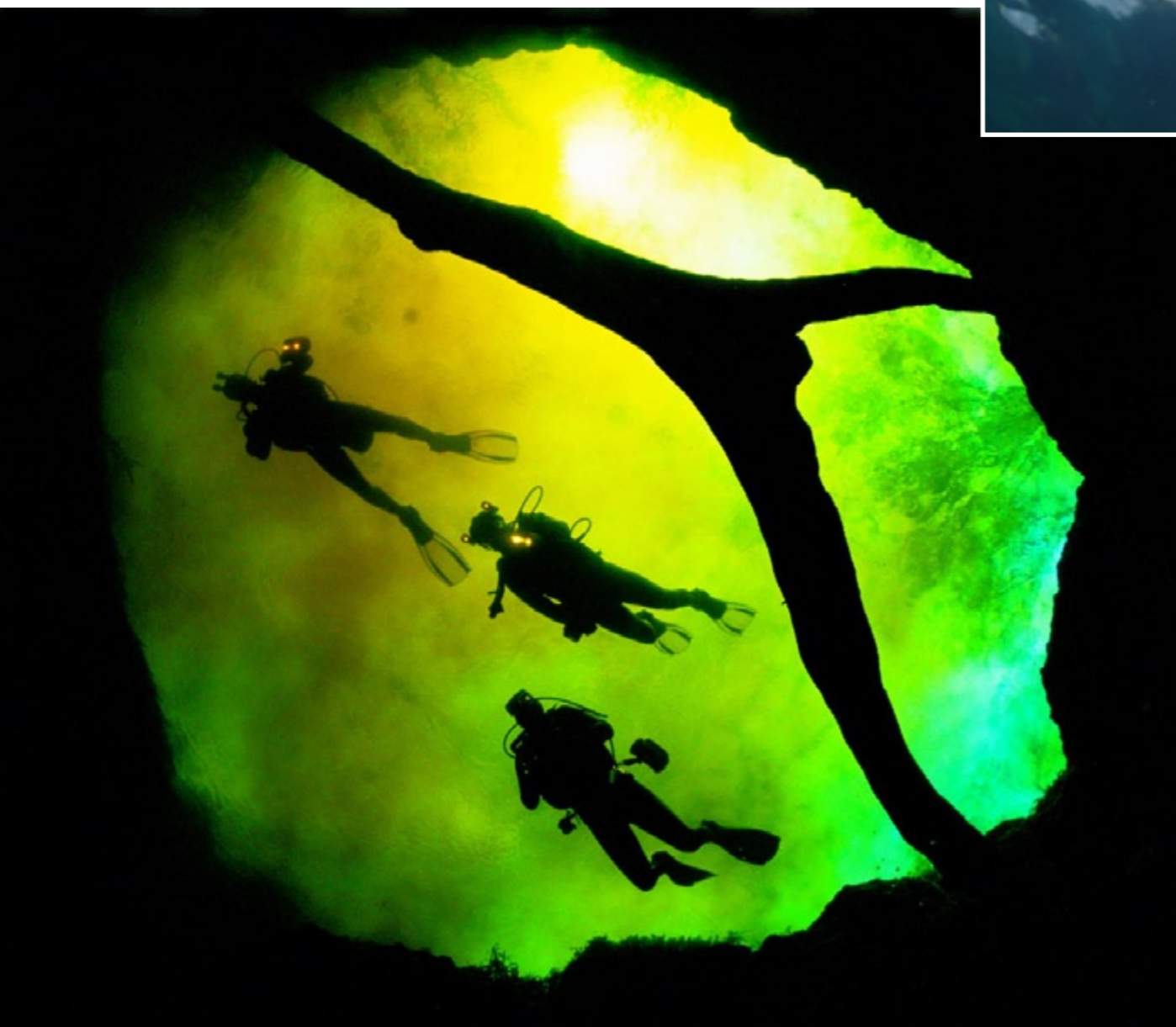


calculations on the brightest areas of the image leaving all the shadows and darker areas hopelessly underexposed as result.

Fill

Using fill flash is often a balancing act and a compromise between background and foreground. The high brightness will often require very fast shutter speeds and small

apertures. For example, consider a case where we have a diver appearing next to the sun disc. In this case, the metering system may call for an aperture of f:16 and of 1/60 second shutter speed combination. But the part of the diver facing the photographer won't be lit, so how do we handle this? If the diver is, say, about two meters away, the flash would not often be



able to create sufficient output if the aperture setting is f:16.

Since the duration of the flash output is a fixed entity, the answer lies in changing the exposure combination to one with a more open aperture and faster shutter speed. As we open the aperture, the shutter speed must be reduced correspondingly to maintain the same overall exposure.

Note, however, that at shutter speeds faster than 1/125 second, many cameras—especially older ones—will no longer be capable of staying synchronized with the flash. In this regard, digital photographers—who can also enjoy a more direct control and instant feedback—have a distinct advantage over the now diminishing breed of film photographers. Photographers who capture their images on film, should always make use of bracketing.

Subjects

The easiest—and, especially at the beginning, most appropriate—subject

is the dive buddy. He or she can be positioned without haste to ensure that you get the composition just as you want it. In this regard, make sure that your model's equipment such as pressure gauge, console or belts and hoses are tucked in and worn close to the body. Having them dangling in all directions as many divers do does not look attractive on images.

If you have a little patience, you will often get into situations where the diver starts interacting with approaching wildlife. In these cases, the main challenge is for the photographer to find the right position in relation to the sun. But with some patience, you will succeed not only in getting great shots of jellyfish (see photo above), but also turtles, manta rays, and even sharks and mackerel.

Tips

- As we get used to constantly using flash, we tend to forget about making the best use of ambient light. Keep an eye out for the effect of sunlight!



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Backlight

- Approximately 80 percent of backlit subjects are photographed without a flash. This has the advantage of a wider choice of aperture-shutter speed combinations, and you won't be bothered by backscatter.
- When photographing without a flash, resist the temptation of just setting the camera to automatic exposure mode. The automatic system exposes according to the brightest

CLOCKWISE FROM LEFT: If a synchronized fill flash is used correctly, one sees not only the skyline, but also details. In order to create such a halo around the divers at least two thirds of the sun need be obscured; To bring out the inner structures of this coral, the flash was positioned behind the subject (below); Ambience: A diver in the light of the sun (bottom left)

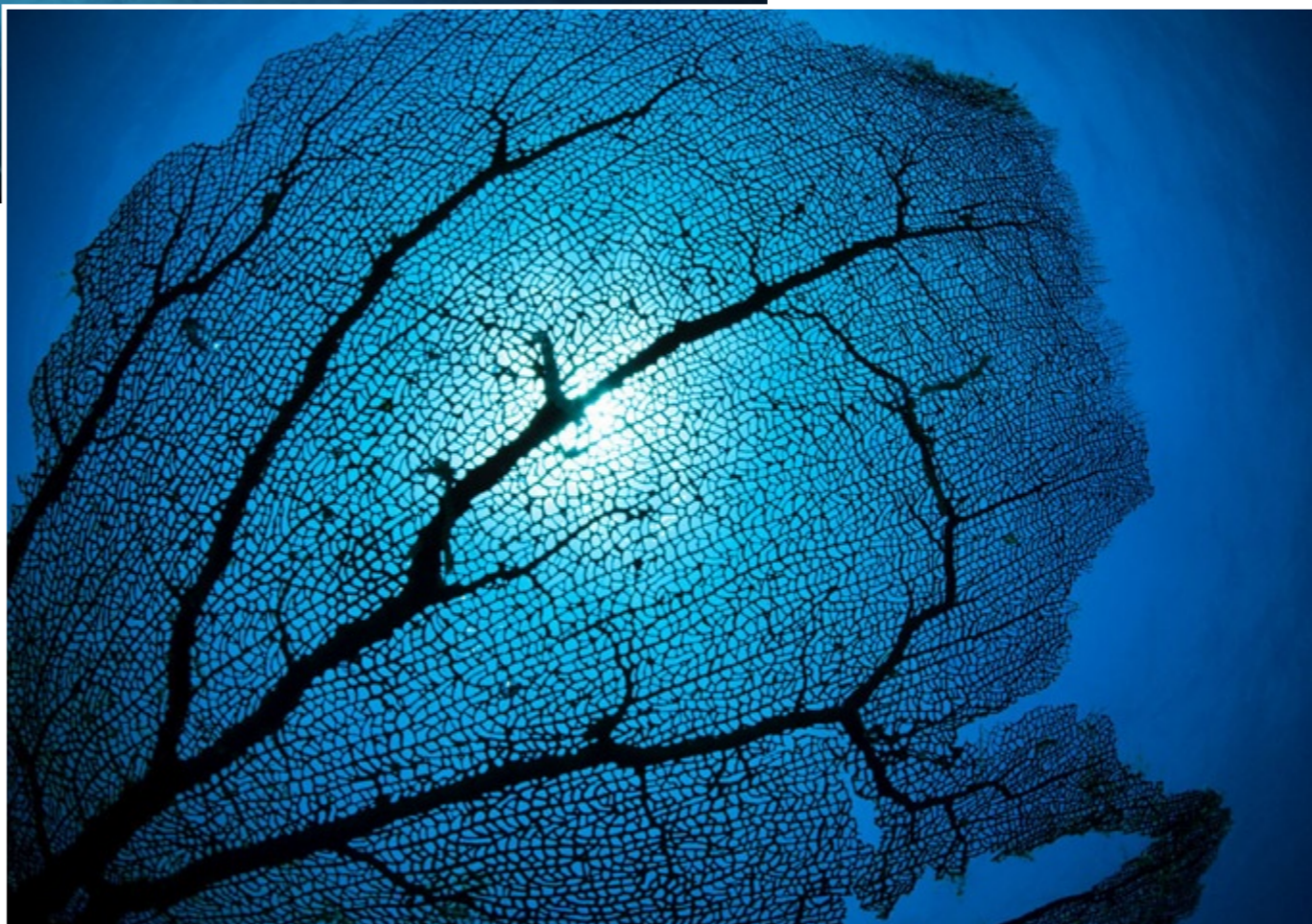
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Backlight

parts of the image and tends to leave the rest too dark.

- The positioning of the model in relation to the sun is very important, so it is of great importance that placement and roles are discussed between the photographer and model before the dive.
- Silhouettes of divers are easy to photograph. The model must cover at least two-thirds of the sun disc.
- For the sun to be properly obscured by the subject, the image should not be taken from too great a distance. The closer the image to the camera moves, the more the sun is covered.
- To capture marine life against the sun, the photographer must act fast. In addition, because the photographer is positioned directly beneath the creatures, they must avoid exhaling prior to the shot, as rising air bubbles don't look good in the

image and often cause fish to change direction.

- Backlit shots tend to bring out scratches and dirt in the front glass on the port, especially with dome ports. In these cases cleaning is paramount.
- Balancing backlit images with flashlight requires certain combinations of shutter speeds and aperture settings. There are two factors you need to consider: First, is the flash powerful enough to illuminate the subject at the desired distance to the subject? Secondly, will the camera and flash be synchronized at the chosen shutter speed?
- The method of measuring for exposure in the direct opposite direction but at the same angle to the surface, has proved to be very successful. To make sure that you get a precisely exposed image, use bracketing. ■

Cave entrances (above) are ideal for backlit pictures when the sun is directly above

The U-boat *Rubis* in front of St. Tropez looks great against backlight (far right)



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Keldan LUNA 8 LA-V

Lightweight and powerful, Kelvan's LUNA 8 LA-V uses a rechargeable Li-Ion battery pack. Offering a much higher power density and less weight than NiMH batteries, the Li-Ion battery pack also offers better performance in cold water conditions. The unique optical design with diffuser and dome lens results in a very soft and wide beam of 90° on land as well as in water. There is no need for special mountings for the battery canister. The included bracket allows easy mounting on standard arm systems like the Ultra Light arms. The wall adapter accepts 110V to 240V AC. Exchangeable adapter plugs allow worldwide use. www.keldan.ch

MINI C-MARK

Back by popular demand, Ikelite has re-released The Mini C-Mark. Emitting brilliant flashes of light visible for several miles at the surface, it's an ideal location marker or emergency beacon for night and limited visibility use. Utilizing a pair of C-Cell alkaline batteries (not included), the adjustable flash rate runs eight to 20 continuous hours, depending on the flash rate selected. The bright yellow body provides visibility even in poor conditions and features a unique folding switch to assure against accidentally being turned-on. The lens is secured by a screw-on cap that is guaranteed unbreakable. The Mini C-Mark can be converted to their famous Mini-C flashlight by purchasing the #9073.1 module with bulb. www.ikelite.com



Sony announces DSLR-a450

The newest addition to Sony's ever-increasing stable of DSLR's, the new Alpha 450 is a versatile choice for photographers eager to take their craft to the next level. Powerful yet easy to use, the DSLR-A450, boasts a high-resolution 14.2 megapixel sensor delivering highly detailed, ultra-low noise images. Sensitivity extends right up to ISO 12800, allowing the capture of handheld images in low light without flash. Creative options are enhanced with Auto HDR mode that accommodates bright highlights and dark shadow details in a single frame. Two successive frames shot handheld at different exposure values are merged automatically by the camera, resulting in a detail-packed High Dynamic Range image without image editor software. Slots for Memory Stick PRO-HG Duo and SD/SDHC memory cards are offered to suit users' personal shooting preferences. When using the optical viewfinder, the high-capacity battery allows up to 1,050 shots between charges. The a450 will be available from the beginning of February 2010. www.presscentre.sony.eu



Here We Go Again

We all knew it would happen again sooner or later. The Christmas Day terrorist attempt on a Detroit-bound Northwest flight was enough to put government officials on full-fledged panic mode, imposing strict new security measures on US-bound flights. Unfortunately, these kind of restrictions will simply not fade away. What's a travelling dive photographer to do?

As in most situations however, there is always a solution. Try to pack as much into one bag as possible. On a recent trip, I left my somewhat bulky computer bag at home and packed my laptop and accessories into the pouch on my Lowepro camera bag.

Another option is to purchase a photo vest. All of those pockets can hold a number of items, from hard drives, cell phones and iPods to reading material and snacks (providing the latter are still allowed at the time of writing). Careful packing of those in-flight essentials will allow more space in your carry-on for that all-essential photo gear. ■



Nauticam, D90 D700 and D7

Text by DigitalDiving

— *An Introduction to Nauticam*
Like many users of housings we come to a point when we want to upgrade our system. The usual route is to move to the latest camera housing by our current manufacturer to utilise the investment we have previously made in port and lighting systems.

We wanted to upgrade our two Nikon D200 system to D300. The search was on for the best deals available on both cameras and housings through our network of underwater photographers around the globe.

Our conversations led us to Hong Kong where our friends, Stephen and Takako,

considered that we may be interested in talking to Edward Lai, owner of the newly formed Nauticam company, who was completing the final pre-production housings for the Nikon D90 and D300/300s models. Edward and his team have been in the precision mould manufacturing industry for more than 20 years, and now focusing on development and production of underwater photographic equipment.

The introductions were made and after many e-mails over a couple of weeks, Edward kindly sent us a Nikon D90 and Nauticam Housing for us to use on our trip to the Philippines. Such joy and excitement it was to have a generous offer made, and we had nervous anticipation to be experimenting with a new camera model and a new housing—a daunting prospect.

Upon arrival, the quality of the finish and the precision of the engineering was most eye catching. Underwater, the system was

very simple to operate and had much easier access to the operating features than we were used to. Additional levers replaced some of the traditional push in rods making

regular operations much easier and at one's fingertips. We were able to connect our Inon strobes via optical cables that enabled use without electrical sync cords (a potential point of weakness), and for those that like to use TTL, the need for additional converters is not necessary.

The bonus was that we could use our existing Sea & Sea ports by simply removing the existing locating plates and replacing them with a simple Nauticam bayonet ring—a one-off operation for continued use on the Nauticam housings. The fitting of the ports is simplicity itself through the unique lever/locking feature on the front of the housing—open lever, push in port, close lever!

Existing Zoom Gears—no problem. A well-engineered adapter allows all existing Zoom Lens Gears to be used.

During our trip, we used the system on 50+ dives and only had two minor faults, one of which was due to camera failure and the other, a fixing point which has since been rectified for the production units.

The Enhanced Optical 180° Viewfinder is supplied as an optional extra but has such excellent qualities that once tried would be difficult to return to the standard.

We have now been introduced to a well-engineered housing system that provides easier usage,



advanced operating features, lighter weight and is able to use our existing ports and strobes—all for the total expense of purchasing two optical cables.

We will soon take delivery of a Nikon D300 and D300s Nauticam Housing and suggest to anyone interested in a change for the better to look at the Nauticam range as extensions are planned in the near future (including Canon models) before making a final decision. Prices are realistic and extremely competitively priced, which is surprising for such a quality item.

Features and Benefits

- The port mount mechanism provides quick and easy exchange of ports via release/locking lever on the housing.
- Allows use of Sea & Sea ports by replacing rear-locking plates with Nauticam bayonet ring by a simple one-off application to existing ports. Nauticam also produces adapters for Nexus, Aquatica, Subal, Ikelite, etc.
- Provides dual strobe connection via dual optical sensor bulkheads using the cameras built-in flash enabling strobes to be used in TTL

or manual mode or through an optional single Nikonos five-pin bulkhead.

- Operating levers are used for the OK, AF, Live View (if featured) and Review operations.
- Moulded grip handles in polycarbonate and rubber for textured, smooth grip—spacers are available to increase width from housing, if required.
- Three-point locking latch housing closure
- Lighter weight housing construction versus competitors
- Moisture audible and visual alarm sensor
- Simple installation of optional Enhanced 180° Viewfinder

For more information, visit: www.nauticam.com or contact: enquiry@nauticam.com

The views and opinions in this article are solely those formed by DigitalDiving—Dive the experience with Nauticam. ■

Nauticam's new underwater housing for Canon EOS 7D

Nauticam USA proudly announces its underwater housing for the groundbreaking 18MP Canon EOS 7D Digital SLR. Engineered from a solid block of seawater resistant aluminum alloy, Nauticam's engineers have created a compact, lightweight design that provides effortless camera control. Video enthusiasts will appreciate the video/still photo mode and video start/stop button and their convenient proximity to the right grip.

Shooters can switch from still photo to video shooting, and start recording a video clip without removing their right hand from the handle. The innovative Nauticam Multi-Selector joystick control pad enables quick changes to focus point, camera menu settings, and the quick control menu. Nauticam is pleased to offer the industry's only locking extension ring system, securely fixing large dome ports even when mounted with an extension ring. A full range of port adapters allowing existing slr housing owners to use their existing ports.

For additional information, go to www.nauticamusa.com ■



Nauticam underwater housing for Canon EOS 7D