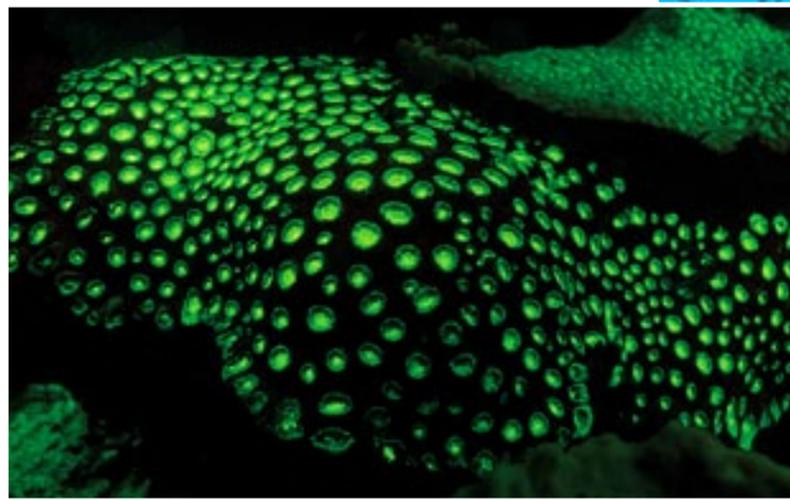




photography



Underwater Photography with HMI Lights

Text and photos by Michael AW

HMI technology is not new. Evolved in the late 1960s, a lamp developer Osram began producing HMI bulbs for the film industry at the request of German television seeking a less expensive alternative to incandescent lights. Ironically, HMI is now much more expensive than halogen and tungsten.

Though the principle behind the HMI /HID lighting has been known for decades in the movie industry, it was only in 1996 that I first saw them used in underwater photographic application by David Doubilet.

Using two 1200 watts units, he created never seen before pictures of fluorescent corals, mantas feeding at night at Kona and atmospheric imagery of the Chandelier cave in Palau. I was immediately hooked on the idea of using a continuous light source that illuminates at day light temperature – 5600 Kelvin like that of an underwater strobe or electronic flash.

Bright

Watt for watt, Hydragyrum Medium arc - HMI' lights are two to four times brighter than their tungsten equivalents. Their application has revolutionized the motion picture photography in films such as the Abyss, Titanic and IMAX production of Volcanoes of the Deep Sea. Since no filament is used, HMI lights are much more robust and less sensitive to shock and vibration. Generally the unit uses separate electronic ballast to regulate power input and they are the lights of choice for ROV in deep sea documentary productions. Until the last few years, those used in the movie industry were huge units of 600 watts to 2500 watts requiring surface supplied power thus logistics and the cost of rental precluded the use even by profession-



HMI lights offer the underwater photographer another dimension of underwater lighting to explore

TOP INSET:

The greenish glow or florescence of these corals is illuminated by torches fitted with HMI lights



HMI lights can illuminate the natural florescence of reef corals





HMI Lights



CLOCKWISE FROM LEFT: Backlighting soft corals such as this large sea lilly can create otherworldly effects and capture the ethereal quality and transparency of these wonderful creatures. HMI lighting adds drama and mystery, depth and dimension to underwater shots where human beings and marine life interact. Even the unassuming squid sparkles like a Christmas tree when HMI lighting draws out its natural luminescence

al underwater photographers. However with the demand of underwater video makers, a few innovative German manufacturers have started to produce units in the range of 24w to 100w.

Somewhat costly

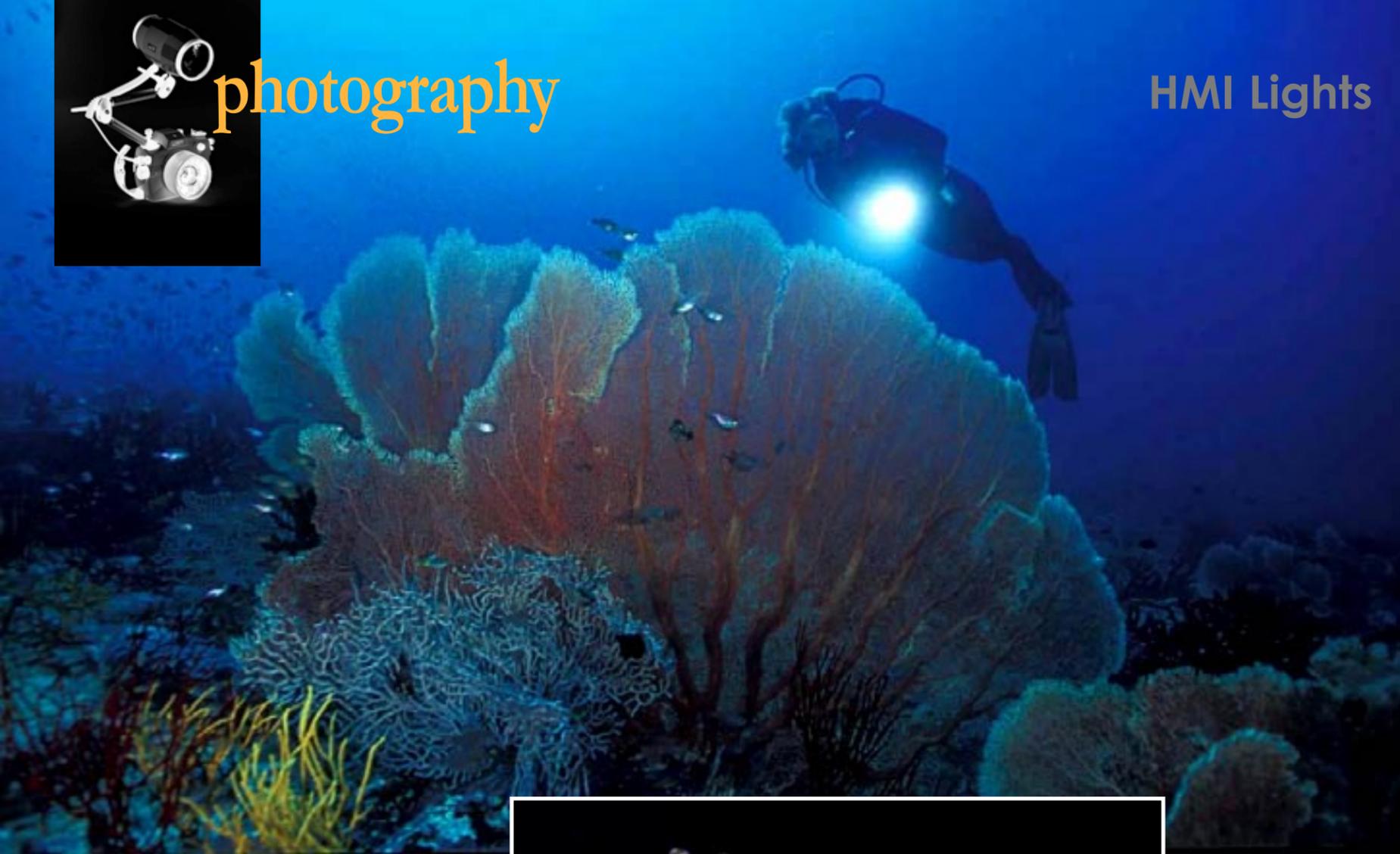
Albeit the extraordinary illumination quality, the principal draw back of HMI application is its cost. Whereas a 50w halogen light

costs less than USD300, the 24 watt equivalent HMI costs in excess of USD 1500. So with prices like these, why bother with HMI? During the last few years, I have experimented with the big 'guy's' 1200w rented from PANAVISION for the 24-hour shoot in the Maldives, 50w units by Treble-Light and most recently the 24w Solaris Pro from Keldan. Each of them serves the application, achieving the impressive results.



photography

HMI Lights



Advantages of HMI

The main advantage for digital photography is apparent. With SLR camera capable of firing 6 to 9 frames per second, there are no underwater strobes capable of recycling to keep up with the camera firing speed. Keeping unnecessary light out between the object and the



Backlighting with HMI lights shows off the eerie transparency of soft corals



HMI captures the iridescence of a delicate squid

camera reduces the illumination of undesired back scatter. In this department, a HMI light source is more forgiving than an electronic flash. I also find that light from

HMI's seems to have the ability to "wrap around" the subject, seemingly able to enhance depth and soften shadow. Powerful units like the 1200w to 2400w units provide greater true-color rendition over a wide area, making them an ideal illumination source for filming

wrecks and wide seascapes. These pages show some examples of my work with HMI lights. See also: www.michaelaw.com ■

TOP PHOTO: HMI light seems to wrap around the subject, like this gorgonian, offering another dimension to underwater shapes and forms

HOW TO USE HMI LIGHTS

1. For DSLR start with ISO 400 and for Prosumer camera, set to the highest possible.
2. Use S priority and set speed at 1/90 second or higher
3. If your HMI unit offers power setting, use the lower option.
4. Position HMI light in front of lens pointing downward to subject at 45° angle.
5. Start with shooting macro at distant of 30cm, using f16 aperture – bracket up or down for optimum exposure

* to diffuse hotspot, add a 3mm Perspex to the front of HMI/HID light source

THE SOLARIS PRO HMI (BOX)

Highly recommended and relatively affordable is the Keldan Solaris Pro. Using metal halide high intensity discharge globe, the light produces an excellent light in daylight quality with its color temperature of 5500 Kelvin. The rechargeable battery pack is easily removable for recharging and the five stage level indicator gives accurate information on remaining illumination time.

Burning Time	
LOW/HIGH	80/60 min
Luminous Flux	
LOW/HIGH	800/1100*)
Beam Divergence	10/60**) degree
Correlated	
Color temperature	5200 Kelvin
Electrical Power	18/24 watts
Battery Type	NiMH
Battery Capacity	14.4V/2.7Ah
Charge Time	3hrs from empty
Diameter (head)	6.7cm
Length	19.5cm
Weight (in water)	1.1 (0.5)



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photography news



New SWCY

On June 1, URPRO will introduce the new SWCY optical glass underwater filter. This specialty URPRO filter is designed for color correction in shallow tropical blue green water using natural sunlight only. Based upon patented and proven technologies, the SWCY filter is ideal for ALL still, digital, video and cine imaging systems. (SW = Shallow Water ~ CY = Tropical blue green waters)



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Under Water Digital Video

UWDV.COM 2.0

Underwater Digital Video (www.uwdv.com) announces the 2006 re-launch of their website. The site is the first dedicated specifically to the mastery of conceptualizing, shooting and editing underwater video. Although the site has been around since April of 2003, they have just given it an overhaul, complete with a community of visitors who share a common passion for producing underwater video.

In conjunction with the resort's 10th anniversary cel-

ebration, Layang-Layang announced the date for its first International Underwater Photography Competition to celebrate the beauty and delicacy of its marine environment. Photographers will compete from July 25 - 31, 2006 in two categories: macro and wide-angle. Renowned photographers, Takasago, Rod Klein, William Tan and Stephen Wong will be judging the competition, and the event is expected to attract participants from 8 different countries. ■



Photo competition winners celebrate at the Moscow International Diving Festival in Russia

Golden Dolphin

Moscow International Diving Festival "Golden Dolphin" photo competition winners were announced during the jam packed dive show (Feb 15th -18th). The show consisted of a film festival, photo competition, and an exposition hall filled with all the new diving goodies, and saw 22,000 attendees pass through its halls over the four days. The film festival was a success, receiving 90 films from 16 countries. The winning still images



were on display for all to see as they walked through the show. A complete listing of the winners is available on the festival website: www.mosfest.ru

8 Gb

Sony debuts 8GB compact vault drive for higher storage capacity—

Adding to its removable hard disk drive line up for the digital photography market, Sony Electronics unveiled the Compact Vault™ 8GB drive. The new drive is compatible with Compact Flash type II slots and provides a significant increase in data storage over the current 5GB version.



An ideal companion to high-end digital cameras, the new drive's 8GB capacity holds up to 2,560 JPEG images (at 3MB each) or 320 minutes of MPEG4 video and has transfer speeds of up to 12MB per second. Price: US\$259 out in June. www.sony.com ■

Antibes festival officially open to digital format

For several years now, the Antibes festival has accepted the digital format in its colour and black and white photography contest. For its 33rd edition, the Antibes festival officially accepts the digital format in its slide contest.

Officially, digital images have been accepted in the slide contest for years. Some competitors

transferred their digital images to slides, whereas others directly presented a CD with digital files.

Of course, the jury had to judge the works on an equal footing and the necessary means were given to enable them to work in the best conditions. According to the jury's deliberations of the last edition, it seemed it was not necessary

to create a sub-category for the slide contest. Now, film and digital format will cohabit together with no difference.

Thus, in the festival, what primes (and is prized) is the vision of the photograph. So, film fans or digital addicted... just take your camera! www.underwater-festival.com

X-Ray Mag's own Yann Saint-Yves at Antibes 2005 is already in full digital outfit



DivePhotoGuide.com

Photoevent Calendar by Jason Heller

Welcome to another great new X RAY MAG feature—our Dive Photo & Video Event Calendar, provided by DivePhotoGuide.com.

April 1
Celebrate The Sea (Singapore)
► www.celebratethesea.com

April 3
Sandisk Red Sea Eilat (Israel)
► www.sandiskredsea.com

April 21
Il Mare Milano (Italy)
► <http://posta.acquariocivico.mi.it>

May 15
International wildlife & environmental film festival -Wildscreen (UK)
► www.wildscreen.org

May 20
Dive-In 2006 Photo Contest (US)
► www.coralreefalliance.org



photography news



PADI International Ltd has teamed-up with Canon UK to provide a valuable instructor training package of the latest Canon Powershot A540 digital camera and WP-DC2 underwater housing, rated to 40m depth



PADI International Ltd and Canon UK link up in training partnership

PADI has developed a new course—the PADI Digital Underwater Photographer Specialty course, which in Europe is to be launched by PADI International Ltd. in partnership with Canon, at the London International Dive Show, April 1-2, 2006.

PADI will not only be targeting divers with the new PADI Digital Underwater Photographer Specialty but

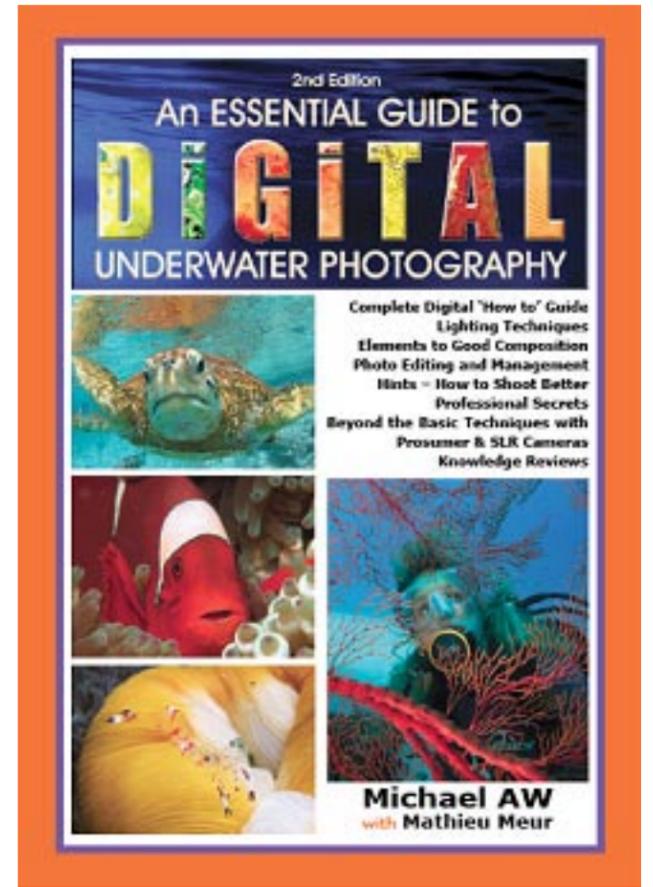
also snorkelers, and above all, non-divers, especially non-diving photo enthusiasts. Douglas Nash, PADI International Ltd commented, "We will succeed in reaching completely new target groups with our PADI Digital Underwater Photographer Specialty. And we are convinced that we will open up new segments."

There are two levels to this new specialty where success-

ful results can be achieved very quickly. Students are provided with an informative manual together with a white balance slate for use in water. Practical work on a camera in the water also guarantees an additional feeling of achievement.

When it comes to the PADI Digital Underwater Photographer Specialty, the PADI Dive Centre/Resort acts

as an all-in-one provider for its customers. This means that participants have access to both the training material and the camera including underwater housing at the dive center/resort where the course is being held. This in turn means that participants can complete the specialty without having to use their own equipment. www.padi.com ■



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A well-structured, comprehensive work, lavishly supported with explanatory diagrams and magnificent images the, *Essential Guide To Digital Underwater Photography* will undoubtedly prove to be as much an educational tool for novices as it will a reference work for those with greater proficiency in underwater image making.

— "David Strike" Editor NEKTON



Olympus E-330

The release of the Olympus E330 represents a major landmark in the development of digital cameras. The E-330 is the first camera to feature live previews directly on the LCD. This groundbreaking innovation enables framing of shots without the need to look through the viewfinder. To many, this development may sound insignificant, but this new feature will allow the photographer to compose pictures with their cameras at arms length, or allow you to use the camera in situations where it is difficult to frame using the viewfinder. Not being stuck directly behind your camera can change your shooting style dramatically. By holding your camera at arms length, you'll find you can get closer to marine life because your presence and your exhalation bubbles will not be as threatening to timid subjects. www.olympus.com ■

NEW STUFF



D200 and 5D housings

Nikon's D200, and Canon's 5D are two of the most popular cameras around at the moment, and it seems like new housings are being announced daily!

www.nikon.com www.canon.com

Subal, Aquatica and Ikelite have all recently announced new housings, and there are bound to be more on the way soon. Check out manufacturers websites for more information. www.subal.com
www.aquatica.ca
www.ikelite.com ■





Honorable Mention
Wide-Angle Traditional
Barakuda
by Tibor Dombovari
Kimbe Bay
Papua New Guinea



1st Place
Macro Traditional
Seahorse
by Noam Kortler
Eilat, Israel



Wetpixel.com/DivePhotoGuide.com Photo Competition Winner 2006

Our World Underwater film festival winners announced in Chicago

February 24-26, 2006—Photographers competed in six categories to win more than \$25,000 in prizes, including premium dive travel, underwater photography equipment, and more.

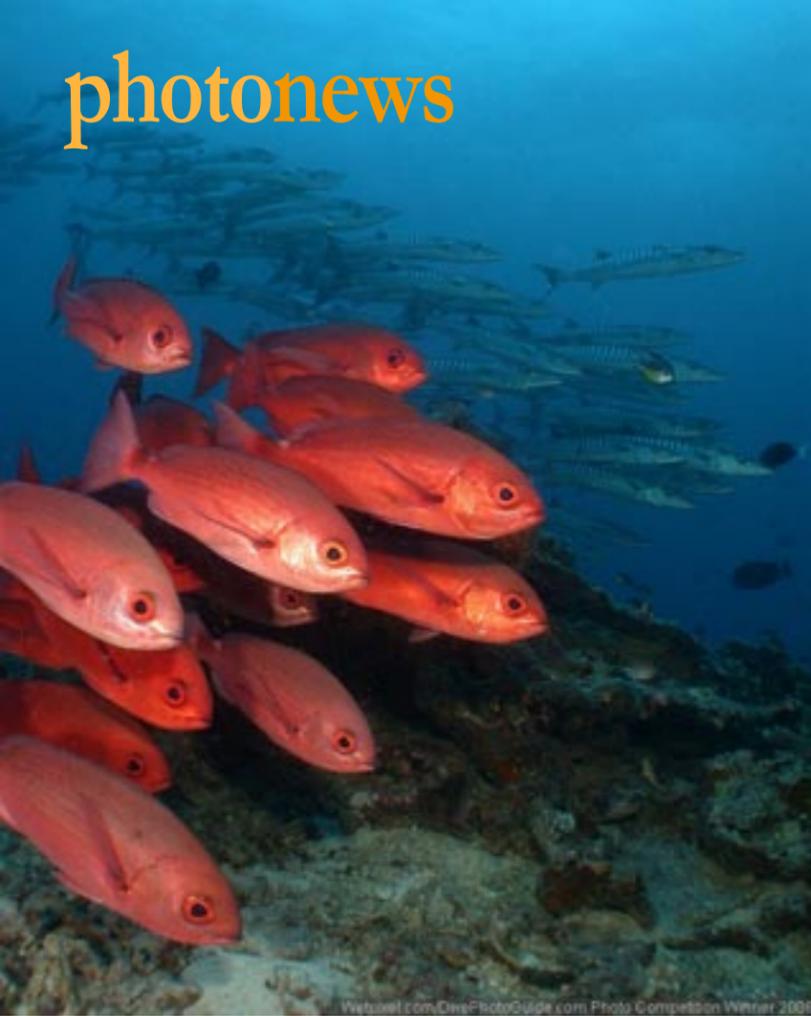
Judges Eric Cheng, Stephen Frink, Dr. Alexander Mustard and Berkley White selected the winning images from over 1,000 entries

from all over the world.

The winning photographers alone spanned the globe across 14 countries. X RAY MAG's very own Jason Heller from DivePhotoGuide.com announced the winners on stage at the 2006 Our World-Underwater festival in Chicago, Illinois. ■

Best of Show

1st Place
Wide-Angle Traditional
Shark in Motion
by Christopher Guglielmo
West Caicos
Turks & Caicos Islands



Honorable Mention
Compact Camera
Pinjalo and Barracuda
by Judy Johnson
Walindi Plantation
Kimbe Bay
Papua New Guinea



Honorable Mention, Wide-Angle Unrestricted
Underwater Forest by Alex Dawson, Sweden



Honorable Mention
Wide-Angle
Unrestricted
Dig In
by Martin Heyn
Utila, Honduras

2nd Place
Wide-Angle
Unrestricted
Mangrove
by Cor Bosman
Solomon Islands





◀ 3rd Place
Wide-Angle Traditional
Reef Patrol at Sunset
by Jose Alejandro Alvarez
Grand Turk
Turks & Caicos Islands

▼ 2nd Place
Wide-Angle Traditional
Island Cruising
by Justin Gilligan
Cocos (Keeling) Islands



◀ 1st Place
Macro Unrestricted
Open Wide
by Cor Bosman
Solomon Islands



1st Place ▶
Wide-Angle
Unrestricted
Bat Fishes
by Tibor Dombovari
Kimbe Bay
Papua New Guinea





Wetpixel.com/DivePhotoGuide.com Photo Competition Winner 2006

CLOCKWISE FROM LEFT:
Honorable Mention
Macro Unrestricted
Juvenile Goby
by Karl Dietz
Turks & Caicos

3rd Place
Macro Traditional
Red Eyed
by Alessio Viora
Lembeh Strait Indonesia

2nd Place
Macro Traditional
True Frogfish
by Ann Worthy
Papua New Guinea

Honorable Mention
Wide-Angle Unrestricted
Tigers & Lemonshark
by Alex Dawson
Tiger Beach, Bahamas

Honorable Mention
Wide-Angle Unrestricted
Octopus
by Andy Lerner
Kona, Hawaii, USA



Wetpixel.com/DivePhotoGuide.com Photo Competition Winner 2006



Wetpixel.com/DivePhotoGuide.com Photo Competition Winner 2006

3rd Place ►
Wide-Angle Unrestricted
Below Him
by Alessio Viora
Papua New Guinea



▼ Honorable Mention
Macro Traditional
Twins
by Matthias Blättler
Lembeh Strait



Honorable Mention ►
Macro Unrestricted
Mr. Mom
by Keri Wilk
St. Vincent



Yam Magazine and www.idive.co.il
announce the second international underwater photography competition.
The competition is open to all photographers, amateurs and
professionals alike, shooting either film or digital images.

\$10,000 - First Prize
for the best 5 images
1,000 bottles of beer
for the best singular entry
\$3000 - First prize
for the best color print
\$3000 - First prize
for the best 5 slides

For more information
www.sandiskredsea.com

