



Edited by Peter Symes
and Scott Bennett

Cave & Cavern Photography

—*Techniques for Photographing in Overhead Environments*

Text by Kurt Amsler
Translation Arnold Weisz

Caverns and caves is one of the most demanding challenges in underwater photography. To produce great images in the dark requires both special equipment and training, and mastery of daylight photography.



Penetrating into caves should only be undertaken with proper training and correct equipment

Mysterious, pitch dark and dangerous. This is how most divers imagine underwater caves. On the other hand there are few underwater photography's that come out more spectacular than images captured in caves. Obviously you have to discern between full cave and cavern diving. The latter are being defined as the area where daylight still can be seen and can be dived by normal sports divers without requirements for additional equipment other than a good light source. Penetrating into caves on the other hand is a completely different ball game and should only be undertaken with proper training and correct equipment.

The equipment

Photography in dark overhead environments is very seldom about animals, but all about the special impressions of bizarre shapes and the play-of-light. The best lenses to use in this environment are therefore super wide angle. Small cameras like the Nikonos and Motormarine are often easier to use than larger housed mirror reflex cameras, as you may have to work your way through narrow passage ways. These simpler kinds of cameras will

do the job as good as SLR cameras, since you are only working with wide angle photography. To capture the fascination of cave diving you have to work with the light effects. To create some good light effects you should also use (besides the main strobe) slave flashes, like f.ex. the YS-30 from Sea & Sea. But even a 50 W dive light can create some nice effects in a cave. To keep your slave flashes negative buoyant, strap some lead on to them. I've used counterweights, normally used to balance car tires, with great success for this purpose.

Caverns

The most spectacular images can often be made at the caverns and cave entrances. Stay inside the cave/cavern and let the divers enter, swimming towards you with their dive lamps turned on. Light entering a cavern/cave from holes or crevices in the ceilings also make for great light effects. To capture these kinds of light effects you need to use longer shutter times, like for example 1/30 or 1/15 second. If you can place a diver within the natural light beam, the image will be even better.

The most spectacular images can often be made at the caverns and cave entrances



cinema of dreams



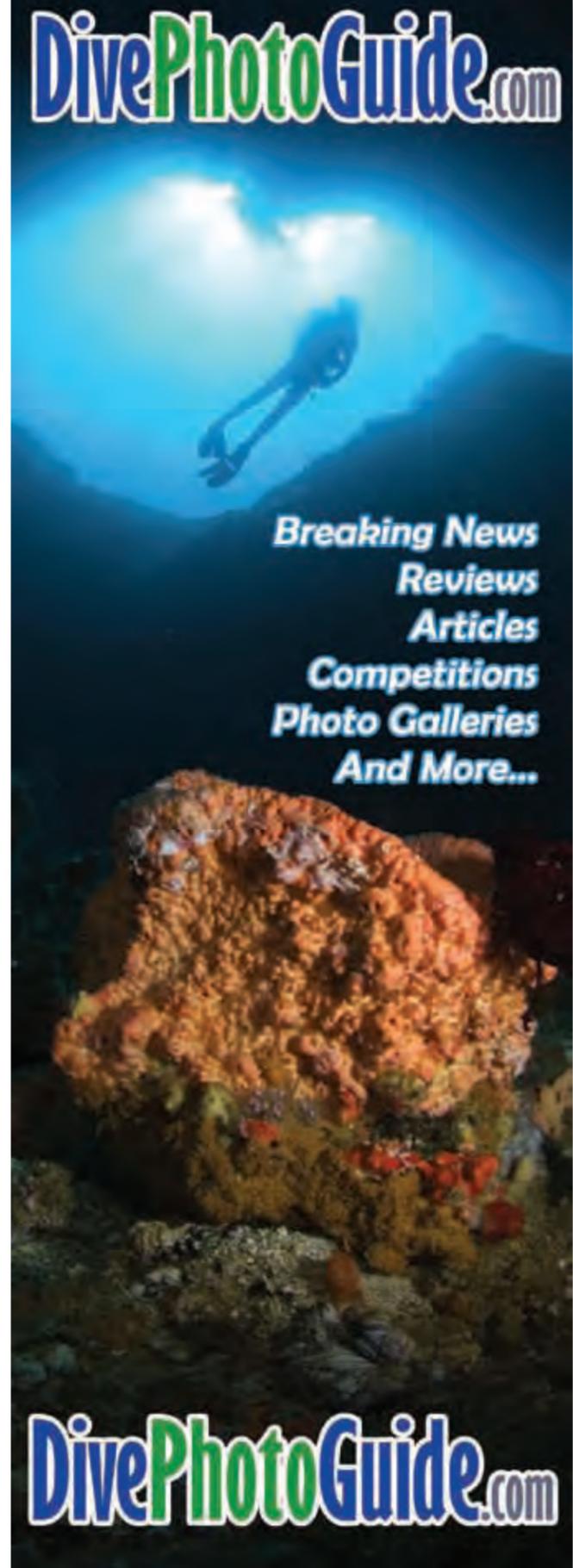
www.seacam.com



Cave & Cavern

Slave strobes can illuminate everything although they cannot be pointed towards the camera, as this would distort the image

flash and no models, and progress the next step, once you've mastered the previous. Before setting up more complicated shots, do dry-runs with your team, and start up with doing easier shots by setting the image in caverns or cave entrances with some ambient light, before you do images in full caves. Training in a low risk environment first, relieves some of the stress once you are diving 1 000 meters into narrow caves. When you are using multiple slave flashes, try to arrange them in calm and quiet before you bring in the models. After a while, both you as the photographer and the people that see your images will learn to appreciate caves. Well illuminated caves appear much less intimidating and secretive than our vivid imagination too often tricks us to believe. Because caves can actually be dreamlike beautiful.



DivePhotoGuide.com

Breaking News
Reviews
Articles
Competitions
Photo Galleries
And More...

DivePhotoGuide.com

Caves

In caves slave flashes really come in useful. Most ideal would be if every diver in the group could carry one. The main aim for those who carry a slave flash is to illuminate the surrounding cave and/or each other for the photographer. These can illuminate everything although they cannot be pointed towards the camera, as this would distort the image. You can also achieve some great effects, if you place several slave flashes around the cave and place a diver in the midst. If there is any current in the cave, you can fasten the slaves to the rocks. Just be certain that the sensor of the slave is directed towards the main strobe. To do this kind of imagery with multiple light sources and diver's within a cave

can be complicated. It is therefore important that you brief your team so that every member knows exactly what to do.

Direction

When ever you have divers involved you have to pay attention to directing them, otherwise capturing great underwater images is impossible. This is especially true in the difficult conditions as you often encounter in caves. Everyone participating in the photo shoot needs to have a clear idea of their role. Therefore the importance of a thorough briefing is essential for obtaining a successful image. For the photographer it is important to master the necessary skills involved. Learn them step by step. Start with one slave





CLOCKWISE FROM ABOVE:

Training in a low risk environment first, relieves some of the stress once you are diving 1000 meters into narrow caves

You can also achieve some great effects, if you place several slave flashes around the cave and place a diver in the midst

Whenever you have divers involved, you have to pay attention to directing them

Practical tips:

- To capture the atmosphere, is Alfa omega for underwater cave/cavern photography. Use all the different light sources available such as natural light at entrances or holes or create your own by using dive lamps, strobes and slave flashes.
- Penetrate caves only if you are trained for diving in such an environment.
- Overhead and dark environment diving creates more obstacles than in free water. Know your techniques to work well in dark, and bring camera equipment suitable for working in small spaces.
- Photographical accessories such as lamps and slave flashes should be secured to your body by carbine hooks and d-rings. This allows you to have your hands free for movement and squeezing through narrow passages.
- Your models can point their slave flashes where ever they want, except in the direction of the camera to avoid distortion.
- To get the most out of your light sources, like dive lamps and ambient light, use a slower shutter speed like 1/15 second.
- Especially for full cave dives a detailed briefing of all the team members is a must.
- It is important to protect your camera well when diving in the darkness of caves and narrow passages. Cover your domes and lenses with neoprene covers, and keep the equipment tucked well together during swims.
- If your camera doesn't have any viewer display light carry an small dive lamp on your wrist to help you using the knobs and the wheels on the camera, for settings such as shutter speed and blender.
- Caverns and caves offer some fantastic photo opportunities, but never forget to put you and your dive team's safety first. ■



photo & video



Underwater cave photography using natural light

How to prevent your housing from fogging

If you open your housing in a warm humid environment and bring it down into the relatively cooler temperature water, you are likely to get condensation in your housing. One of the most popular counter measures would

be to use silica packs inside the housing to absorb any moisture in the air. But eventually these will get saturated, and then what? You can try to bake moisture out of the pack inside an oven three minutes, but

desiccants, such as silica packs, are used to absorb moisture. They are often used in camera housings to prevent fogging. However, they can become saturated and need to be replaced or recharged. Baking them in an oven can be a solution, but it's important to do it correctly to avoid damaging the desiccant.

that might not be an option either. Then, you can use teabags or better still, uncooked rice stuffed into an emptied teabag. Even a live-aboard way out on the ocean will usually have one or both.

The best solution is to keep the moisture out of the housing altogether by putting your equipment together in the driest and—since cold air cannot hold as much moisture as warm air—coldest environment you have. This could be an air conditioned hotel room. Then, keep it out of the sun, covered if possible. ■



36^e FESTIVAL MONDIAL

DE L'IMAGE SOUS-MARINE



Renate LUKMANOVA, 13 ans, Russie



PALAIS DU PHARO MARSEILLE

29 octobre - 1^{er} novembre 2009

SOUS LE PATRONAGE DE LA FÉDÉRATION FRANÇAISE D'ÉTUDES ET DE SPORTS SOUS-MARINS



Festival : 1157, chemin de la Plaine - BP 1307 - 06255 Mougins Cedex, France. Tél +33 (0)4 93 61 45 45 - Fax +33 (0)4 93 67 34 93 info@underwater-festival.com - http://www.underwater-festival.com

ESCALIER PHOTOGRAPHIE, M. BENOIST



SensorScope

SensorScope enables you to check your sensor to see if it needs cleaning. The SensorScope looks like a camera lens, but it allows you to look back into your camera to inspect your sensor. The SensorScope is easily portable and provides a 5x magnification lens and 4 ultra bright LED lights, which are focused to completely illuminate the field of inspection. Although specifically designed for Canon and Nikon DSLRs, the SensorScope may be used on any manufacturer's DSLR. www.backscatter.com

YS Converter for Canon

This new type of converter lets you use simultaneously two different types of strobes with different discharge characteristics and flash tubes, simply by turning the strobe selector dial. You can also switch between TTL mode and manual mode* depending on the shooting situation. Moreover, you can check the images taken with TTL mode on the LCD monitor of the camera and use the TTL adjustment dial to easily make fine adjustments to the level of light emitted. www.seaandsea.jp



PowerShot D10

It is hard to believe that this is actually Canon's first waterproof camera. This camera is waterproof to 10m and will work in temperatures as cold as -10°C. Its lens sits inside the camera's largest bubble-shaped protrusion to give it room to extend its 3x (6.2-18.6mm) zoom while staying within the waterproof case. A powerful flash sits atop that lens, while a range of smooth button controls lie on its back, around a 2.5in LCD screen. Users must control the zoom with two large buttons on the camera's top.



Aquatika Canon T1i

Optical fiber strobe connections along with the more classic Nikonos and Ikelite bulkhead connectors are now offered as an options, making this Aquatica housing one of the most versatile, as far as strobe connections goes; controls are supplied for accessing the built-in flash of the Canon T1i controls. The Aquatica housing's robust aluminum construction also means no warping or twisting; these reactions to pressure can affect the controls when

diving the deeper part of the recreational diving limit.

The Aqua View Finder, along with many other accessories, is fully compatible with this new housing. www.aquatika.ca



Housing Tripod

This tripod mount can be used with the long Ultralight Sea & Sea adapters and any length of Ultralight arms as legs, and you have an instant tripod. The mount comes with rubber feet to safely rest the housing on a flat surface. www.backscatter.com



Our motive: Your passion



www.subal.com

Unique Dive Site

Skookumchuck

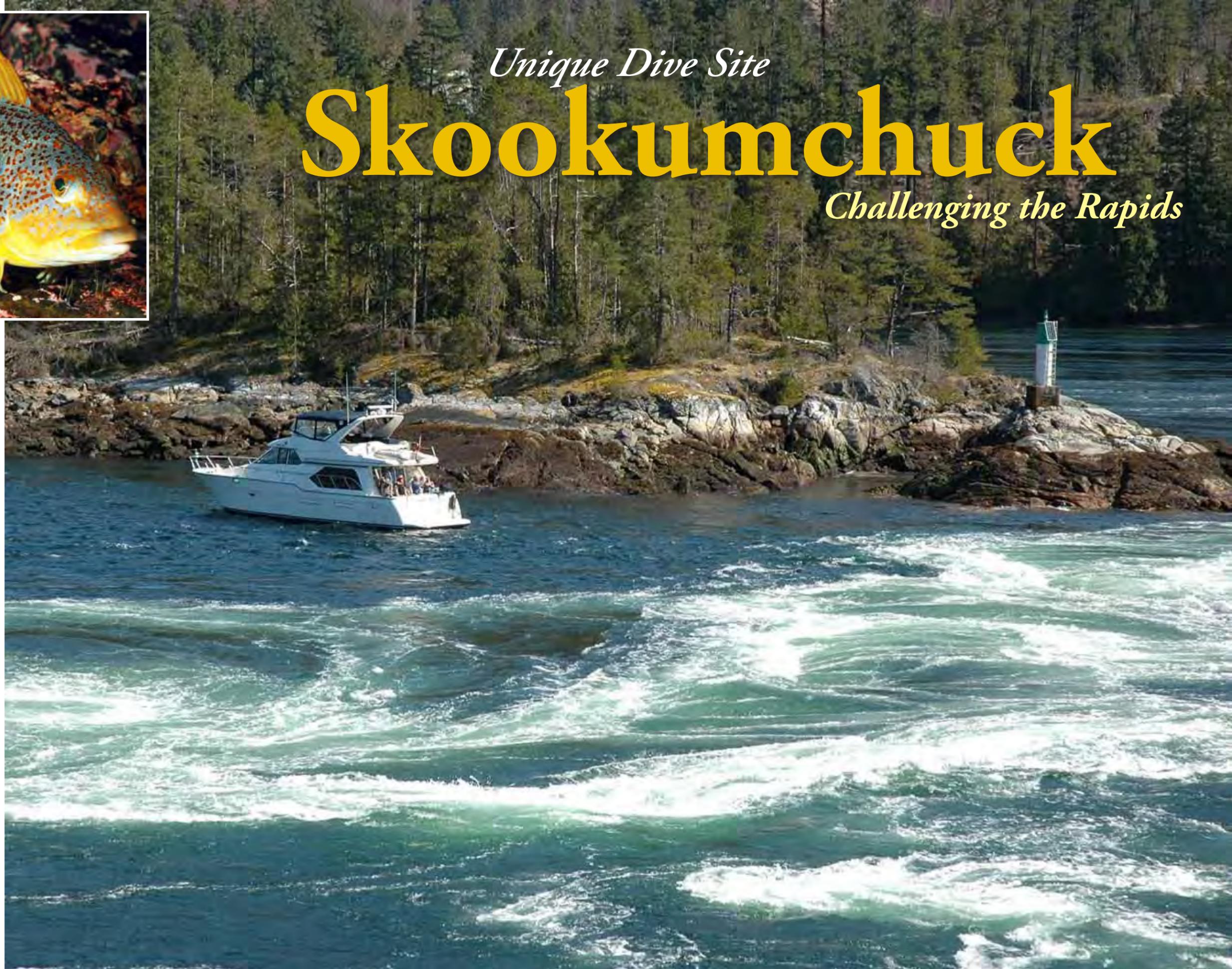
Challenging the Rapids



Female Kelp greenling (above)
Dive boat on Skookumchuck (right)

Text and photos by Barb Roy

Viewing a torrent of flowing liquid turmoil while safe and dry on shore is enough to make anybody hesitate about signing up for a dive charter in the Skookumchuck Narrows. This is also the place where rushing tidal currents commonly reach impressive speeds of 14-16 knots (30 km/hr)! Looking down at churning whirlpools strong enough to challenge 30-foot boats (9m) might make any diver question if it's even possible to pierce this witch's cauldron. Yet hundreds of divers travel to British Columbia's Sunshine Coast every year to take on the "Skook" and test their dive skills for a look beneath. With the help of a professional dive charter operator, the Skook might be tamed long enough for a quick look or a fun exploratory ride.





Purple ochre sea stars and painted anemones



Soaring turkey vulture at Egmont (above)
View of the Skookumchuck Narrows (left)

Also known as the Sechelt Rapids, Skookumchuck Narrows consist of a 500 meter (1640 feet) wide passage connecting Sechelt and Jervis Inlets on the inside part of the Sechelt Peninsula. The area is part of Skookumchuck Narrows Provincial Park, established in 1957 and managed by Parks Canada. Topside viewing of the Skook is possible from shore, accessed down a four kilometer trail off the main road to Egmont.

The word Skookumchuck comes from the Chinook language with the word *skookum* meaning "strong" or "powerful", and the word *chuck* meaning "water". Although there are several place names in British Columbia using the word *Skookumchuck*, most refer to it as the area located on the lower part of Sunshine Coast.

Underwater, visiting divers are treated to a collage of vibrantly coloured marine residents at over a half dozen different dive sites within the zone. Each area is quite unique, revealing an array of different fish, anemones, tunicates and even nudibranchs, over a rolling bedrock terrain full of surprises.

"We commonly take only skilled divers to the Skook two to four times a month, all year long," comments Kal Helyar, co-owner of Strong Water Retreat and Porpoise Bay Dive Charters, located a few minutes by boat from the notorious Narrows. "The trick is not only being able to read the water movement, but knowing when to put your divers in and when to safely get them back onboard before the current picks up again. If everyone is ready to go, bottom-time can be any-

Unique Dive



where from 20 to 45 minutes."

I recently had the opportunity to take on the Skook with my husband, and fellow adrenalin dive junkie, Wayne Grant. Actually, we're not really adrenalin junkies, just photographers, although I'm not

sure if there's a difference, because we tend to go where the critters are, be it at 60 meters (200 feet), under the ice or in a high current channel.

Fortunately for us, Kal knew exactly what he was doing and didn't drop

CLOCKWISE FROM RIGHT: Dive boats of the Porpoise Bay Charters; Male Kelp greenling; Divers hiking through forest to Skookumchuck

us in a 14 or even a 10 knot current. His timing was impeccable on selecting the proper slack-time (when the water slows to change direction), with no drift felt at all! The site seemed to run parallel to the northern bank for awhile, until we changed direction and headed for deeper water. Our run started in seven meters (21 feet), reaching a maximum of 18 meters (60 feet).

As we swam over the terrain, it seemed deceivably smooth, probably from centuries of pushing billions of gallons of water back and forth. Upon closer observation, however, a thick layer of barnacles added a rough texture to the rock, with small multi-coloured anemones lining every crack and grove, stretching out like branching veins of life. Continuing deeper, we stopped at a garden of critters, all utilizing the shelter of kelp, with most latching tightly to the fingering reef before us. There must have been hundreds of anemones



clustered together in colonies of the same colour. Some were surrounded by purple ochre sea stars, and others surrounded the sea stars. Burrowing sea cucumbers, sunflower stars, sculpins and multitudes of other Skookum marine life thrived in this nutrient rich channel.

Kelp greenlings (fish) also braved the slack water, as they darted about looking for food and very curious of our presence. Brilliant blue males and bright yellow females didn't shy away when I photographed them. Throughout the dive, more came to investigate us. Tiger and quillback

rockfish even took advantage of the calmness to search for tasty morsels.

Once finished with the reef, Wayne and I headed for the depths of "Glory Hole", a crater-like indentation in the bedrock. I remembered watching from the shore how immense whirlpools formed in this area. Now, I felt very strange, knowing this will soon be the center of so much chaos. Yet noticing a blanket of yellow, orange and tan sponges covering huge boulders distracted my thoughts. Moving more into the center, it looked as if an explosion of invertebrate life had occurred.

I have seen walls in British Columbia with a similar abundance of life, but never like this, or on the ocean floor, with such intensity. Needless to say, when the Skookumchuck permits a slack time of this length (40 minutes), both wide angle and close-up (even macro) video or still photography is possible. We truly enjoyed our experience and recommend the adventure to any skilled thrill-seeking dive junkie, or underwater photographer! Just remember: when the dive operator gives you a maximum bottom time or tells you to be at the surface at a certain time – BE THERE!!!!



Unique Dive

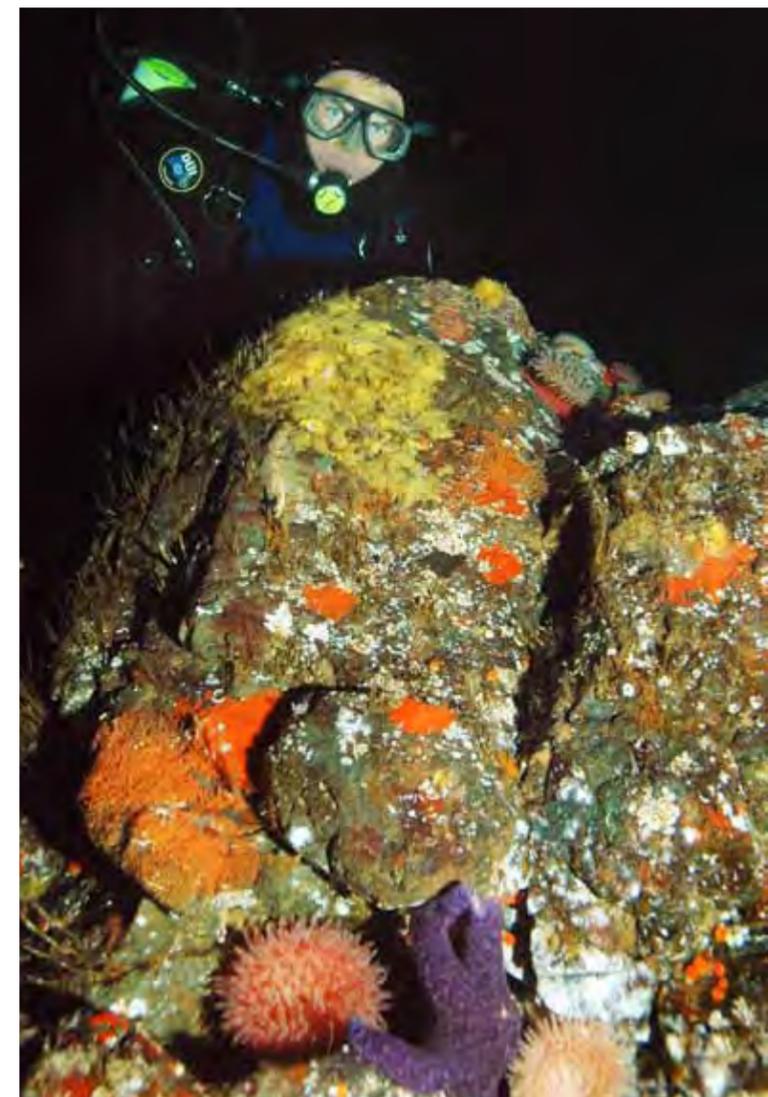
boats provide sectioned buddy-team stations with benches for easy donning of tanks and gear. Both boats are equipped with marine toilets. Nitrox is available with prior notice. Boarding for divers/groups is at the Egmont Government Dock. Since the Skook is a popular location, there are minimum group sizes, with advanced reservations highly recommended. Visit: www.porpoisebaycharters.com.

From Mainland Vancouver, take BC Ferries from Horseshoe Bay to Langdale on the Sunshine Coast. Follow the signs to Egmont on the Sunshine Coast Highway, past Gibsons and Sechelt. Turn right at Egmont Road. The Skookumchuck trail is on the road to Egmont, and the Government Dock is located farther ahead.

Dive gear is available for rent at any of the Lower Mainland dive stores in Vancouver and Surrey, or in the town of Sechelt. For a selection of available stores, check out the website of the Dive Industry Association of British Columbia (DIABC) at: www.diveindustrybc.com

Travel Information

- DIABC www.diveindustrybc.com
- Tourism British Columbia www.hellobc.com
- Sunshine Coast Tourism www.sunshinecoastcanada.com
- BC Ferries www.bcferrries.com ■



Wayne Grant in Skookumchuck; Bed of barnacles (top)

Diving

Diving in the Skook is possible year round with a 6mm wetsuit or dry suit and full body exposure protection. Water temperature ranges from 7.2 – 14.4°C (45-58°F) and although underwater visibility is usually best during winter months, it varies from 9-21 meters (30-70 feet) during the rest of the year.

Strong Water Retreat and Porpoise Bay Dive Charters are operated by Kal Helyar and Ann Beardsell. The husband and wife team have been accommodating divers since 1991. At their current 6.5 acre waterfront property, not far from Egmont, they can handle large and small groups. Accommodations consist of several large yurts, with their dive packages supplying home-cooked hearty meals, tanks and weight belts and plenty of awesome boat diving. Two custom built aluminum dive



Painted anemones (above); View of Skookumchuck (top)

Marcelo Tatsuyoshi Kato



P O R T F O L I O





Marcelo

Detail of *Sea Time* paper sculpture by Marcelo

At one point in my life, I renovated an entire apartment where I lived by myself.

Why I got really involved in paper is because I realized paper can do a lot in various ways—for example, drawing and painting—but paper itself is one of the materials that is very hard to deal with. We can use paper in cutting, folding, bending, piling, brushing, etc. There are many creative methods for paper as a medium, and it has unlimited potential. Even though it is flat, it can also become 3D. Of course, I like other materials, but I love paper the most, because my artistic life started with paper.

I don't think there are any role models or mentors present in my life, but I am quite sure that my family, relatives, friends and environment where I grew up influenced my art. I now create new ideas for art works by getting favorable influences from people around me.

GS: What inspires you? What inspires you about the underwater world? Tell us how the sea inspires your

work and why you use themes of the underwater realm.

MARCELO: I would love to answer this question! I really like nature and living things, especially marine creatures and bugs. Their shapes, colors, designs

Edited by Gunild Symes
Translation by Tina Tsuchiya
All images courtesy
of Marcelo Tatsuyoshi Kato

Do water and paper mix? Yes, they do in the Marcelost World created by the Japanese Brazilian artist, Marcelo Tatsuyoshi Kato, who makes magic in paper sculptures and papercuts with themes related to the underwater world. X-RAY MAG's Gunild Symes interviewed the artist to find out how he developed his unique craft and what inspires him about the sea.

GS: Tell us how you became an artist and why you chose the medium you use. Who were your role models or mentors?

MARCELO: First of all, I would like to thank you all for having this wonderful opportunity to introduce my works and say hello to everyone in the world. It all started when I was three years

old, when I started using a pair of scissors and separated a book. The book was a picture book loaded with illustrations of many invertebrate animals like crabs and shrimps. Since



Detail from *Golden Coral* paper sculpture by Marcelo (see full view on previous page)

then, I started using scissors by my right hand spontaneously, and drawing by my left hand as well. When I was a student, I drew, made paper-cutting, creating hand crafts and enjoyed putting together plastic models. I really liked creating things since I was young.



Sea Time by Marcelo, paper sculpture. Available at: www.soleyne.com



Marcelo

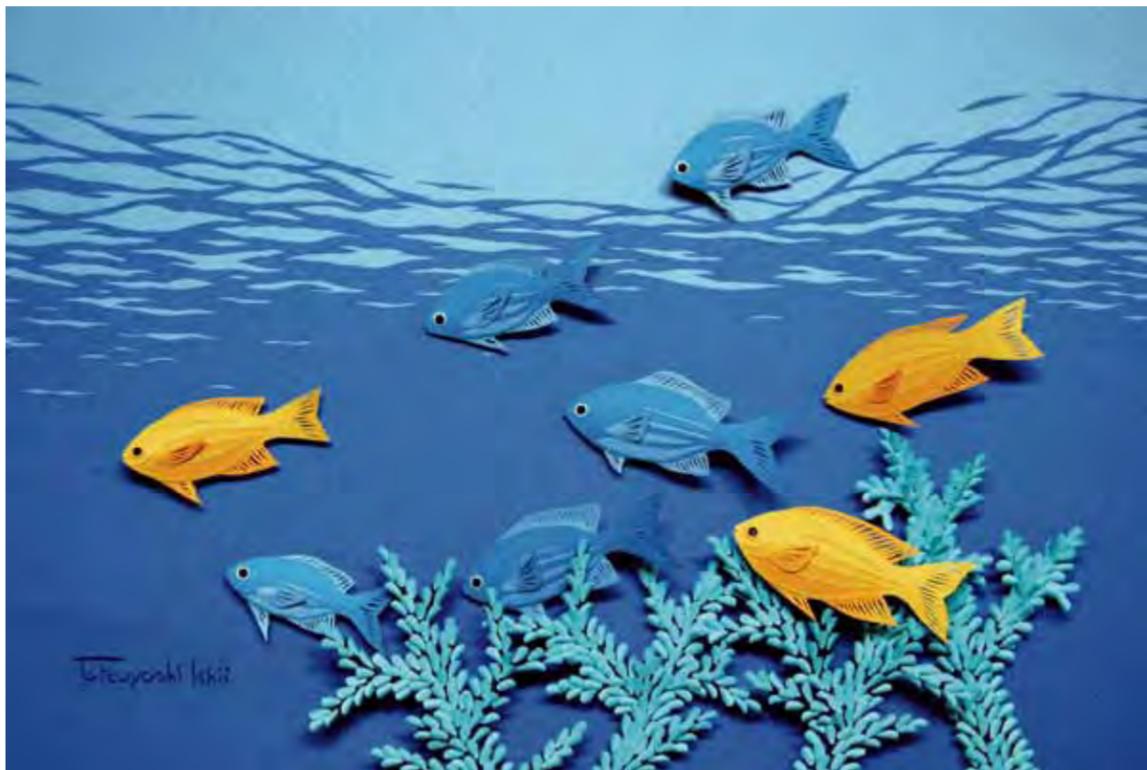
and motions are just amazing! In the underwater world where we cannot see anything deeper than a few hundred meters, we just need to imagine what the creatures are like. It is like imagining aliens from other planets. (Laughs) I do like imagining something like that.

I get my inspiration of marine creatures from photos, movies, aquariums and skin diving, and I create my art works using these sources while adding my imagination.

One good reason why I chose the underwater world for subject matter is that I don't think I can create



CLOCKWISE FROM ABOVE:
Detail from *Anuanus acropora*;
Full view of *Anuanus acropora* paper sculpture by Marcelo;
Detail from *Damselish acropora*;
Full view of *Damselish acropora* paper sculpture by Marcelo



Detail of *Mermaid Secrets* papercut by Marcelo (left); *Basslets and Soft Coral* paper sculpture by Marcelo (below) available at www.soleyne.com



everything about the underwater world, even if I spent the rest of my life doing so. Even if I try very hard, I will be able to create around 50 percent of it? So, I will enjoy creating art works all my days.

GS: Tell us about your artistic vision and artistic methods, process, techniques, materials, etc.

MARCELO: I think that people need art, basically. Each person needs art in any period of time in their lives. By meeting art, in their everyday life, something can be changed. They can be driven by art work. They can be stimulated about something when they see art works right in front of them. That is a fundamental goal in my artistic vision.

When I create a paper sculpture art, I draw a rough sketch first. Depending on the works, I use many techniques to sketch a few pieces. What I mean by "sketch" is using paper-cutting, digital imaging, acrylic, painting in watercolor, etc, to develop an idea. Those "sketches" become themselves art works in some cases.

Even though I draw rough sketches, I need to create many things without preliminary sketches in paper sculpture art. In that case, I imagine the completion of the art work. That

is why small details and color are changed often from the preliminary sketch. I can do so much with freehand.

I try to create paper sculpture art that has good keeping quality. Materials I use are Japanese mermaid paper and French Canson Mi-Teintes paper. Paper and glue are acid-free. For the base, I use light balsa wood or cardboard. Equipment I use is mainly scissors, a cutter knife and tweezers. When I have to cut into very small pieces, I

use a puncher too.

With paper cut outs, clipping, pasting other small parts and bending, one fish, a coral and a mermaid are created. After I create all the parts, I paste everything on a mat board while checking balance by making adjustments. One paper sculpture art is done with all those procedures, however I keep them for six months to one year just hanging on the wall. I need to check them to see if they are ok and stick



Fish wall decal by Marcelo is available at www.etsy.com

Sea animal wall decals by Marcelo are available at www.etsy.com



Marcelo

wanted to do it since I was young, but I couldn't get any opportunities. I am sure that I will do scuba diving in the near future. Where I would like to dive is Okinawa in Japan, the Red Sea, the Caribbean Sea, on the coral reef in the Pacific Ocean, the Indian Ocean and Brazil, among other places.

GS: What are your current artistic and/or ocean conservation projects?

MARCELO: My current art project is the Marcelost World, which has four different worlds—Marcelocean, Marcelopolis, Marcelonia and Venezia Secrets.

Marcelocean is the world inside of the sea that I imagine. The theme of Marcelonia is the imagined world of mountains, and Marcelopolis is the imagined world of the city. Venezia Secrets is newly added to my art projects this year, and it is about an imagined urban area that is based on Venezia, Italy. This is a project about ocean conservation that I am currently working on. I donate to WWF Coral Reef Conservation and Research Centre (WWF Coral Reef Centre) located in Shiraho Village on Ishigaki Island, Okinawa, at the moment. I would like to work to protect coral reefs more actively in the future.



well under the conditions of dryness, moisture and sun light. Passing all of the tests, my paper sculpture art goes out into the world!

GS: Are you a scuba diver? If so, what made you become one and where have you dived? What are your favorite dive locations?

MARCELO: Unfortunately, I haven't experienced scuba diving yet! I have always



LEFT TO RIGHT:
Zebrasoma xanthurus paper sculpture by Marcelo available at www.etsy.com;
Detail from *Basslets and Soft Coral* paper sculpture by Marcelo (see full view on previous page); *Mermaid Secrets* papercut by Marcelo

portfolio

GS: Any future projects in mind? What are they and how do they relate to the sea or ocean conservation?

MARCELO: I have so many future projects in my mind. For example, I would like to create a paper sculpture art based on a theme about the coral reefs. It will be the biggest coral reef made of paper sculpture. The size will be about 10m wide and 2m high. I



Marcelo



Parade paper sculpture by Marcelo (above); Clownfish in Sea Anemone paper sculpture by Marcelo (left)

MARCELO: Since I don't speak English well, if you have any questions, feel free to contact my agent Tina Tsuchiya (tina@marcelo.jp) who speaks English. Or, you can visit my internet shopping sites, Marcelost World in ETSY (www.etsy.com) and Soleyne (www.soleyne.com). We can discuss commissions, if patrons are interested. At the moment, I sell paper sculpture art (US\$800-10,000), paper-cutting (US\$300-1,000), limited edition giclée prints (US\$50-300) and art posters (US\$20-30). ■

guess it will take a few years to create. The message I would like to say through this art work is that, "We have to take good care of the sea. Otherwise, we won't be able to see a really beautiful coral reef. We will only be able to see a coral reef in this unmoving paper sculpture."

GS: Why does art matter and how can art help the world?

MARCELO: I believe that art can move people's hearts by overcoming culture and the language barrier. If people can

be moved by getting a message from the art, the world will follow, too. If there are many arts which are meaningful, the world will be better.

I got a precious gift in 2007—my son Erick. I created the first paper sculpture art in the Marcelocean series for his birth. I just hope he will be able to dive and see beautiful coral reefs when he grows up. If he cannot see this beautiful underwater world, it is going to be really sad. I also made a small reef aquarium at home for him. I think my son will think that it is important to protect nature and living things if he grows up together with

corals and small fishes.

I actually cannot say anything about the underwater world because I haven't dived yet, but you divers know how beautiful the underwater world is. I would like to contribute in some way to society and nature through art. I just hope through my art, people will feel something for nature and think about how to protect it.

GS: How can interested buyers contact you? Do you do commissions? Do you sell fine art giclée prints or posters? What are the prices?



The artist, Marcelo, and his son Erick sit by the sea in Japan

IN OUR NEXT ISSUE

Sabah, Borneo



ANDREA FERRARI



ANDREA FERRARI



ANDREA FERRARI

COMING IN OCTOBER
Subscribe now FREE!
www.xray-mag.com

