

Anthias shot in Anilao, Philippines. Shooting a compact camera at f/8 and 1/1000s speed while using a strobe can help you to create dark backgrounds even on sunny days.

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**Even though compact cameras have been used in underwater photography for decades, familiarity with the compact camera today is still limited to a mere handful who have really exhausted its buttons, modes, scenes and capabilities.**

I figure this is mainly due to the compact camera being "the first foray into underwater photography" for most people. Commonly, once these folks are convinced that they like the game, the upgrade to DSLR and other more complex camera systems happens very quickly, leaving many compact cameras merely serving a short service span.

Talking to a professional underwater photographer, especially one who has spent very limited hands-on time with a compact camera, is likely to create more frustration and failed results due to the differences in the limiting factors and user techniques between DSLR

and compact cameras.

The common response from professional image-makers to these failures is: "It's just a compact camera! You should upgrade if you want to go

further." After upgrading, this would be the same message the former compact-camera shooter tells the next compact-camera user who asks about it.

Let's set a few points straight.

### **Shutter speed & black backgrounds**

A common mistake I encounter when

teaching compact-camera users involves the shutter speed that they have read about, been told to use, or have learnt about on YouTube.

These shutter-speed settings are basi-

# Myth Busting: Compact Camera Rules & Common Misconceptions





Flamboyant cuttlefish shot over the sandy seabeds of Anilao, Philippines. Unlike with an interchangeable-lens camera, the Sony RX100 compact camera is able to shoot f/2.8 with a shutter speed of 1/2000s—and still works well with a strobe!

cally what the pros use. The problem is the pros give their advice based on the interchangeable-lens cameras which the professionals use, and not compact cameras, which function differently.

A DSLR or mirrorless camera system is limited by the “flash-sync speed;” hence, it is the fastest possible speed (depending on make and model) that is normally chosen for black backgrounds, while the aperture value is what is tuned to achieve black.

Often, a value like 1/200s or 1/250s is matched with a bigger

f-stop value to achieve black backgrounds. But this is not the case with a compact camera because the f-stop values do not normally push to higher numbers.

Telling compact-camera users to use a 1/250s value, when their cameras can only push to f/8, will not yield them a black background at 12 noon, on a sunny day, at five meters.

While interchangeable-lens camera users are limited to its flash-sync value, 99 percent of today’s compact cameras allow the flash to sync even at speeds

of 1/2000s or 1/4000s.

Considering this, a likely speed setting for a compact camera shooting black backgrounds with a flash or strobe would be in the region of 1/1000s and above.

Personally, I have made 1/1600s my general starting point with f/8 and an ISO of 100. This is my starting point for macro photography with dark backgrounds when using a strobe.

**Macro diopter (wet lens)**

With the Olympus TG series leading the “entry-level photographer



Mantis shrimp with eggs shot in Anilao, Philippines. Although the Canon PowerShot S95 compact camera has a maximum aperture value of f/8, it is still able to flash-sync at a shutter speed of 1/1000s.



This image of an anemonefish in anemone was captured with a Canon PowerShot S95 compact camera with strobe at f/4.5 and a fast shutter speed of 1/1600s, to catch fast-moving subjects (right).

A whip coral goby photographed when the coral polyps opened (far right). A Canon PowerShot G16 compact camera shoots with strobe at f/8 and a shutter speed of 1/1600s to create a black background.



Compact



The tiny yellow goby often makes its home in a bottle on the seabed.

category" today, another mistake that needs to be corrected is the "advice" to all compact-camera users that they need to buy a macro diopter to enable them to take macro photos.

Indeed, it is true that with DSLR, mirrorless, or more advanced compact-camera systems, super-macro is almost unachievable without the help of a macro diopter. To capture most super-macro images with many compact cameras (except Olympus TG models), one must push the zoom to almost "fully zoomed" levels, adding a diopter to allow focusing within closer distances to the subject.

An example of this would be to fully zoom in with a

Canon G7x or Sony RX100 camera, and then the focusing distance extends to almost a meter away from the subject. This is why in cameras without a macro diopter (wet lens), shooting super-macro would be almost impossible.

The purpose of using the wet lens is to allow you to come in closer to the subject, even while fully zoomed, to capture that super-small subject so it fills the frame. However, this is not the case with the Olympus TG series of compact cameras, which can achieve focus even when 5mm away

from the subject while fully zoomed (utilizing the Microscope mode). Adding a diopter to the TG will actually force you to back up and is counterproductive.

As each wet lens also has its own working distance, adding a wet lens not only minimizes the magnification but also

subjects the user to working within the limitations of the specific wet lens chosen.

If you are going to buy ONE wet lens for your TG, make it the wide-angle lens. That is the only wet lens needed to allow your TG to shoot super-macro to wide-angle photos.



Coleman shrimp living on a fire urchin (left). While an interchangeable-lens camera is limited by its shutter speed due to the flash-sync limitation of this type of camera, a compact camera is not limited by the speed.

about underwater photography can manage.

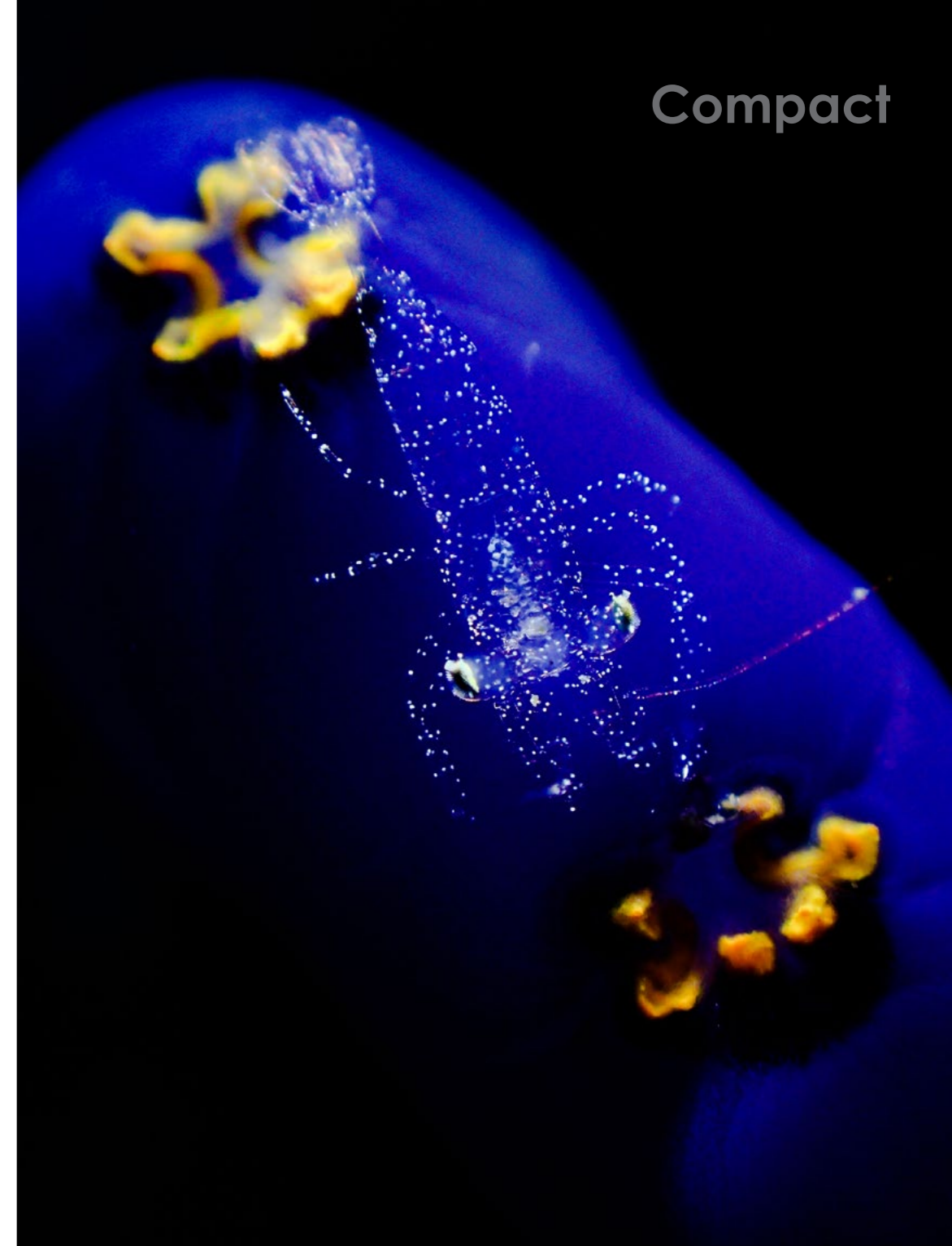
Aside from the main factor of sensor size in DSLR cameras, which allows for better ISO noise handling, better dynamic range and the ability to actually print billboard-size images, the capability of shooting a photo that is just as beautiful and just as creative with a compact camera lies in the hands and eyes of the user.

However, it is important to note that although the rules of photography are the same in theory, there are differences in the practical application of them. Compact and DSLR cameras can deliver the same results but using

Note: The TG has a default 25mm-wide range, leading the user to buy a wide-angle lens for 24mm or 25mm equivalence. If you buy a wide-angle lens for a 28mm equivalent, you will have to zoom in to avoid the vignetting (black areas around the edges of your photos).

### Advantages of compact cameras

While sensor size is the driving factor in why a photographer would move into an interchangeable-lens camera system, the compact camera also has its advantages by allowing the user to shoot both macro and wide-angle on the same dive. It is also easier to pack and travel with. Most importantly, it is within a budget range that most people who are passionate



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different settings and working around the unique limitations of each camera type has method and is an art in itself. ■

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Tunicate shrimp live inside these small tunicates and occasionally come out (above). An Olympus TG compact camera does not need to use a wet macro lens as it is counterproductive. Utilizing the Microscope mode allows you to take photos while fully zoomed, even at 1cm distance from the subject (left and above, and yellow goby on previous page).

## Lens Beyond Ocean International Photo Competition returns in 2022

Enter the annual international underwater photography competition, Lens Beyond Ocean (LBO), which is in its eleventh year. It is accepting entries from 15 February 2022.

Since 2011, the LBO competition has continued to grow year upon year. It has attracted over a thousand accomplished underwater photographers from all over the globe and awarded high-quality prizes from key sponsors.

### Prizes

Enter for a chance to win incredible prizes at world-class dive destinations as well as top-of-the-line dive gear and camera equipment, including dive travel holidays to some of the best dive spots in Asia worth **USD 10,000**.

### New developments

Each year, the competition adds new features to its categories and activities to entice, encourage and motivate more and more underwater photographers and videographers from all over the world to capture imagery of the wonder and nature of the underwater realm. Over the years, the final exhibition of the competition in Kuala Lumpur has been open to the

public, featuring the fine photographs and videos by participating artists, increasing awareness and drawing attention to the fragile beauty of the underwater world among divers and non-divers alike.

LBO announced a new category this year, "**Best of Malaysia by Malaysian**," which has been added to its roster of competition categories, including Macro, Wide-Angle, Compact Camera and 3-Minute Video. This new category aims to recognise the talent and excellence in underwater photography by fellow Malaysians who capture imagery in Malaysian waters, highlighting the captivating marine life and beautiful coral reefs found here.

### Be a winner

If you are a diver who is passionate about sharing your underwater imagery and experiences with the world, LBO provides a great opportunity for you to show off your talent. First place winners will be selected in each of the following categories: Macro, Wide-Angle, Compact Camera, Best of Malaysia by Malaysian, and 3-Minute Video.

### Judges

Winners in each category will be chosen by a select panel of judges.

**LENS BEYOND OCEAN**

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Register at [www.lensbeyondocean.com](http://www.lensbeyondocean.com)

**CLOSING DATE: 30TH APRIL 2022**

**MIDE MALAYSIA INTERNATIONAL DIVE EXPO**

Malaysia International Dive Expo  
**27-29 MAY 2022**  
WORLD TRADE CENTRE, KL

**NEW CATEGORY ADDED!**

**BEST OF MALAYSIA BY MALAYSIAN**

This is a special category to recognise the excellence and talent in underwater photography by fellow Malaysians of Malaysian waters and its fascinating inhabitants.

### Showcase of winning entries

Winners will be announced on **Wednesday, 18 May 2022**, and prizes will be awarded on the main stage at the Malaysia International Dive Expo (MIDE) on **Saturday, 28 May 2022**, at **11:00 a.m.** Furthermore, all winning photos will displayed in the foyer, and winning videos will be showcased on the big screen of the main stage during MIDE from **27 to 29 May 2022** at the World Trade Centre in Kuala Lumpur.

ing MIDE from **27 to 29 May 2022** at the World Trade Centre in Kuala Lumpur.

### Submission deadline

The final date for submission of all entries is **30 April 2022**.

### Prize sponsors

Prizes for LBO 2022 are sponsored by Borneo Divers & Sea Sports (Sabah)

Sdn Bhd, Bubble Scuba Worldwide, IST Malaysia, Scubaholics Anonymous, Tenggol Coral Beach Resort, and The Reef Dive Resort & Tours Sdn Bhd.

For more information about how to enter the competition, please visit: [lensbeyondocean.com](http://lensbeyondocean.com)





**Hugyfot housing for Nikon Z6/7 II**

The Z6/7 housing by Belgium manufacturer Hugyfot is machined out of a solid block AlMgSi1 high strength aluminium. All Nikon Z6/7 II camera controls can be accessed (on/off switch, shutter release, shutter speed, aperture, programme dial, main dial, push buttons, lens release, FN1 and FN2). As is standard, the 100m depth-rated z6/7 housing is equipped with the HugyCheck system, one M16 accessory port, two optical outlets (for two fibre-optic cables), two rigid aluminium handles with one-inch ball mounts, soft neoprene handle for one-handed photography, gearwheel drive for manual zoom or focus control, standard viewfinder, bayonet adaptor for port mounting, and a ball mount on top of the housing. Housings of this new generation are available in various colours, including Graphite Black, Titanium, Blue Titanium and Pink Champagne. [hugyfot.com](http://hugyfot.com)



**Nauticam housing for Nikon Z9**

The NA-Z9 housing by Nauticam offers a full suite of controls within reach of the integrated handles, including levers for the Fn1/Fn2 customisable buttons and the AF-Mode

button as well as double thumb levers for Playback/Disp and AF-On/Rec. The housing comes with an M24 bulkhead for attaching external monitor/recorders via HDMI 1.4 or HDMI 2.0. Additional features include M16 and M14 bulkheads for strobe triggering and a vacuum system. The NA-Z9 is compatible with Nauticam's water-contact optics such as the WACP-1/2 and CMC-1/2 and also supports Nauticam's N120 port system. Weight on land is 3.76kg, and 0.05kg underwater. The housing is depth-rated to 100m. [nauticam.com](http://nauticam.com)



**Panasonic Lumix GH6**

This video-centric Micro Four Thirds camera by Panasonic comes with a new 25.2-megapixel Live MOS sensor combined with the new Venus image processor. It supports an improved in-body image stabilisation (up to 7.5 stops) and upgraded video features. The new sensor delivers 14fps in AF-S mode (8fps in AF-C mode) when using the mechanical shutter, and 75fps (in AF-S mode) with the electronic shutter. The GH6 can record 4K/120p video at 10-bit 4:2:0. Furthermore, full

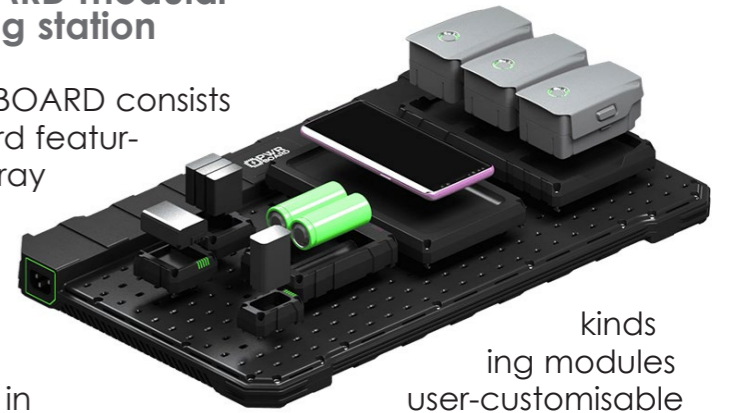


V-Log/V-Gamut has been added, providing up to 13+ stops of dynamic range. The GH6 features a 3.68M-dot OLED electronic viewfinder and is equipped with dual card slots: a CFexpress (Type B) slot and an SD UHS II slot. [panasonic.com](http://panasonic.com)



**PWRBOARD modular charging station**

The PWRBOARD consists of a board featuring an array of holes that accepts various kinds of charging modules arranged in configurations, allowing one to charge literally every kind of battery/akku with one single device. Each charger draws its power from the board and the number is limited only by the available space. The PWRBOARD is available in two sizes: Mini (23cm x 35cm) and Classic (33cm x 50cm). The 30+ different available charging modules (attachable to the PWRBOARD) will support batteries for Canon, Nikon, Sony, Panasonic, Olympus, Fujifilm, GoPro and DJI cameras, various smartphones as well as AA, AAA and V-mount batteries. The device also includes a couple of built-in USB-C and USB-A ports to charge additional gear. The PWRBOARD can be plugged into a wall outlet (110V or 220V) or used with a 12V/14V DC car power input. Important note: PWRBOARD is a crowdfunded product that will be available for purchase once the funding is secured. [pwrboard.io](http://pwrboard.io)



**Tokina fisheye lens**

The Tokina SZ 8mm f/2.8 X FISH-EYE is a compact, lightweight, fast, ultra-wide prime, manual focus, full-frame fisheye lens designed exclusively for APS-C sensor mirrorless cameras. The line-up includes models for Fuji X and Sony E APS-C size camera mounts. This new lens features a clickless aperture ring for smooth operation during video shooting, a minimum focus distance of 10cm, and a detachable bayonet-type hood to use with full-frame mirrorless cameras for achieving a circular fisheye effect. The lens weighs 280g, and its overall length is 52mm. [tokinalens.com](http://tokinalens.com)

