

Inspiring People to Care About our Oceans Since 1995

DIVERS

FOR THE ENVIRONMENT

WWW.EMIRATESDIVING.COM | MAGAZINE | JUNE 2011 | VOLUME 7 | ISSUE 2

PROJECT IGNITE AND TAWASUL'S DIVE
TO CHANGE A LIFE CAREER DEVELOPMENT
SCHOLARSHIP 23

THE DTRP
MAKING A DIFFERENCE 49

SHARKQUEST ARABIA UPDATE 51

DELVING INTO UNDERWATER PHOTOGRAPHY
AND ITS GADGETS 74

DIGITAL ONLINE

UAE UNDERWATER PHOTOGRAPHERS
COMPETE IN THE 2011 COMPETITION

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Scuba Dubai is the longest established dedicated dive store in Dubai, staffed by professionals with a deep understanding of the products sold and repaired.

Since 1989, it is the recognized expert in diving equipment repairs and sales and is the central point of reference for technical matters in the Middle East.

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with the right equipment,
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you to concentrate on the
task at hand...**

enjoying the **DIVE!**

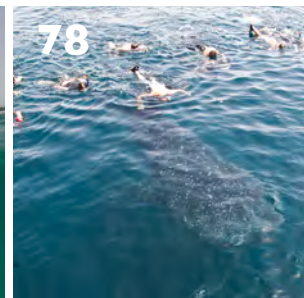
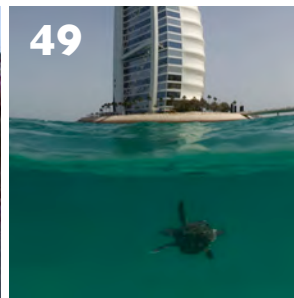


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SCUBA DUBAI NORMAL TIMINGS:

Saturday - Wednesday: 9:00 AM - 8:30 PM,
Thursday: 9:00AM - 7:00 AM
Friday: closed



REGULARS

- 5** EDA DIRECTOR'S NOTE
- 28** FEATURED CREATURE
Dugong
- 95** UPCOMING EVENTS
EDA Event Schedule Updates
- 95** INTERESTING LINKS AND RESOURCES

NEWS

- 6** THE EDA MARKET DAY
On The Walk at JBR
- 8** DIGITAL ONLINE AWARD CEREMONY
- 12** DMEX 2011 MEMOIRS
- 14** EDA MOVIE SCREENING
Of Disney Nature Earth
- 15** WED – 5 JUNE 2011
- 15** RAFFLES SCHOOL
Recycled Fashion Show
- 16** SUSTAINABLE FISH RECIPE BOOK LAUNCH
At Verre by Gordon Ramsay
- 18** BODY GLOVE DIVES INTO DUBAI
Billy Meistrall, Brand Owner, Inaugurates Official Opening
- 20** ATLANTIS DIVE CENTRE NEWS
- 21** AL BOOM DIVING NEWS
- 22** GEAR REVIEW
A Whole New Dimension
- 23** PROJECT IGNITE AND TAWASUL'S DIVE
To Change A Life Career Development Scholarship
- 24** AN ADVENTURE OF A LIFETIME
- 25** GISAD
Taking Care of Our Environment
- 25** STAGE IS SET FOR EPIC DUBAI
The Sustainable Living Expo
- 26** ZAYED IN OUR HEARTS DIVE SITE
- 27** HAMMERHEAD SLAUGHTER

CORAL NEWS

- 30** VIRTUAL STUDENT PARTICIPATION
In Hawaii Undersea Research Laboratory's 1,000th Pices Submersible
- 31** REEFS AT RISK REVISTED LAUNCHED
- 31** THRIVING 'MIDDLE LIGHT' REEFS FOUND IN PUERTO RICO

REEF CHECK

- 32** EDA REEF CHECK TRAINING
- 33** REEF CHECK IN ABU DHABI
- 34** REEF CHECK HELPS DESIGN
Tracking of The Convention of Biological Diversity
- 34** REEF CHECK CONTRIBUTES TO
"Cabo & Coral Reef Explorers" Book
- 35** ALTERNATIVE SUSTAINABLE TOURISM
In La Caleta: Carey Aquatic Center Opens in the Dominican Republic
- 36** HAITI'S REEFS
Most Overfished in The World
- 37** A NEW PHASE FOR CORAL REEF
MONITORING IN BRAZILIAN FEDERAL MPAS
- 37** REEF CHECK DATA IN REEFS AT RISK
REVISITED REPORT

FEATURES

- 38** EQUIPMENT GUIDE
Scuba Regulators
- 40** REBREATHERS ARE CAUSING A BIT OF A STIR
In The Diving World Today! The Question is Why?
- 42** ZAINAB, A JEWEL OF DUBAI
(If You Are A Diver That Is!)
- 44** NUDIBRANCHS

DIVERS FOR THE ENVIRONMENT

Please note that EDA's magazine, "Divers for the Environment" includes articles written by individuals whose opinions, whilst valid, may or may not represent that of EDA. It is hoped that the magazine can become a platform for individuals to voice their opinion on marine and diving related issues. You are welcome to submit an article for the next issue of "Divers for the Environment" released in September 2011. Send all articles, feedback or comments to: magazine@emiratesdiving.com

EDA COVER

PHOTO BY ADAM SKRZYPCZYK



Please recycle this magazine after you have read it.

- 
- 47** ONLY ABOUT FIVE PERCENT OF THE
BODY OF A JELLYFISH IS SOLID MATTER
The Rest is Water
- 48** JELLYFISH BLOOMS
A Summary
- 49** THE DTRP; MAKING A DIFFERENCE
- 50** SHARKWATCH ARABIA DATABASE UPDATE
The Sharks Are Back!
- 51** SHARKQUEST ARABIA UPDATE

UW PHOTOGRAPHY

- 56** DIGITAL ONLINE 2011 RESULTS
- 72** LITTLE JEWELS OF ABU DHABI
- 74** DELVING INTO UNDERWATER
PHOTOGRAPHY AND ITS GADGETS
- 78** PHOTOGRAPHY ADVENTURES IN THE
MUSANDAM...WITH WHALE SHARKS

DIVING DESTINATIONS

- 82** WHITE ROCK
- 84** DIVING IN THE RED SEA
Jeddah, Kingdom of Saudi Arabia
- 88** DAYMANIYAT ISLANDS
- 92** TUBBATAHA: THE WONDERS BENEATH

HEALTH

- 94** STONEFISH AND STINGRAY
ENVENOMATIONS

A PHOTOGRAPH ALWAYS HAS A STORY BEHIND IT



IBRAHIM N. AL-ZU'BI
EDA Executive Director

Welcome to the biggest issue so far of the EDA magazine "Divers for the Environment". It is always great to start a quarter with such a rich and interesting magazine with topics related to varied diving activities and our underwater world.

For the first time, I felt lucky that I was not a member of the jury panel for our annual Digital Online Underwater Photography Competition. As a matter of fact, I felt sorry for the judges. This year's was one of the toughest to score with lots of underwater photography gurus participating and sending EDA amazing photos of the varied marine life from all the places our members have dived. If I were to describe in one word the 21 entries we received this year, it will simply be, 'Fascinating'. The Digital Online Award Ceremony at the Jamjar Gallery in Al Quoz made a clear point that taking underwater photos is an ART. A photograph always has a story behind it. I want to congratulate all the participants for enriching EDA's photo library with amazing photos – I am sure you will all agree with me when you see the photos in this issue. I also want to congratulate Mr. Warren Baverstock for being the overall winner of the 2011 competition. Also many thanks to Mr. Marcelo Mariozi for being this year's photo coordinator; the jury, the sponsors, the EDA team and EDA's Event Coordinator, Ally Landes for another successful EDA event towards promoting for diving not only in the UAE but in the whole region.

DMEX 2011 was another success this year and was the biggest exhibition so far, where dive centers and retailers received excellent demand from divers interested to learn, buy and know more about diving here in the UAE. EDA will also be participating in the Birmingham Dive Show and we will have a UAE pavilion where all our dive centers can promote for diving in the UAE.

We have been busy the past three months organizing different events for our members, starting with DMEX 2011 in March, celebrating Earth Day with the movie screening "Earth" in Dubai and Abu Dhabi in April. But my personal highlight was launching a dive site with a very dear name to my heart, "Zayed in Our Hearts"; HH Sheikh Zayed Bin Sultan Al Nahyan the late president of the UAE who is the EDA Founder and an environmental champion.

Another topic close to my heart is whale shark conservation. EDA managed to sponsor a satellite tag thanks to Al Ghurair Group

who named the female whale shark tagged as "Jenan". As this magazine goes to press, David Robinson from Shark Watch Arabia and his team are looking for whale sharks to tag in the Arabian Gulf.

In the last 3 months we received lots of comments and enquiries via email and on our facebook page with questions related to diving. One of the questions that got my attention was related to whether we can go to the top of Burj Khalifa (the tallest building in the world standing at 828 meters) after a dive! I had never thought of that before; from the underwater world to the top of the world, only in Dubai. We got the answers from our professional divers who advised that you can't go to the top and it depends on the diving profile. It was really interesting to follow up the discussion.

Jellyfish! Yes summer is already here in the UAE and so the jelly fish season begins. We received lots of enquiries on this topic. As a lot of you might already know, vinegar is the common option for minor jellyfish stings, but what we also noticed is that a lot of people don't know much about them! We have two articles that talk about these amazing marine creatures.

In this issue of "Divers for the Environment" you will be reading about topics where passionate divers are leading good causes such as Reef Check and Shark Quest Arabia. You will also notice that underwater photography is going beyond just taking photos.

I hope you will enjoy reading this issue and we look forward to you all enriching our next issues with your diving stories and memories wherever you dive and enjoy the underwater world.

Dive Safe!

Ibrahim Al-Zu'bi

"If the world is to be healed through human efforts, I am convinced it will be by ordinary people, people whose love for this life is even greater than their fear."

JOANNA MACY (BORN 1929); AUTHOR, ENVIRONMENTAL ACTIVIST

THE EDA MARKET DAY ON THE WALK AT JBR

EDA held its second EDA Market Day on Friday the 18th and Saturday the 19th of March on The Walk at JBR in collaboration with Dubai Properties Group and the Covent Garden Market Dubai. The weekend was a huge success for all involved.

We want to thank all the stall holders who came to join us:

- Zen Beauty Lounge (Dubai's only Eco Ladies Salon)
- Al Boom
- Body Glove
- La Vela (Soya Candles)
- Bokashi (Kitchen Composting – Food Waste Recyclers)
- Al Maosood
- Bunky Diving Equipment Trading LLC
- Premiers For Equipment
- Deep Blue Sea
- Filipino Scuba Divers Club
- Emirates Divers Centre
- Scuba Dubai (Diving Equipment Service Centre)
- Scubatec Diving Centre

We were amidst all the hustle and bustle of Dubai's hip beach front and shopping promenade, with endless choices for restaurants and coffee shops. Familiar and new faces came on over to say hello and get a hold of some of the fantastic bargains that the EDA Market offers to its members through dive gear and this year's choices of eco products.

We would like to thank Dubai Properties Group in helping us organize our event and thank Covent Garden Market Dubai for supplying their stalls to EDA.

COVENT GARDEN MARKET DUBAI

Covent Garden Market Dubai is a unique outdoor retail experience offering an alternative to Dubai's famous malls. Based at the stunning beachside location of The Walk at Jumeirah Beach Residence, Covent Garden Market showcases the work of 55 artists, jewellery makers, fashion designers and artisans.

Reminiscent of European street markets, this open air venue offers the chance to buy original gifts, jewellery, paintings, fashion and exotic home-ware's at the same time as enjoying street entertainers at a seafront location unique to Dubai.

WHERE: The Walk at Jumeirah Beach Residence, by Rimal Sector (between the Hilton Hotel and the Sheraton Hotel)

WHEN: Every Wednesday, Thursday, Friday and Saturday from October until the end of May 2011.

TIMINGS:

WEDNESDAY & THURSDAY: 5pm to midnight

FRIDAY & SATURDAY: 5pm to midnight

CONTACT: +971 50 425 0543



by DUBAI PROPERTIES GROUP



EDA
جمعية الإمارات للغوص
Emirates Diving Association



DUBAI
PROPERTIES GROUP
A member of DUBAI HOLDING



FRIDAY & SATURDAY, 18TH - 19TH MARCH 2011 ON THE WALK AT JBR
10AM - 6PM

**THE MARKET PLACE FOR ALL YOUR DIVER NEEDS
AND ENVIRONMENTALLY FRIENDLY ESSENTIALS**

Inspiring People to Care About our Oceans Since 1995

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EDA is a non-profit voluntary federal organization and is accredited by UNEP as an International Environmental Organization.



DIGITAL ONLINE AWARD CEREMONY

FEATURE **ALLY LANDES** PHOTOGRAPHY **ROY ALEXIS SISON**



Digital Online is a yearly internet entry based underwater photography competition run by Emirates Diving Association. Professional and amateur UAE underwater photographers upload 3 unpublished photographs of their choice following the competition specs and regulations for the three categories of Fish, Macro and Wide Angle. This year's deadline for submissions was the 30th of April at midnight.

EDA celebrated its third Digital Online this year with 21 registered candidates. EDA are proud to introduce and acknowledge the professional and upcoming underwater photographers living in the UAE that all share a passion for this style of photography. You will have seen and will see many of their names appear in the EDA Magazine, 'Divers For The Environment', illustrating past and upcoming front covers and features.

This year's Digital Online Award Ceremony took place at thejamar on the 26th of May to unveil this unique exhibit of beautiful images. Guests were able to meet this year's candidates and converse about underwater photography with other like minded folk, catch up with old friends and indulge in sumptuous canapés by The Lime Tree Café and Kitchen, including their famous carrot cakes in bite size.

This year's Dubai based Photo Coordinator was Marcelo Mariozi and the competition Jury were, EDA's Project Manager Reema Abbas, from Brazil Luis Fernando Cassino, Kadu Pinheiro and Daniel Botelho, and from Portugal Vasco Pinhol. All of whom are reputed professional and award winning underwater and/or other speciality photographers.

The prize sponsors for 1st and 2nd place overall were sponsored by Biosphere Expeditions and 3rd Place Overall was sponsored by Emirates Palace Abu Dhabi, EDA and Al Mahara Diving Center. 1st place for Fish, Macro and Wide Angle was sponsored by Discover Orient Holidays, 2nd Place for Fish, Macro and Wide Angle was sponsored by Scuba Dubai and 3rd Place for Fish, Macro and Wide Angle was sponsored by Atlantis Dive Centre. Thank you to all our sponsors for such grandiose prizes.

DIGITAL ONLINE'S MAIN OBJECTIVES ARE:

- To gather information on the number of underwater photographers in the UAE (both professional and amateur);
- To discover new promising underwater photographers in the UAE;
- To develop the human interaction with the underwater environment by displaying the beauty of its fauna and flora.

Digital Online is open to all UAE Nationals and all people living in the UAE under a valid Residence Visa and of any diving qualification.

CATEGORIES

- **Fish (F):** Photographs of whole fish and/or fish parts as the main visual element (NOT mammals, crustaceans, molluscs etc...) taken with any lens, portraying its natural behavior and environment.

- **Macro (M):** Photographs taken with close up-equipment, portraying underwater flora and/or fauna. The main element NOT being fish.
- **Wide Angle (W):** Photographs taken with a wide-angle lens (or adapters that provide an equal field-of-view), with or without human presence, portraying the natural beauty of the underwater environment and/or the human interaction underwater.

SPONSORS PRIZES AND WINNERS

- | | |
|---|---|
| 1st Place Overall: | Biosphere Expeditions – 1 week in the Maldives
WARREN BAVERSTOCK |
| 2nd Place Overall: | Biosphere Expeditions – 1 week in the Musandam
ADAM SKRZYPCZYK |
| 3rd Place Overall: | Emirates Palace Abu Dhabi – One Night Package
EDA – AED 1,000 Leisure Spending Money
Al Mahara Diving Center – Diving Package
SIMONE CAPRODOSSI |
| 1st Place Fish: | Discover Orient Holidays – Destination Package
4 Days/3 Nights to Sipadan, Malaysia
WARREN BAVERSTOCK |
| 1st Place Macro: | Discover Orient Holidays – Destination Package
4 Days/3 Nights to Bali, Indonesia
ADAM SKRZYPCZYK |
| 1st Place Wide Angle: | Discover Orient Holidays – Destination Package
4 Days/3 Nights to Phuket, Thailand
ADAM SKRZYPCZYK |
| 2nd Place Fish: | Scuba Dubai – Scubapro Titanium MKII Regulator
SIMONE CAPRODOSSI |
| 2nd Place Macro: | Scuba Dubai – Scubapro Titanium MKII Regulator
WARREN BAVERSTOCK |
| 2nd Place Wide Angle: | Scuba Dubai – Scubapro Titanium MKII Regulator
WARREN BAVERSTOCK |
| 3rd Place Fish: | Atlantis Dive Centre – PADI Tech40 Course
ADAM SKRZYPCZYK |
| 3rd Place Macro: | Atlantis Dive Centre – PADI Tech40 Course
JOHN HAGER |
| 3rd Place Wide Angle: | Atlantis Dive Centre – PADI Tech40 Course
SIMONE CAPRODOSSI |

CONGRATULATIONS TO OUR WINNERS

We would like to give a special thanks to thejamar for their help in setting up for the exhibition and The Lime Tree Café and Kitchen for their catering services.

PLANET C... det... n PIC... RE ENVIRO... MEN... planet im...
 fish SAND... eda... VERS... AR... CAFE... I UP...
 enviro... ent... NA... URE... IMA... S... treasure S... rks...
 OCEAN... CO... AL... WATER... REGION... onli... FLORA... PRIDE...
 OTOS CREA... RES... WORLD... HO... SE...
 FAUNA... turtles... RES... DNS... ITY... sar... hel... RE... OCEA... beauty...
 FREE... divers... MARINE... pho... s re... atur... picture... ma... ne...
 LIFE... W... el... EDA... flor... WID... ANGLE... clea... region...
 ... ED... shor... visu... sea... m... FISH... life...
 ... branches...



Adam Skrzypczyk with Fei Chin from Discover Orient Holidays



Warren Baverstock with Fei Chin from Discover Orient Holidays



Warren Baverstock with Leo from Scuba Dubai



David Robinson accepting Simone Capradossi's prize from Scuba Dubai



Warren Baverstock winning 1st Overall



John Hager with Ibrahim N. Al Zu'bi with Macro 3rd Place



John Hager with Shana Wolfe from Atlantis Dive Centre



Adam Skrzypczyk winning 2nd Overall





DMEX 2011 MEMOIRS

The Dive Middle East Exhibition was held at the Dubai International Marine Club at Mina Seyahi from the 1-5 of March from 4pm-9.30pm daily. Maintaining its unique position as the only international diving event in the Middle East, the 5th edition of Dive Middle East (DMEX) had something for everyone. From exciting educational activities for children to new diving pursuits for experienced enthusiasts, the show offered a unique platform for the very latest in diving equipment, supplies, services and techniques. Complemented by live demonstrations, the 2011 show hosted a series of presentations about the latest dive gear, training programmes and projects across the region and beyond.





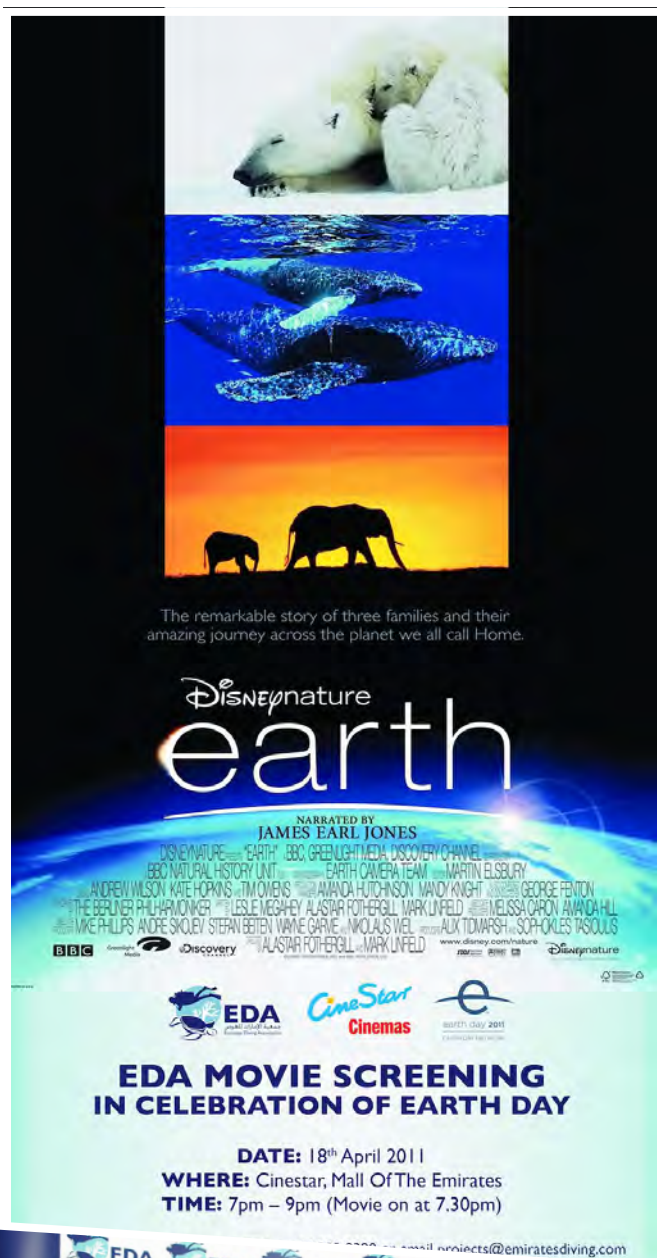
EDA MOVIE SCREENING OF DISNEYNATURE EARTH

Cinestar, Mall Of The Emirates once again, sponsored the cinema hall for EDA's movie screening of Disneynature Earth on the 18th of April in order to celebrate our planet for Earth Day (22nd of April)!

'The first film in the Disneynature series, Earth, narrated by James Earl Jones, tells the remarkable story of three animal families and their amazing journeys across the planet we all call home. Earth combines rare action, unimaginable scale and impossible locations by capturing the most intimate moments of our planet's wildest and most elusive creatures. Directors Alastair Fothergill and Mark Linfield, the acclaimed creative team behind the Emmy Award – winning Planet Earth, combine forces again to bring this epic adventure to the big screen'.

The doors opened to a full house to register EDA members and their guests at 7pm and allow everyone the time to collect their tickets and order some snacks in before setting themselves to watch the film at 7.30pm. Disneynature Earth was another spectacular visual about the fascinating wildlife on our planet which everyone thoroughly enjoyed!

We'd like to thank Gulf Film LLC for providing us with the film copy and copyright approval.



WED – 5 JUNE 2011

WORLD ENVIRONMENT DAY

THERMOSTAT



WORLD ENVIRONMENT DAY
Forests: Nature at Your Service
In support of the UN International Year of Forests

World Environment Day (WED) is an annual event that is aimed at being the biggest and most widely celebrated global day for positive environmental action. WED activities take place all year round but climax on 5 June every year, involving everyone from everywhere.

WED celebration began in 1972 and has grown to become the one of the main vehicles through which the UN stimulates worldwide awareness of the environment and encourages political attention and action.

Through WED, the UN Environment Programme is able to personalize environmental issues and enable everyone to realize not only their responsibility, but also their power to become agents for change in support of sustainable and equitable development.

WED is also a day for people from all walks of life to come together to ensure a cleaner, greener and brighter outlook for themselves and future generations.

EDA will be going to Raffles School this year to talk to and encourage change with the students.

So what are you going to do for WED?

RAFFLES SCHOOL RECYCLED FASHION SHOW

EDA's Project Manager, Reema Al Abbas was invited to be on the judging panel of the Raffles West Campus Recycled Fashion show on the 28th of April.

The children paraded their innovative costumes which were made entirely from recycled materials. It was hard to judge the kids as they all did a great job in utilising the materials they had available to them.

The photos are proof on how enjoyable and fun the day had been!



SUSTAINABLE FISH RECIPE BOOK LAUNCH AT VERRE BY GORDON RAMSAY

FISHED OUT FOR US: UAE STOCKS ARE IN DECLINE, TIME FOR US TO CHOOSE WISELY

FEATURE **EWS-WWF** PHOTOGRAPHY **EDA AND TIFFANY SCHULTZ**



STARTER: Cured Faskar and marinated beetroot, daikon salad and soy dressing | **MAINS:** Roasted fillet of Shaari Eshkeli, baby leeks, smoked pomme purée and curried velouté | **DESSERT:** Chilled chocolate fondant raspberry sorbet and milk mousse.

Our oceans are currently undergoing a sea of change! The biodiversity of our marine ecosystems is known to be unparalleled. For many years, most of us believed that our actions could never have an effect on our vast and wondrous underwater world. The popular assumption was that the ocean, and its resources, would always be there to sustain us, and that the world's fisheries were keeping pace with the increased demand from a growing global population. In recent years however, it has become clear that this is far from the truth, and that our actions are, indeed, affecting our marine environment.

Unsustainable fishing is a global problem with almost 80% of the world's fisheries being fully to over-exploited, depleted or recovering from depletion, according to the United Nation's Food and Agriculture Organization (FAO). We are simply removing more species than our oceans can provide, and as a result, placing a wide variety of marine life under duress. Unsustainable fishing is not only affecting fish

stocks and the marine ecosystem; it is also threatening the livelihoods of those reliant on fishing for food and income.

Fish stocks worldwide are experiencing heavy pressure as a result of exploitation and stocks in the United Arab Emirates (UAE) are no exception. Stock assessment studies carried out by government bodies indicate that the UAE's fish populations have declined by about 80% in the last 30 years. This startling reduction can be attributed to the degradation of the nation's coastal environment, with the loss of important marine habitats, as well as unsustainable fishing.

On April 25, 2010, Emirates Wildlife Society (EWS), a local non-governmental organization working in association with the leading international conservation body, the World Wide Fund for Nature (WWF), launched Choose Wisely: an awareness campaign promoting sustainable fish choices in the United Arab Emirates.

Unsustainable fishing is affecting the health of fish populations and their surrounding environments.

Examples of unsustainable fishing include:

- Catching too many fish in a short amount of time to supply the high demand for popular varieties (i.e. Hamour, Kingfish).
- Catching juvenile fish which have not had a chance to mature.
- Excess fishing in important spawning areas and seasons (where fish release their eggs).
- Catching unpopular species that are then discarded.
- Damaging habitats by polluting, coastal development, anchoring in reef areas or discarding fishing gear at sea (abandoning cages or nets).

EWS-WWF is the first organisation to highlight the unsustainable exploitation of marine fish in the Gulf. Choose Wisely aims to raise awareness among UAE residents, businesses, retailers and restaurants of the

overfishing of local stocks, by communicating the threats facing several popular varieties of fish. Through this campaign, the organisation strives to emphasise the severe decline in UAE fish stocks in the last 30 years, with special attention to some species, such as the Hamour, which are currently being fished at over seven times the recommended sustainability level.

Sadly, Hamour is not the only fish in need of a break. Seven other local species are currently being fished out in excess, including: Kanaad (Kingfish), Shaari (Spangled emperor), Farsh (Painted sweetlips), Zuraidd (Golden trevally), Yemah (Snub nose emperor), Qabit (Goldlined seabream) and Safi Arabi (White-spotted spinefoot).

Local fish are a staple of the Emirati diet and the UAE has a long-standing fishing tradition; so the protection of fish resources holds cultural significance as well as benefitting marine ecosystems and biodiversity. The Choose Wisely campaign endeavours to empower consumers to be part of the solution by making responsible choices when it comes to fish consumption. A nationwide consumer survey found that 66% of UAE residents eat fish at least once a week, but 70% declared they would be less likely to consume a particular species if they knew it was being overfished.

In a bid to provide UAE residents with a practical tool to help them make informed decisions when buying or catching fish, EWS-WWF with the support of the Environment Agency – Abu Dhabi (EAD) has produced a pocket-sized guide classifying 22 local species of fish into three major categories. The classification in this first edition of the consumer guide is based on stock assessment studies which have been carried out by fisheries' scientists. The guide assigns a colour to each of those categories;

RED = overfished stock (Think Again!)

ORANGE = stock exploited within sustainable levels, (Good choice but there's better!)

GREEN = stock is not experiencing heavy fishing pressure (Go for it!)

Our consumer guide is available to download online at www.choosewisely.ae.

For those who enjoy cooking, the campaign has launched its first sustainable fish cookbook featuring 20 recipes submitted to the online Sustainable Fish Dish Challenge on the campaign's website: www.choosewisely.ae.



الأخضر: أفضل خيار! (لا تواجه هذه الأنواع ضغط صيد عالية)

Orange-spotted Trevally
Two-bar Seabream
Black-streaked Monocle Bream
Yellow Bar Angelfish
Pink Ear Emperor
Sordid Sweetlips
Ehrenbergs' Snapper
Yellow Fin Seabream
Blackspotted Rubberlip

Jesh Um Al Hala

Faskar

Ebzimi

Anfooz

Shaari Eshkeli

Yanam

Naiser

Shaam

Hilali

جش أم الحلا

فسكر

بزيمي

عنفووز

شعري شخيلي

ينم

نيسر

شعم

هلاي



البرتقالي: خيار جيد، ولكن هنالك خيارات أفضل (يبلغ معدل استغلال مخزون هذا النوع درجته المثلى)

Longtail Silver Biddy
Small Tooth Emperor
Black Spot Snapper
King Soldier Bream
Blue Spot Mullet

Badah

Souli

Aqalah

Kofar

Beyah Arabi

بدح

سولي

عقلة

كوفر

بياح عربي



الأحمر: فكر بشراء نوع سمك آخر! (هذا النوع يتعرض مخزون هذا النوع إلى ضغط الصيد الجائر).

Orange-spotted Grouper
Spangled Emperor
Painted Sweetlips
Golden Trevally
Kingfish
Snub Nose Emperor
White-spotted Spinefoot
Goldlined Seabream

Hamour

Shaari

Fersh

Zuraidd

Kanaad

Yemah

Safi Arabi

Qabit

هامور

شعري

فرش

زريدي

كنعد

يماه

صافي عربي

قابط

Tamil Nadu Fish Curry, Shaari Eshkeli with Lemon and Olive Oil and Hot-Smoked Green Tea Souli Wraps are just some of the recipes included in the new Choose Wisely cookbook, which was unveiled at Gordon Ramsey's award winning restaurant Verre in the Hilton Dubai Creek on Monday April 11, 2011.

The book is a real community effort with all the recipes submitted by volunteers who tried and tested their sustainable creations on their friends and families, helping people taste the benefits of eating sustainable green-labeled "Go For It" fish and offering consumers alternatives to eating red-labeled "Think Again" fish such as the Hammour, King Fish and Shaari. Recipes reflect the cuisines of India, the United Arab Emirates, Europe and South America. Zighy Bay Resort, Méridien Al Aqah, Verre Restaurant at Hilton Dubai Creek and Flavours Restaurant at Sheraton Abu Dhabi Hotel and Resort offered raffle prizes to encourage recipe submissions and recognise volunteers who participated in the campaign.

Knowing how to cook a fish is an important factor when deciding what to buy, and with the campaign's fish dish challenge, many soon discovered that sustainable varieties are just as easy to cook with and can be just as delicious. The Choose Wisely website features a collection of tried and tested sustainable recipes submitted by EWS-WWF volunteers: proof that yes, it is possible to create a delicious dish with a fish other than Hamour! Go online and vote for your favourite recipe or submit your own sustainable creation.

The solution to overfishing is in our hands and it is high time we started taking note of what is happening to our fish stocks by learning more

about how our actions can help protect this precious resource. To find out more about the campaign and to download the UAE fish consumer guide and discover some sustainable recipes, log on to: www.choosewisely.ae.

About Emirates Wildlife Society in association with WWF (EWS-WWF)

Emirates Wildlife Society is a national (UAE) environmental non-governmental organization. EWS is established under the patronage of HH Sheikh Hamdan bin Zayed Al Nahyan, Ruler's Representative in the Western region and Chairman of Environment Agency - Abu Dhabi (EAD). EWS works in association with WWF, one of the world's largest and most respected independent conservation organizations, with more than 5 million supporters and a global network active in over 100 countries. EWS-WWF has been active in the UAE since 2001 and has initiated and implemented several conservation and education projects in the region. The mission of EWS-WWF is to conserve the natural heritage of the UAE and to promote sustainable lifestyles.

For more information please visit: www.ewswwf.ae



BODY GLOVE DIVES INTO DUBAI

BILLY MEISTRELL, BRAND OWNER, INAUGURATES OFFICIAL OPENING

The ultimate water sports lifestyle brand, Body Glove, is officially in Dubai. Billy Meistrell, Body Glove owner and Executive Vice President, was present for the ribbon-cutting ceremony and the press conference at Sun & Sand Sports in Deira City Center on the 30th of March 2011. Billy's journey from the US to the Middle East marks a landmark achievement for the California-based Body Glove, as they aim to launch more flagships stores all across the region.

Starting in Dubai, the Body Glove crew will travel to several countries, tour many retail stores, participate in ribbon cutting ceremonies and attend promotional events on the world renowned Jumeirah Beach, Dubai. In addition, Body Glove is working exclusively with Shape Magazine to create the all-new 2012 Body Glove swimwear calendar, the first of its kind.

"I am so excited to be here in Dubai and to be able to see firsthand what the region has to offer. It's always exciting to be working with our partners, around the globe, and expand our business. It's going to be a great experience to dive into the Arabian Gulf," said Billy Meistrell.

"It is very exciting to be involved in making history with our brand in the region" added Abbas Hassan, Senior Vice President of Tiki Shark, Body Glove's license for the GCC.

"On behalf of Sun and Sand Sports I welcome Billy Meistrell and Abbas Hassan to the region. We are strengthening our Aqua category with the addition of Body Glove, a brand with rich history and success," commented Marvin Shaire, CEO of Gulf Marketing Group

Body Glove products will be available at Sun & Sand Sports in Madinat Jumeirah, Old Town – Souk Al Bahar, Deira City Center, Dubai Festival City, Jumeirah Sports Market, Mirdiff City Center, Ibn Battuta Mall and in Abu Dhabi at Khalidiya Mall.

For more information on Body Glove products and athletes go to www.bodyglove.com and for daily updates visit the Body Glove Facebook page www.facebook.com/bodyglove.





BILLY MEISTRELL BIOGRAPHY:

Billy began his career when he accompanied his late father Bill Sr. to the Body Glove wetsuit factory as a toddler. He exhibited a talent for creating and designing patented innovative improvements to the existing line of Body Glove wetsuits, orthopedic and snorkel products. In 1986, Billy designed Body Glove's first patented orthopedic device. Although this device was designed specifically for former Los Angeles Laker superstar, Kurt Rambis, it gained global popularity with professional athletes throughout the NBA, NFL, and NHL.

Billy has since exclusively designed five other patented products including the "slant zip" wetsuit that is still a top seller worldwide.

In 1994, he became vice-president of licensing and works on the acquisition and development of domestic and international licenses. Billy has revolutionized the wetsuit industry by introducing bright hues and unique designs to the once nearly colorless world of wetsuits.

He is a passionate water sports enthusiast and his entire family shares his passion for water and spends its annual vacations on or near some body of water.

Billy and family can be seen wake boarding, body whumping, surfing, riding air-chairs, scuba diving regularly in their home town of Redondo Beach California.

INTERVIEW WITH BILLY MEISTRELL

Q | What made you follow your father's love for the water?

A | Nobody [in the family] has really veered off from what the family lifestyle is. We all believe in living around, playing in and protecting the water. We have my dad and uncle who were the first generation, five from the second (my generation) and 13 from the third generation. My dad's slogan was, "Love what you do and do what you love." It's nice to be passionate about something you call work.

The thing I always tell people that don't dive, is that there are a lot of beautiful colors everywhere in life, but those colors are magnified underwater.

Q | After nearly six decades, Body Glove has finally come to the GCC. What spurred this move?

A | We've been shipping products to the region since the early 90s and we did sell a lot of products. We dealt with single retailers, which can be a bit of a roller coaster ride. We've finally paired up with Tiki Style who is here working on the brand around the clock and we're thrilled to partner up with them.

Q | What are your thoughts about Body Glove coming to Dubai and the GCC?

A | I'm really excited to be here and to see first hand, what the region has to offer. It's going to be a great experience to dive into the Arabian Gulf. It's the first trip of any Meistrell to this region, which is definitely on our radar in terms of being a new market. This move is perfect for Body Glove; I don't see anything but growth and a lot of opportunity here.

Q | Who would you expect to buy Body Glove products? Young kids or serious divers?

A | We definitely think we cover both. The older cusp knows Body Glove, and we've never stopped marketing to the younger population. We've got the World Champion Wakeboarder on our team and one of the top five athletes in the world surfing for us. We always try to keep our brand fresh, and marketing towards the younger generation is crucial for us.

Q | How does Body Glove, a privately owned company, compete with large international organizations like Rip Curl, Nike, Reebok, Quicksilver, etc?

A | We're very focused on what we do and who we are. If we were here for the money, we would have accepted one of the dozen takeover offers we've received in the past, but we're here for our lifestyle and our love of the water.

We don't compare ourselves to their dollars, as they are much bigger than us in terms of sheer size. However in terms of brand awareness, our brand is rated above Billabong and Quicksilver; and we see that as proof that we are marketing our brand in excellent fashion. It's not based on money and we don't want to answer to shareholders about our passion and lifestyle.

Q | What are your plans for the region, considering Dubai is a small place?

A | Our brand has always been based on water, regardless of how big or small the destination is. There's a lot of water in this region, and we're looking to expand in the region after our Dubai opening and looking to get Body Glove a big foothold in the region.

Q | How would you describe diving to somebody who has never ventured underwater?

A | If I could give one piece of advice to people who don't dive, it would be that the everyday colors and beautiful images you see in your daily life, are magnified underwater. Words don't do justice to the images one can see underwater.

100% OWSI

April was the first PADI Instructor Examination for 2011. I am very happy to report we had a 100% success rate again, so a HUGE congratulations to Kerstin, Amir, Chris and Marianne who successfully became OWSI's and good luck to Richard who is taking his IE next month.

Many of you know Paul Cunningham who runs our Career Development Programs. So a big congratulations to Paul (CD) and Kerry Wheldon (IDCS) who ran a great program and put a lot of time in to make sure the guys were 100% confident.

Paul has been running a mock IE for the past two IEs we have run and it has proved very popular with the candidates. He runs the program as if it is a real IE and it seems to work a treat to help the guys relax a little more during the real PADI IE.

We would also like to welcome our overseas candidates who are joining us for 2 months to go through the Atlantis Dive Centre Career Development Program. It is great to see candidates choosing Dubai to come and do their IDC, MSDT and their IYT skippers courses. Egypt and Thailand are known as some of the top destinations for diving candidates to go to, but we are getting a lot of enquiries so hopefully this is the start of a new chapter for the dive industry of Dubai.

We are looking forward to the PADI IE this coming July. Good Luck everyone.



MARK DIGBY, a very popular diver as many of you know, turned 50 in April and he won't mind me saying that!

In October Mark successfully completed his PADI IE but with work, has not been able to teach much, plus his wife Jan thought it was time she saw her husband at the weekends.

Jan does not dive and has a slight fear of the water but for Mark's 50th Jan learn't to dive with my guys but did not tell Mark!

The day of Jan's certifying dives 3 and 4, Shana called Mark first thing and said 'I know its your birthday but we need help teaching a VIP (we did not lie there did we Jan?). Jan went to get her hair done...or so she said and came up to the Atlantis Dive Centre. Mark at first agreed to come but then changed his mind (a good husband), lots of texting was done between the family and then Mark finally appeared at the Dive Centre.

Well the look on his face when his VIP



student was brought out was priceless. Minutes went by before Mark could say anything. It was wonderful to see after so many years of marriage.

Congratulations to Jan on becoming a certified diver and to Mark for his first certification on his 50th.

What does this story tell us...well lads... the wives can still keep secrets, it does not matter how long you've been married!

DIVING THE A300

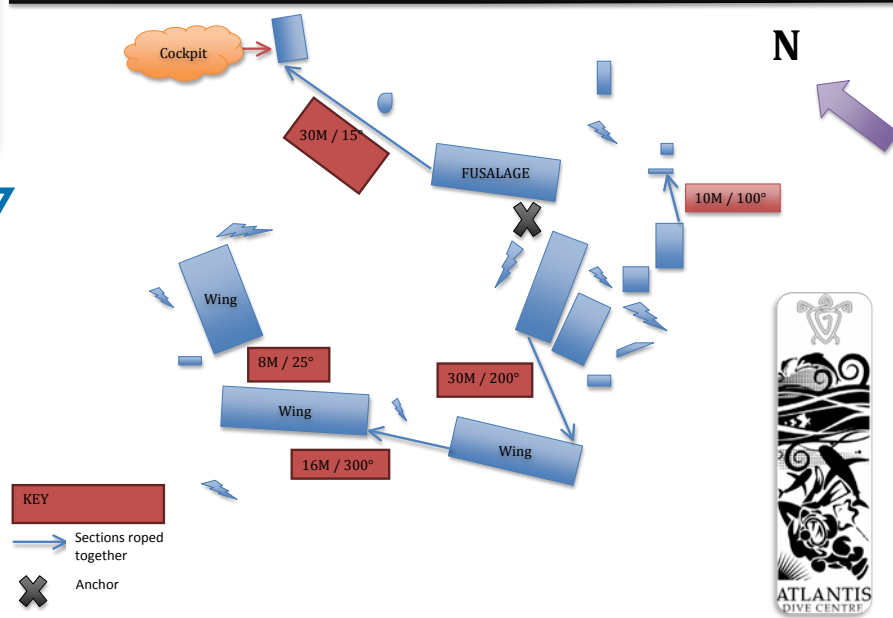
Diving in Dubai over the past two plus months has been absolutely amazing. The visibility has been great and the marine life has been incredible too. So many rays, dolphins, baby sharks and there were 2 whale sharks on the plane two weekends ago.

Again I hope this visibility is here to stay because there is nothing better than descending down and seeing the wreck, just puts a big smile on every divers face.

A few weekends ago we were on the Zainab and it was great to see so many divers having a great time. I was filming on the wreck and in one shot we had so many things going on from AOW, PADI Tec, pleasure divers, Sara-Lise Haith in the distance free diving and Mohammed Helmy taking his students around the wreck. Awesome to see. Check out Atlantis Dive Centre on YOUTUBE and see if you can see Sara in the background free diving.

I finally got around to producing a map of the plane. If you cannot make the weekend dive trips, we are also diving it every Wednesday night.

Atlantis Dive Centre - A300



ATLANTIS DIVE CENTRE SCHOOLS PROGRAM

Congratulations to the students of Repton School and Emirates International School whom throughout this school year have been busy learning to dive or continuing their diving education.

Congratulations to the first group to have completed their National Geographic Course and we look forward to the remaining guys throughout this term completing theirs.

Also huge thanks to everyone from the schools that have been coming in each month to take part in our Marine survey of the house reef and dive sites, monitoring the fish species and coral growth. It has been great seeing you at the dive centre.

It is not just about learning to dive but as part of the schools program, the students come in once a month and dive for free to become involved with the many marine projects that we run and we have some very talented photographers within the groups. Perhaps there is a future working with National Geographic.



BRITISH MINISTRY OF DEFENCE

The Atlantis Dive Centre is very proud to announce that we have become an approved Dive Centre for the British Ministry of Defense. One of only a few throughout the World.

So what does this mean for the ex-servicemen and women? You do not have to pay for any courses!

You no longer have to travel to another country to take advantage of the Enhanced Learning Credit Scheme. Receive up to £2,000 towards either:

- Learning to Dive – PADI Master Scuba Diver
- Career Development Courses – Divemaster to Instructor (including EFRI)
- Become a IYT Bareboat skipper

We have had a great response already and we have our first Dubai resident, ex-serviceman going through our Career Development Program and fingers crossed becoming an OWSI this coming July.

If you have any questions please do not hesitate to contact Jason at the Atlantis Dive Centre for further information on +971 4 426 3000 or email Jason@atlantisdivecentre.com

AL BOOM DIVES INTO EARTH DAY



Al Boom Divers took part in cleanup dives to celebrate Project Aware's Dive Into Earth Day in April. Clean up dives were done by boat from the dive centre at Le Méridien Al Aqah, and from the beach at the Jebel Ali Golf Resort & Spa. Over in the Musandam, divers went out on a special cleanup dhow trip as well.

A total of 5 divers joined Mohamed, Course Director at Al Boom Diving in Jebel Ali, and 15 divers joined the dive crew at Al Aqah to take part in the cleanup dives. Twenty enthusiastic divers went out to the Musandam.

"Cleanup dives are always very social, and have a good cause," noted Mohamed. "Everyone had a good day out!"

The dive sites were in good condition with not too much work to be done which is good news!" said Mohamed. "I believe that divers are always aware of the underwater environment and usually make sure that dive sites are kept clean."

To keep up to date with Al Boom Diving activities and news, join the "Al Boom Diving" group on Facebook or sign up to receive the newsletter by emailing abdiving@emirates.net.ae.

MEETING UP WITH YOUR BUDDIES

The BBQ season has sadly come to an end with the last Al Boom Diving Divers BBQ held on the 29th April.

"The monthly Diver BBQs have been a great success this season with a different theme at each evening. We have had the Spring BBQ, the Royal Wedding BBQ, and the Beat the January Blues BBQ" said Sonia Glazebrook, Call Centre Supervisor at Al Boom Diving.

"These events are a great opportunity for divers to gather with one thing in common – diving!" added Mohamed Helmy, PADI Course Director at Al Boom Diving. "The aim of diving is of course to: meet people, go places and do things, according to PADI – and this is a great way to meet fellow divers."

The good news is that the diver meet ups



continue throughout the summer, but move indoors to Cactus Cantina, located in the Rydges Plaza Hotel on Satwa Roundabout. For more details, please subscribe to the Al Boom Diving newsletter by emailing abdiving@emirates.net.ae or by joining the "Al Boom Diving" group on Facebook.

PADI DIVE COURSES FOR THE LADIES



Al Boom Diving is now offering PADI dive courses for the ladies, at the Dubai Ladies Club on Beach Road in Jumeriah. Our instructor, Sara-Lise Haith, will be available to teach in this ladies-only environment.

The Dubai Ladies Club offers a ladies-only environment for dive courses in Dubai. Al Boom Diving operates the PADI Dive Resort within the club to accommodate our lady divers that do wish to learn in the privacy of the club that offers a multi-purpose sports venue in luxurious surroundings. Female instructors are available to teach PADI dive courses with prior arrangement.

For all enquiries, please contact:

Email: Abdiving@emirates.net.ae

Tel: +971 4 342 2993

Opening hours: on demand

www.alboomdiving.com

SNORKELING IN THE SUN



Not all of us are ready to take the plunge required to go scuba diving. Some are not ready to take their first breath underwater, some have health reasons that don't allow for scuba diving, and some of us just prefer a sunny day on the reef.

Snorkeling is both a gateway to diving, a diver's surface-interval activity and an underestimated activity in its own right. Snorkelers often claim to see more than divers, as they can be quieter without the bubbles. Fish, sharks and turtles are often sighted by snorkelers on the Al Aqah reef sites Dibba Rock and Sharm Rocks.

Al Boom Diving runs boat rides and snorkel trips from Le Méridien Al Aqah daily at 3pm, returning to the hotel's Gonu Bar at 5pm for optional refreshments as the sun sets.

Not only does snorkeling give you a view of the underwater world, the boat ride along the coast is full of photo opportunities.

At just Dh150 per person, with top of the range Aqualung snorkel gear rental included, this is a great afternoon activity.

Fancy some shopping and snorkeling?

It is possible! At the Dubai Aquarium, within the Dubai Mall, snorkeling in the shark cage is available every 30 minutes from 12 noon to 7pm daily at a cost of Dh225, which includes a briefing on the animals that you will see in the Dubai Aquarium, and rental of all snorkel gear, a wetsuit and a towel. Hot showers are available on site so that you can prepare for last minute shopping after your snorkel.

For snorkeling and boat ride options in the UAE and Musandam, contact the Al Boom Diving call centre on abdiving@emirates.net.ae or +971 4 342 2993 – or complete the enquiry form at www.alboomdiving.com.

GEAR REVIEW – A WHOLE NEW DIMENSION!

FEATURE STEVE WOOD WWW.SCUBASTEVE.AE

Previously in our gear reviews, we have looked at the Aqualung Pro QD i3 and Zuma BCD's. Two jackets at very different ends of the spectrum, the QD is a heavyweight jacket while the Zuma is the lightest travel BCD on the market.

Both jackets offer very different benefits for divers and have some great innovative features. However, could Aqualung take the best of both jackets and combine them so we have a jacket right in the middle of the spectrum?

STEP ONE – TAKE THE BEST BITS...

So what made the other 2 jackets great? The Pro QD has the new i3 inflation system which means control at the flick of a lever for inflation and deflation – a great innovation and a breeze to use. New style swivel clips on the shoulder straps to improve comfort and fit. Lots of pockets and storage.

The Zuma has no hard backplate so weighed in at less than 2kgs, fits like a glove and can be rolled up.

Both jackets had the new flat dump valves and integrated weight pouches.

STEP TWO – COMBINE AND ADD...

Put them all on a new BC, add some trim weight pouches and a new hose routing system and it's: **Welcome to the new DIMENSION i3!**

This is a back inflation BC with no back plate so it keeps the weight down again. It's not as light as the Zuma but it's still in the travel BC range. The i3 inflation system works like a dream and the jacket offers plenty of lift.

Because there is no back plate, the tank band sits at the bottom of the tank and therefore the jacket hugs the tank to you, giving a reassuringly snug and secure feel. Two trim pouches are integrated into the tank band which means you can set the jacket up so the tank does not float upwards towards the end of a dive, further enhancing the control you get.

Plenty of d-rings and good sized pockets give you more options for storage than the Zuma. And the 'Wrapture' harness system means everything sits close to your body almost making the jacket feel like its part of you. Nicely padded throughout there are no hard bits to dig into you anywhere on the jacket so it really is comfortable.

Perhaps the best thing about the

Dimension is the innovative hose routing system. The inflator and gauge hoses go through a slot in the back of the jacket, around your back and come out on the sides. The inflator hose clips straight in the i3 unit, your contents gauge is stowed in a Velcro pouch. Then your octo goes into a smart little pocket which keeps it out of the way but it's still easy to grab if required. What this all means, is that you have no dangling hoses to get snagged on things. And the i3 system means no corrugated inflator hose hanging down so the front of the jacket is clear.

I used the Dimension on a recent trip to the Musandam and found it gave me plenty of lift at the surface (22 litres say Aqualung) and once underwater, I felt in total control at all times. As a photographer, the real bonus was the lack of hoses which allows me to get much closer to the reef without worrying about anything hitting it.

The Dimension is a great new jacket that bridges the gap between heavyweight BCDs and the travel range. For divers who want to dive both here and on holiday but are conscious of weight allowances, and don't want to have to buy two jackets, the Dimension gives you the best of both worlds.

The Aqualung Dimension comes in men and women's styles/colours and is available now from Al Boom Diving.

Thanks to Colin at Al Boom for loaning me the Dimension for testing.



PROJECT IGNITE AND TAWASUL'S DIVE TO CHANGE A LIFE CAREER DEVELOPMENT SCHOLARSHIP

Dubai volunteers under sponsorship of the Emirates Airline Foundation are changing lives at the Word of Life Youth Centre in Merewent, Durban.

Project Ignite March 2011 is a youth outreach program running in March in Merewent Durban. Spearheaded by volunteers from Tawasul who have flown over under sponsorship of the Emirates Airline Foundation, they started off by giving 24 young adults a once in a lifetime experience to scuba dive.

Calypso Diving and Adventure Centre in Durban alongside Tawasul and the Pavilion Dive Centre at the Jumeirah Beach Hotel in Dubai, sponsored 24 individuals a Discover Scuba course in the Aquarium at Ushaka.

The diving instructors were volunteers from The Pavilion Dive Centre at the Jumeirah Beach Hotel in Dubai led by Ernst Van Der Poll. The aim of the program is to give young people from under privileged communities a once in a life time opportunity to experience Scuba Diving and give them the opportunity to apply for a scholarship program. The Pavilion Dive Centre/Tawasul Dive to change a life Career Development Scholarship would be the first of its kind in the region. It will give under privileged kids from communities in South Africa, Sabah Borneo and Palestine an opportunity apply for a scholarship that will take them from Open water to Instructor Level and then to a possible job placement in a PADI Dive Operation.

Young people will learn life changing skills while learning to dive. The Scholarship Internship also has a very strong environmental focus helping kids to think in a sustainable manner to protect the future resources of our planet. The Scholarship is made possible with strategic partnerships with companies wanting to allocate CSR funding to sponsor the kids through the program. The Scholarship is incentivized creating short term and long term goals for the kids, encouraging them to study hard and get involved in projects within their communities. Young people will start their training with a local Dive Operation Partner in their community and once reaching Divemaster level join the Pavilion Dive Centre Career Development Centre at the Jumeirah Beach Hotel where they will complete an internship and receive Instructor Training. Once they complete the program, the Pavilion

Dive centre will be helping them with job placement at a PADI Dive resort.

The next community outreach program will be from the 11th to 19th of August in Borneo Sabah when the Pavilion Dive Centre and Tawasul will be visiting Mabul for a National Geographic Exploration Expedition. During this trip volunteers will be working with

Durban for 3 years and since moving to Dubai I just see opportunities everywhere to inspire them. The support from international sponsors and volunteers as well as local companies in Durban towards the outreach ideas we develop have been phenomenal and we need more support to keep going, if you wish to collaborate with us, please contact us via e-mail on info@youthcarecentre.org".



Project Ignite is the first in a series of workshops planned for 2011 and will be followed by Operation Transformation later this year.

Here are some quotes from the kids after their first scuba diving experience:

DAVID SMITH – 13 years old | I felt excited to actually swim underwater with fish and sharks, but at the same time I was scared because I had a cut on my finger the previous day. When we were about to get into the water with all our equipment, I quickly asked

if those sharks were attracted to human blood, once the diving instructors said 'NO', I was really relieved. I really enjoyed it. It was life changing; it was so unusual to breathe underwater. I never thought that I would ever go scuba diving and wouldn't mind having it as my career. Thanks so much!

PHAPHAMA MDINGI – 15 years old | Scuba diving was a nice experience to see sea creatures underwater and how things were in slow motion. At first I could not breathe, but I learnt very quickly and when it was time to go out I did not want to end the dive.

ZUBENNATHI SAMPETA – 13 years old | It was fun – I had the best time but I was scared. I have never done something like this. When I saw fish I was amazed.

JEREMY DE FLEUR – 20 years old | I was scared at first when I heard about scuba diving. And the fact that we had to swim with sharks. When I did end up diving, I enjoyed the experience and I did not want to go home. I wanted to dive some more – when I went underwater it was like a whole new life. I would really like to help marine conservation. I like scuba diving because it could become a hobby and I feel I would really enjoy it as a job.

MAQHAWA MDINGI – 12 years old | When I saw the gold, I wanted to steal the gold in the ship in the aquarium. When I first went in the water with a diving tank on my back, I was sinking. I enjoyed cleaning the mask with spit

Borneo Divers, Sphere Divers and Treasure Images to help build the School of Hope. The School of Hope is a community school for kids from the local fishing village who do not have the necessary identification paperwork to be able to attend government schools in the region. School of Hope enables these kids to receive an education and skills to start their own business or become a Dive Professional and work in one of the many dive resorts in the region.

Another leg of the program is run by Heather Grace, Operations Manager at Alchemy Films, a Film Company in Dubai. Heather hosted a drama and film-making workshop in collaboration with The Helen O Grady Drama Academy. This part of Project Ignite was sponsored by Flip Video Middle East. All videos are available for viewing on www.myshortvideo.ning.com where the teens from Durban can engage with teens from Dubai who have done the same program of creating a 3 minute video about their lives as part of the Tawasul Week without Walls Program earlier this year. Heather will return to Durban later in the year to set up a Film Lab in conjunction with JVC for underprivileged teens to gain access to camera and editing training in order to further the opportunity to have access to film studies.

Heather Grace says, "I love working with these children – their passion for knowledge and learning new skills is so refreshing. I worked with The Youth Care Centre while living in

and I also enjoyed swimming with the sharks and parrot fish.

JERMAINE VANWHYE – 12 years old | It was a great experience to go scuba diving. I never ever thought I would be swimming with sharks and fish. I was very scared that day because I thought it would be impossible to breathe underwater. I thought that soccer was the only thing in the world that I would be great at, but I was wrong. I would love to become a scuba diver one day.

IVAN BARNAS – 13 years old | It was a life changing experience for me and it opened new doorways for me and showed a different part of the planet to me. It was a wonderful experience to breathe underwater.

JEANNO BUSSACK – 17 years old | My scuba diving experience was amazing. It was out of this world. It was like never before. I would love to be a scuba diver one day, it was so peaceful underwater and the fish are so lovely.

WILBUR SMITH – 21 years old | When I first heard about the Word of Life Doing Scuba Diving this year I was so excited because I've wanted to go scuba diving for a long time in my life. I knew it would be a great experience, but when I went diving that day it was much more than great – it was out of this world. Going scuba diving made me, or should I say, gave me the chance to swim with my favorite animal in the world – the shark. Diving was so amazing; I would love to do it for the rest of my life because the three guys that took us diving were such great guys.

REFERENCE LINKS:

Youth Care Centre: www.youthcarecentre.org
The Pavilion Dive Centre: www.thepaviliondivecentre.com
Diving Scholarships Tawasul: www.mytawasul.com
Calypso Diving and Adventure Centre: www.calypsoushaka.co.za
Emirates Airline Foundation: <http://www.emiratesairlinefoundation.org/english/>

AN ADVENTURE OF A LIFETIME

For the past 6 years The Pavilion Dive Centre has been travelling to Sipadan and bringing back stories of amazing adventures. The island of Mabul where the hotel and diving resorts are located have become a second home for us with several trips going back and forth from Dubai each year.

Sipadan is located on the South Eastern Coast of Sabah, Malaysia and is judged by many to be among the top 5 diving locations in the world. It's famous with swirling tornado formations of Barracuda, massive schools of Hump-head Wrasse, Sharks, Turtles, Turtles and more Turtles and thousands of exotic species of macro marine life.

Due to the Island's location, the weather and diving conditions are near perfect all year round so there is never a bad time to go. From the dozens of divers that have travelled with us to Mabul and Sipadan, there has never been a bad report and all commented that they would definitely go back. Most have done just that.

"Sipadan is not all diving for us" says Ernst Van Der Poll, founder of Tawasul, the reach out program of The Pavilion Dive Centre. "Having built up such a close relationship with the natives, we make a priority of giving back to the community on every trip to the island. We take funding to build up the school, school books, art materials, whatever we can get our hands on that will make a positive difference to the children and people of Mabul".

Get yourself onto a diving adventure of a lifetime in Sipadan Malaysia and add some depth to your lifestyle.

The next adventure of a lifetime will depart on the 11th August for 8 days.

FACEBOOK EVENT:

<http://www.facebook.com/event.php?eid=156232507773314>

www.thepaviliondivecentre.com

Tired of life in the fast lane?

Try slowing it down!




Sipadan, Malaysia

7 Nights, 8 Days

3,250 \$USD per person

11th to 19th August

Taking Bookings now



Such is the magic and allure of Sipadan, acclaimed as one of the best dive sites in the world, impressing even the most seasoned divers with Hammerheads, Barracudas, Turtles and some of the Ocean's most captivating marine life.

If you are looking for the ultimate diving adventure, the time is now, the place is Sipadan, Malaysia.

For more details and bookings contact The Pavilion Dive Centre Tel: 04 4068828 Email: divecentre@jumeirah.com

GISAD – TAKING CARE OF OUR ENVIRONMENT

FEATURE ULRICH STREHLE – GISAD

As part of our project week at the German International School Abu Dhabi, we organized a one day Beach Clean Up at the ADISMC Breakwater on Wednesday the 9th of March. Organized by Kathleen Russell from Emirates Diving Association in partnership with the Environment Agency of Abu Dhabi, about 60 pupils aged 10-14 set out to participate in the action.

Our Clean Up proved to be a very interesting undertaking as the students did not only discover many different pieces of rubbish such as rubber pipes, building materials – even a trolley from a nearby supermarket was found in the shallow water – but allowed them to ponder about the way people treat the environment we actually depend upon.

This event did not only make the children more aware of our environment and the way we should respect and deal with nature, they were really eager and developed a great sense of community while working together for a good cause.

Kathleen Russell and her team supported the pupils in a fantastic and encouraging way providing them with interesting educational materials on several environmental issues.

The Beach Clean Up was a great success for all participants and it is hoped that in future we continue the contact with these environmental organizations.



STAGE IS SET FOR EPIC DUBAI: THE SUSTAINABLE LIVING EXPO

Dubai is all set to host a unique consumer lifestyle showcase called EPIC DUBAI: The Sustainable Living EXPO. EPIC, which stands for Eco-Wise, Progressive and Intelligent Consumer, is the Middle East's first consumer showcase and sixth international Exhibition, bringing together thousands of savvy shoppers with smart business operators to inspire sustainable consumerism. Products and services exhibited at EPIC are broadly sustainable and friendlier to the earth.

EPIC Dubai will showcase a wide range of sustainable products and services in eight categories: Fashion and Accessories, Food and Beverage, Leisure and Travel, Health and Beauty, Home and Garden, Transportation, Government and Technology. It will also present a number of exciting community features, eco-fashion shows, live cooking demonstrations, music talents and artists, all to inspire a positive change in our lifestyle.

Produced by Sustainable Media Group (SMG), a partnership between S.S. Lootah Group and GLOBE Foundation, EPIC Dubai will be held at The Dubai Mall from the 22nd-24th June, 2011. Keeping in line with His Highness Sheikh Mohammed Bin Rashid Al Maktoum's vision for sustainable development, and aligning with World Environment Day, SMG aims to promote Dubai as the world's favorite destination for internationally successful exhibitions, conferences and sustainable business events.

Mark your calendar today for EPIC DUBAI and check back often for program updates. We hope to see you there!

For more information, visit www.epicdubai.com

EPIC

THE SUSTAINABLE LIVING EXPO™

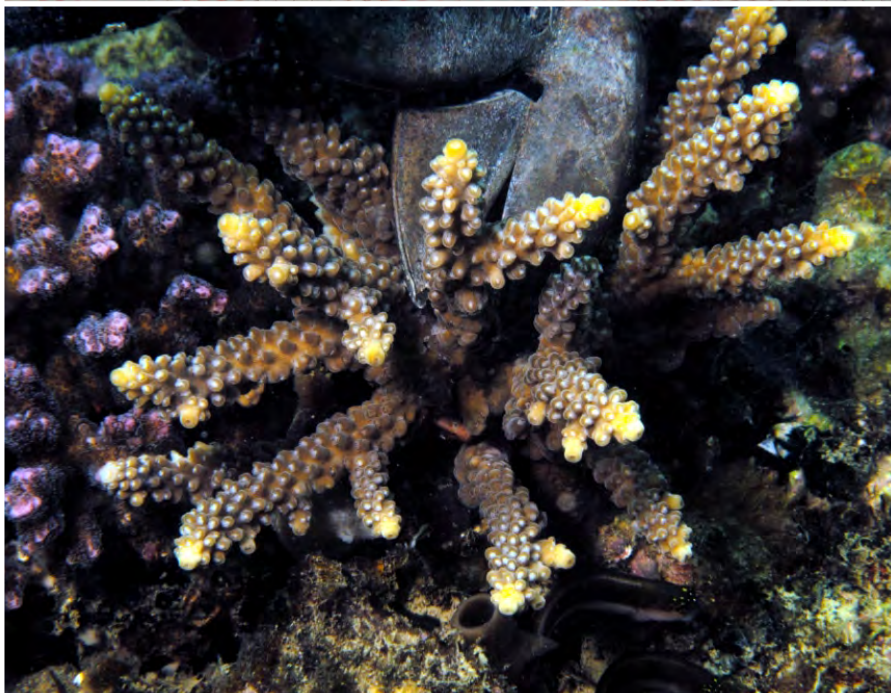
ZAYED IN OUR HEARTS DIVE SITE

FEATURE **IBRAHIM N. AL ZU'BI**

Natural coral reefs are of the utmost importance to achieve the balance of the marine environment and to strengthen the role of biodiversity. They provide a safe haven for aquatic breeding and the incubation of small larvae of various fish, which are crucial to the well being of the countries stock of fish.

Coral reefs are highly sensitive to environmental change that result from either natural disasters or from human impact. EDA, the UAE Ministry of Environment and Water (MOEW), Dibba Fujairah Municipality and the Dibba Fishermen Association have again joined efforts to launch a special dive site dedicated to the Founder of the UAE and EDA, our father the late President of the UAE, HH Sheikh Zayed Bin Sultan Al Nahyan. The Ministry of Environment and Water created a special farm for the cultivation of corals using rocks and broken corals collected from the beach after the cyclone JUNO hit the UAE's east coast a couple of years ago using them as a frame support. The new corals were replanted in the sea after having been placed in special tanks and labs.

The results were very successful and the corals have started to grow again. To celebrate this project, EDA and MOEW along with the support of relevant authorities as part of the initiative, put an EDA dive team together and in the presence of HE Dr. Rashid Ahmed Bin Fahad – UAE Minister of Environment and Water – placed the writing (Zayed in our hearts) carved on rocks with planted corals on them in the Dibba Marine Protected Area in Fujairah as a dedication and thank you to our late president who supported all the environmental initiatives.



HAMMERHEAD SLAUGHTER

FEATURE **EMMANUELLE LANDAIS** – **GULF NEWS** PHOTOGRAPHY **THOMAS VIGNAUD**



45 hammerhead pups dumped

MARCH 20, 2011 I was sent some particularly hard-hitting photos of shark catch from Dubai's Deira fish market today from an acquaintance all too familiar with the dwindling populations of sharks in the Arabian Gulf.

Jonathan Ali Khan is more than just a shark expert, he's a wildlife documentary film maker based in the UAE for the last 25 years. I've worked with him on several stories over the years. On his recent trip to Musandam to film sharks in their natural habitat as part of the SharkQuest Arabia series, he said he came across almost none underwater.

"They are out there because we saw fishermen bringing them back and landing them at Khasab (Oman)," he told me. "The ones left are probably moving to much deeper waters."

After Khasab however, the sharks, and in particular a 5m long female Greater Hammerhead pregnant with 45 pups, was taken to Dubai fish market where the meat and fins can be sold for more. Jonathan also pointed out that on either side of the large female were two 4-metre males as well.

The article below (published in Gulf News) highlights the dire need for more stringent measures on shark catch and trading in fins in the Gulf overall. Oman needs to introduce some measures to stop shark-fishing during pupping season, and fast, if these creatures are to have any chance of surviving.

DUBAI: Fishermen may have struck gold this week when they landed a great hammerhead shark pregnant with a litter of 45 pups, but the Arabian Gulf's marine ecosystem took a great hit.

The 5-metre-long shark was found at Deira Fish Market by filmmakers recording the decline of sharks in the region despite evidence showing that the Arabian Gulf is a 'hotspot' for birthing sharks.

"We need to raise the flag that this is an important region for sharks. This area is a pupping ground, but when a slow-reproducing shark is found at the market with 45 pups, something needs to be done for the welfare of the species," said Jonathan Ali Khan, project leader, producer and director of the Sharkquest Arabia Musandam Expedition.

"If even half of these shark pups had survived, it might have made a significant contribution to the survival of this species at least in this region," he added.

The shark was landed in Khasab, Oman, and brought to the UAE to be sold for a higher profit, Khan said.

In 2008, the UAE Ministry of Environment and Water issued a decree banning shark finning, and halting shark-hunting from January to the end of April.

Only shark finning at sea is banned in Oman. According to the Food and Agriculture Organisation (FAO), the UAE is one of the main Middle East exporters of shark fins to Hong Kong, exporting around 400-500 tonnes per year between 1998 and 2000 and attracting fishermen from the region to trade in shark products.

Shark researcher, Thomas Vignaud, working with the Sharkquest project, visited Deira Fish Market and found the large pregnant

female Great hammerhead amongst dozens of other large sharks. Interested in collecting samples for genetic research as part of his PhD, Vignaud reached inside to reveal 45 dead, unborn babies almost ready to be born.

"Great hammerheads are of critical importance in this region and they have pretty much disappeared from everywhere else. We need to regulate fishing more as 80 per cent of sharks have disappeared," said Khan. "We know hammerheads used to aggregate in the Straits of Hormuz but we never see that any more."

Plans to regulate and ban the catching of several species of shark during the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (CITES) last year in Qatar was rejected by the international community. Attempts to add the Great hammerhead and two other hammerhead species for added protection during the summit in Doha failed.

Sharks are unusually sensitive to fishing because their populations grow so slowly, a consequence of reaching sexual maturity late and producing few young ones. The latest figures from 2003 show that the shark catch went up to 3,060 tonnes a year in the UAE.

Gulf News could not get hold of the Ministry of Environment and Water for a comment.

FEDERAL LAW: TIMELY BAN ON FISHING

In 2008 the UAE Ministry of Environment and Water issued a decree banning shark-hunting from January to the end of April. Article 28 and 29 of Federal Law 23 on Exploitation, Protection and Development of the Living Aquatic Resources in UAE waters states that it is 'impermissible' to catch sea turtles, whales, sea cows and other sea mammals.

Article 29 states that the ministry bans the catching of a certain species of fish for 'eggs, skin or fins or for any other purposes



FEATURED CREATURE DUGONG (*Dugong dugon*)

FEATURE **IUCN RED LIST** PHOTOGRAPHY **GERICK BERGSMA 2010/MARINE PHOTOBANK**



Local Species in the IUCN Red List 2010

RED LIST CATEGORY & CRITERIA:
VULNERABLE

Scientific Name: *Dugong dugon*
Common Names: Dugong, Sea Cow

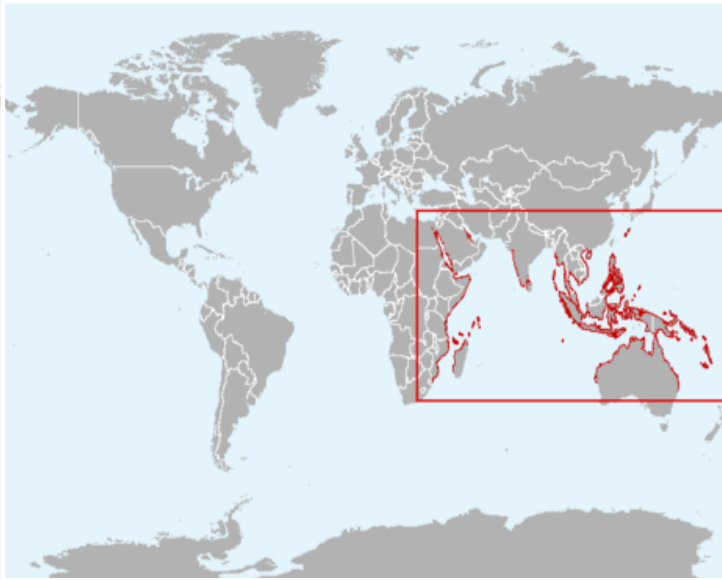
Justification: The dugong's range spans at least 48 countries and an estimated 140,000km of coastline. IUCN have used two relatively crude relative indices of extent of occurrence: (1) length of coastline, and (2) area of continental shelf with a depth of <10 m. IUCN then assembled the evidence for all countries in the dugong's range based on the review of the status of the dugong throughout its range conducted in 2002 with the assistance of more than 100 experts plus additional literature published since that time. This synthesis indicates that the dugong is declining or extinct in at least a third of its range, of unknown status in about half its range and

possibly stable in the remainder – mainly the remote coasts of the Northern Territory and Western Australia.

The only reference site is the urban coast of Queensland where the most robust quantitative data on population trends are available and a 40 year time series of catch rates in nets set for bather protection indicates that the CPUE in 1999 was only 3% of that in 1962. This CPUE is considered an index of dugong decline in the region from all causes during this period. This decline and modern aerial survey estimates of dugong abundance were used to backcast the population in the region in the early 1960s (which would be expected to have been lower than that at the time of European settlement as a cottage commercial industry for dugong oil had existed at several locations along this coast since the 1850s. The extrapolation suggested that the region supported 72,000 (95% CI 31,000, 165,000)

dugongs in the early 1960s compared with an estimated 4,220 (95% CI 2,360, 8,360) dugongs in the mid 1990s. The seagrass habitat in the region is currently insufficient to support 72,000 dugongs, a result which suggests that the habitat had also declined (unlikely) or that the shark net CPUE has overestimated the decline. If the magnitude of this decline was robust and typical of the entire range of the dugong, the dugong would qualify for being classified as Critically Endangered at a global scale.

The major causes of the dugong's decline along the urban coast of Queensland are still present in most of the dugong's range as follows: gill netting 87-99%, subsistence hunting 85-98%, human settlement 82-85%, agricultural pollution 80-89%. The magnitude of these threats is likely to be greater in most other parts of the dugong's range than in Queensland. The Queensland coast supports



a low human population density relative to most other parts of the dugong's range and has a well developed system of marine parks and pro-active management. There is also anecdotal evidence that the area of occupancy of the dugong has declined in many parts of its range, especially along the coasts of east Africa and India where anecdotal evidence suggests that it is at high risk of extinction.

Even in the regions where we have classified the status of the dugong as stable, this classification is unconfirmed. Much of the northern Western Australian and some of the Northern Territory coast has never been surveyed for dugongs and there are no accurate estimates of the Indigenous harvest. The sustainability of this harvest must be questioned as it has been shown to be unsustainable by population modeling in remote parts of Queensland and Torres Strait.

Genetic information on dugong stocks is limited. Recent work based on mitochondrial DNA and microsatellite markers (Brenda McDonald, unpublished data) indicates that the Australian dugong population is not panmictic. There is clear evidence of two maternal lineages, which have a geographical basis apparently reflecting the existence of the Torres Strait land bridge between Australia and PNG, despite the flooding of this land bridge some six thousand years ago. The Australian dugong population still has a fair degree of genetic diversity indicating that recent losses are not yet reflected in the genetic makeup of the population. There is some evidence of gene flow between dugongs in Australia and Eastern Indonesia.

To date, there has been little effective management intervention to reduce anthropogenic impacts on the dugong, apart from legislative protection which is almost ubiquitous throughout its range. Management plans have been developed for some 22-24% of the range (mainly in Australia) but are in place in only 18-22% of the range. The dugong is protected by marine protected areas in 22-23% of its range (again mostly in Australia).

Because of the uncertainty associated with the assessment of the status of the dugong both on the Queensland coast based on the CPUE data and the rest of its range, we suggest that the classification should remain as Vulnerable A2bcd.

Geographic Range: Coastal and Island waters between East Africa and Vanuatu between latitudes of about 27° North and South of the Equator:

Native: Australia; Bahrain; Brunei Darussalam; Cambodia; China; Cocos (Keeling) Islands; Comoros; Djibouti; Egypt; Eritrea; India (Andaman Is., Laccadive Is., Nicobar Is.); Indonesia; Japan (Nansei-shoto); Jordan; Kenya; Madagascar; Malaysia; Mayotte; Mozambique; New Caledonia; Palau;

Papua New Guinea (Bismarck Archipelago); Philippines; Qatar; Saudi Arabia; Seychelles; Singapore; Solomon Islands; Somalia; Sri Lanka; Sudan; Tanzania, United Republic of; Thailand; Timor-Leste; United Arab Emirates; Vanuatu; Viet Nam; Yemen (Socotra).

Regionally extinct: Maldives; Mauritius (Rodrigues – Native); Taiwan, Province of China.

Presence uncertain: Bangladesh; Iran, Islamic Republic of; Iraq; Israel; Kuwait; Myanmar; Oman.

Population Trend: Unknown.

Conservation Actions: The species is listed on CITES Appendix I.

PREVIOUS FEATURED CREATURES: CRITICALLY ENDANGERED

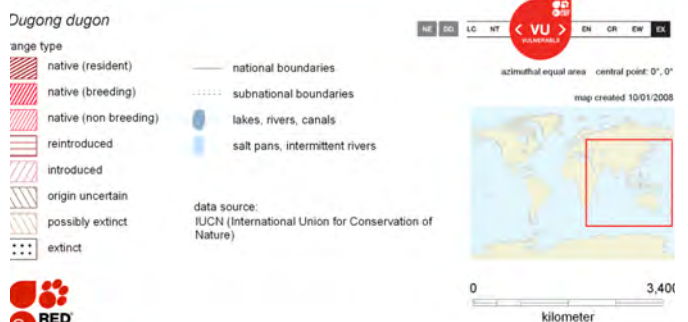
- Hawksbill turtle

NEAR THREATENED

- Blacktip shark
- Spotted eagle ray
- Bluespotted stingray

VULNERABLE

- Leopard Shark



Source: Marsh, H. 2008. Dugong dugon. In: IUCN 2010. IUCN Red List of Threatened Species. Version 2010.4.

www.iucnredlist.org

STUDENTS NATIONWIDE VIRTUALLY PARTICIPATE IN HAWAII UNDERSEA RESEARCH LABORATORY'S 1,000th PISCES SUBMERSIBLE DIVE

FEATURE **NOAA** PHOTOGRAPHY **WITH PERMISSION FROM R.L. PYLE**

Nearly 500 students from more than 35 classrooms “virtually” accompanied researchers from the University of Hawaii and NOAA’s Hawaii Undersea Research Laboratory (HURL) on the 1,000th dive by one of the lab’s twin Pisces manned-submersibles. Since 1981, HURL researchers have spent nearly 9,000 hours underwater around the Pacific.

Students participating in Creep into the Deep:Virtual Research Mission to the Deep-sea communicated with scientists aboard the Pisces V submersible from classrooms around the country via email updates, photos and video. Creep into the Deep was developed in cooperation with WhaleTimes, Inc., NOAA’s Office of Ocean Exploration and Research, and HURL to create a connection between elementary through high school students, ocean research, and marine scientists. This is HURL’s third Creep into the Deep mission.

Yvonne McCarty, a teacher at Felicita Elementary School in Escondido, Calif., wrote, “My second grade class is so excited to be part of this amazing virtual tour. We are grooming future scientists and with this experience I can see that your team has sparked the interest in my students. Thank you for letting us set sail aboard with you. And congratulations on the 1,000 dives. Way to go!”

During the 1,000th dive, HURL researchers used the manned-

submersible to study the growth rates and physiology of mesophotic reefs – reefs that occur in the deeper half of the photic zone, in this case 70 to 150 meters (approximately 230-500 feet) below the surface. They dove in the ‘Au‘au channel, off the island of Maui for a project supported by NOAA’s Center for Sponsored Coastal Ocean Research called Deep-CRES: Investigating the Deep Coral Reef Ecosystems of Hawaii.

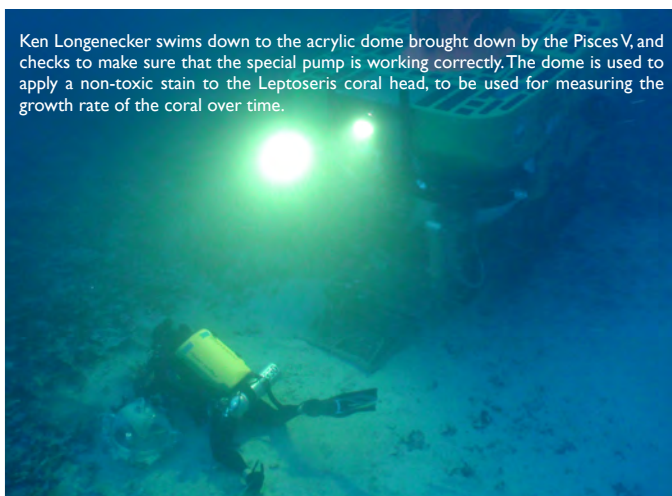
HURL, established by NOAA and the University of Hawaii in 1980, provides cutting-edge, deep submergence capability throughout the Hawaiian Islands and U.S. Pacific territories. HURL operates Pisces IV and V, deep-diving submersibles capable of descending 2,000 meters (nearly 6,600 feet); the Research Vessel Ka‘imikai-o-Kanaloa; remotely operated vehicle RCV-150; and a multi-beam mapping system. It also supports one of the largest annotated video archives in the Pacific.

Commemorating 10 years of ocean exploration, NOAA’s Office of Ocean Exploration and Research uses state-of-the-art technologies to explore the Earth’s largely unknown ocean in all its dimensions for the purpose of discovery and the advancement of knowledge.

NOAA’s mission is to understand and predict changes in the Earth’s environment, from the depths of the ocean to the surface of the sun, and to conserve and manage our coastal and marine resources.



Divers Dave Pence (left) and Ken Longenecker (right) hold up a banner commemorating the Hawaii Undersea Research Laboratory's 1,000th dive with the Pisces submersibles.



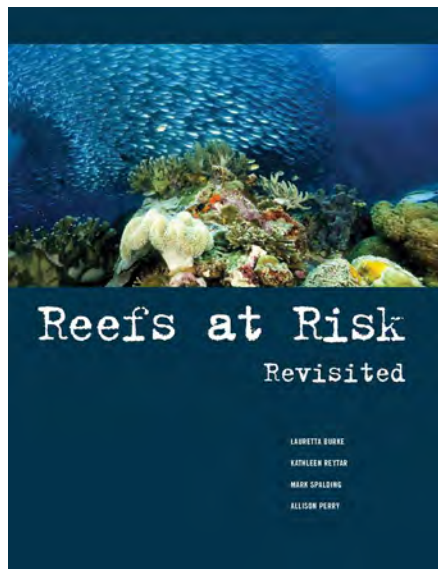
Ken Longenecker swims down to the acrylic dome brought down by the Pisces V, and checks to make sure that the special pump is working correctly. The dome is used to apply a non-toxic stain to the *Leptoseris* coral head, to be used for measuring the growth rate of the coral over time.



The R/V Ka‘imikai-o-Kanaloa launches the Pisces V over her stern, while the chase boat stands by.

REEFS AT RISK REVISITED LAUNCHED

FEATURE REEFBASE



The Reefs at Risk Revisited report was launched on the 23rd of February 2011. This report is the most detailed assessment of threats to coral reefs ever undertaken, and is being released by the World Resources Institute, along with the Nature Conservancy, the WorldFish Center, the International Coral Reef Action Network, Global Coral Reef Monitoring Network, and the UNEP-World Conservation Monitoring Center, along with a network of more than 25 organizations. This is an update of "Reefs at Risk," released by WRI in 1998, which served as an important resource for policymakers to understand and address the threats of reefs. The new report uses the latest data and satellite information to map coral reefs including a reef map with a resolution 64 times higher than the original report. This update of the influential 1998 analysis, Reefs at Risk, a map-based indicator of threat to the world's coral reefs, will provide a detailed examination of human pressures on coral reefs, implications for reef condition, and projections of associated economic impacts in coastal communities. Using recently developed, high resolution data, the analysis is being implemented at twenty times the level of detail of our 1998 analysis. It includes the same local and regional threats as previous Reefs at Risk analyses (coastal development, land-based sources of pollution, marine-based threats, overexploitation), but now also includes climate-related threats (coral bleaching and ocean acidification). Indicators of thermal stress to coral reefs, resistance to coral bleaching, and risk from ocean acidification are important additions.

To view the report, regional fact sheets, press release, video and other materials please go to ReefBase Key Topic:

www.reefbase.org/key_topics/rarrevisited.aspx and www.wri.org/reefs.

THRIVING 'MIDDLE LIGHT' REEFS FOUND IN PUERTO RICO CONSERVING THESE CORALS MAY OFFER HOPE FOR SHALLOWER, DEGRADED REEFS FEATURE NOAA PHOTOGRAPHY H. RUÍZ

NOAA-funded scientists have found extensive and biologically diverse coral ecosystems occurring at depths between 100-330 feet within a 12 mile span off the southwestern coast of Puerto Rico. With the overall health of shallow coral reefs and the abundance of reef fish in Puerto Rico in decline, this finding brings hope that deeper fish stocks may help to replenish stocks on shallower reefs.

These mesophotic ecosystems – 'meso' for middle and 'photoc' for light – are the deepest of the light-dependent coral reefs. Too deep for exploration with traditional scuba gear, these reefs have until recently remained largely unexplored because of the cost and technical difficulty of reaching them. Advances in diving techniques allowed scientists to safely dive and conduct this pioneering survey.

"We had no idea how extensive, vibrant, and diverse these mesophotic coral ecosystems are off La Parguera," said Richard Appeldoorn, lead principal investigator at the University of Puerto Rico, Mayaguez.

"At mesophotic depths in Puerto Rico, scientists are seeing fish species that were once common inhabitants of shallow reefs such as groupers, snappers, and reef sharks," said Kimberly Puglise with NOAA's Center for Sponsored Coastal Ocean Research, which funded the study. "These reefs stand in stark contrast to declining shallow water reefs in the same area."

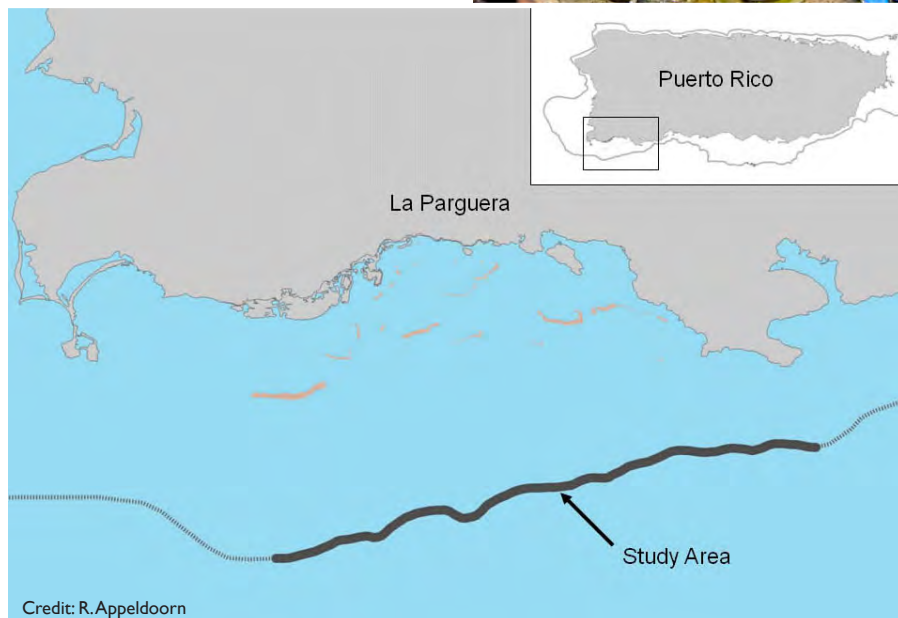
Because of the potential of mesophotic reefs to restore depleted fish stocks, local managers are looking carefully at adding protections for these coral ecosystems.

"We recognize the need to extend protections to mesophotic coral ecosystems in Puerto Rico, and the information being provided by this research is key to making that happen," said Ernesto Diaz, director of Puerto Rico's Coastal Zone Management Program.

This study, conducted by a team of scientists and students from the University of Puerto Rico and the Caribbean Coral Reef Institute, in collaboration with the University of North Carolina Wilmington, is a companion to a similar mesophotic coral ecosystem research program in Hawaii where these mostly uncharted ecosystems exist in the Pacific.

More information on mesophotic coral ecosystems, as well as a NOAA-sponsored international workshop on mesophotic coral ecosystems, was published in the June 2010 edition of the journal Coral Reefs.

NOAA's mission is to understand and predict changes in the Earth's environment, from the depths of the ocean to the surface of the sun, and to conserve and manage our coastal and marine resources.



EDA REEF CHECK TRAINING

Now that EDA's Marine Biologist, Rita Bento is a Reef Check Course Director, we are finally able to train more people to become official Reef Check trainers. Our first successful course was given to Ken Atkinson that finished his training in March. With more Reef Check trainers, EDA will be able to give more trainings per year in both Dubai and Abu Dhabi. In May last month, Ken was able to apply what he had learnt and trained 8 divers for the first time in EDA's first Reef Check Training of 2011. The Atlantis Dive Centre and staff gave its full support to EDA and the training was done using the Atlantis Dive Centre facilities, including classrooms and pool which EDA is truly thankful for.






Reef Check EcoDiver Trainer

Kenneth Atkinson UAE/EcoDiver Trainer/2



Cert Date: March 2011
Indo-Pacific



This card identifies the above diver as having successfully completed all phases of training as a certified EcoDiver Trainer

Please note: This is not a SCUBA dive certification card.
Reef Check Foundation, PO Box 1057, 17575 Pacific Coast Highway
Pacific Palisades, CA 90272 USA www.ReefCheck.org



REEF CHECK IN ABU DHABI

Congratulations to the EDA Reef Check candidates who participated in the Reef Check Eco Diver Program in May in Abu Dhabi. Five intrepid EDA members took up the challenge to become Reef Check Eco Divers. During the three day intensive training program, Ken Atkinson conducted training divers to monitor the coral reefs within the Indo Pacific waters using globally standardized scientific protocol. Participants learn to collect valuable data using the Underwater Reef Guides to establish the healthy status of our local coral reefs. This data can be used by marine park managers or rangers, scientists and government authorities to help keep track of the status of the reefs. In order to pass, all participants have to take the Powerpoint ID test (80% to pass) on substrates, invertebrates and vertebrates and the field test (90% to pass). Upon successful completion, the divers will be able to participate in Reef Check surveys in the region and be able to submit the valuable data to the global database. We will be looking at the next Reef Check Eco Diver training in September. In the meantime, reef monitoring will begin in Abu Dhabi with qualified Eco Divers.



REEF CHECK HELPS DESIGN TRACKING OF THE CONVENTION ON BIOLOGICAL DIVERSITY

FEATURE REEF CHECK'S EXECUTIVE DIRECTOR DR. GREGOR HODGSON



The Convention on Biological Diversity (CBD) is a formal international treaty entered into force on 29 December 1993. It has 3 main objectives:

1. The conservation of biological diversity.
2. The sustainable use of the components of biological diversity.
3. The fair and equitable sharing of the benefits arising out of the utilization of genetic resources.

So far 163 countries have ratified the treaty but it has been difficult to track progress. In 2010, a series of five Strategic Goals and twenty Targets were drawn up to try to help determine how well countries are achieving biodiversity conservation. Named the "Aichi Targets" (for the town where the targets were agreed), the Strategic Goals are:

- **Strategic Goal A:** Address the underlying causes of biodiversity loss by mainstreaming biodiversity across government and society.
- **Strategic Goal B:** Reduce the direct pressures on biodiversity and promote sustainable use.
- **Strategic Goal C:** To improve the status of biodiversity by safeguarding ecosystems, species and genetic diversity.
- **Strategic Goal D:** Enhance the benefits to all from biodiversity and ecosystem services.
- **Strategic Goal E:** Enhance implementation through participatory planning, knowledge management and capacity building.

A number of the Targets involve issues that overlap with the mission and goals of Reef Check. Three in particular are of interest.

Under Goal B, Target 6 pertains to sustainable fisheries management – a focus of Reef Check:

"By 2020 all fish and invertebrate stocks and aquatic plants are managed

and harvested sustainably, legally and applying ecosystem based approaches, so that overfishing is avoided, recovery plans and measures are in place for all depleted species, fisheries have no significant adverse impacts on threatened species and vulnerable ecosystems and the impacts of fisheries on stocks, species and ecosystems are within safe ecological limits."

Under Goal B, Target 10 specifically singles out coral reefs:

"By 2015, the multiple anthropogenic pressures on coral reefs, and other vulnerable ecosystems impacted by climate change or ocean acidification are minimized, so as to maintain their integrity and functioning."

Under Goal C, Target 11 is focused on protected area networks – another priority for Reef Check:

"By 2020, at least 17 per cent of terrestrial and inland water, and 10 per cent of coastal and marine areas, especially areas of particular importance for biodiversity and ecosystem services, are conserved through effectively and equitably managed, ecologically representative and well connected systems of protected areas and other effective area-based conservation measures, and integrated into the wider landscapes and seascapes."

In February, Reef Check was requested by Dr. Clive Wilkinson of GCRMN to attend a Workshop of 50 ecosystem specialists to design monitoring plans that could allow countries to track compliance with CBD Targets. This was an opportunity to suggest a number of monitoring programs including our own Reef Check tropical and temperate protocols to help monitor changes in reef ecosystems. What was surprising is how few ecosystems have any historical data on a global or even regional scale. Because Reef Check began in 1997, we have one of the only long term global databases available for any ecosystem, hence changes can be tracked and compared with the previous condition of reefs. Hopefully, by including Reef Check in the CBD monitoring program, this will also encourage more national governments to include Reef Check in their coral reef monitoring and management plans.

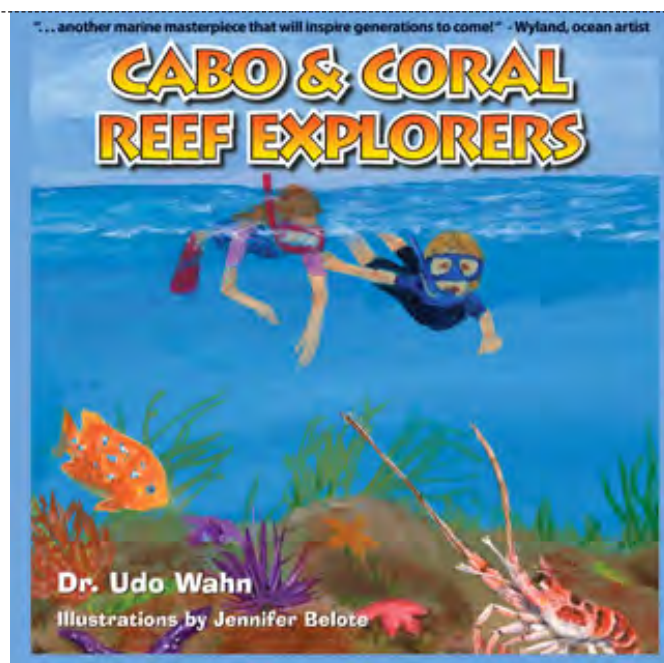
For more information on CBD and Targets, please see: www.cbd.int/sp/targets/

REEF CHECK CONTRIBUTES TO "CABO & CORAL REEF EXPLORERS" BOOK

Dive in! This adventurous tale is a sequel to the popular "Cabo and Coral Go Surfing!" and "Cabo and Coral's Secret Surf Spot!" books by Dr. Udo Wahn. These are educational and inspirational books for the ocean-minded child, and Reef Check has contributed information about its Baja program for incorporation into Cabo and Coral's latest adventure.

In "Reef Explorers," the author reveals his thoughts on sharing and preserving our precious ocean resources. The vibrant captivating art and Dr. Wahn's insight provides children with tips on how they can be responsible for keeping our ocean reefs protected, and how to live the aloha spirit. Children will learn about sustainable fishing, Marine Protected Areas, and gain an understanding of how ocean reefs play an important role in the overall balance of our planet.

Please visit www.caboandcoral.com for more information.



ALTERNATIVE SUSTAINABLE TOURISM IN LA CALETA: CAREY AQUATIC CENTER OPENS IN THE DOMINICAN REPUBLIC

FEATURE REEF CHECK DOMINICAN REPUBLIC

With the presence of officials from the Ministries of Environment, Tourism, Reef Check Foundation, and the community of La Caleta, The Carey Aquatic Center officially opened in February. The Center will offer an alternative life to the community, who for years have hoped for a reward in this important protected area of the Dominican Republic.

The Carey Aquatic Center is one of the actions taken by Reef Check Dominican Republic, with financial support from the Interamerican Foundation, along with the Ministry of Environment, to find an environmental solution to overfishing and to make the La Caleta Submarine National Park a model of sustainable management for replication in other similar areas of the country.

The event was attended by Deputy Ministers Bernabé Mañón, Protected Areas and Ydalia Acevedo, Coastal and Marine Resources, the Sub Director of Ecotourism of the Ministry of Tourism, among other friends and related parties.

The Carey will offer equipment rental for scuba diving, snorkeling and kayaking, in addition to the services of local guides to accompany the visitor on a safe and memorable adventure.

The Cooperative of Fishermen and Touristic Service Providers of La Caleta (COOPRESCA), together with the Reef Check Foundation, has developed a strategy of awareness and respect for the park's natural resources, implementing conservation measures, a reduction of fishing pressure and now a community-based eco-tourism offering, a scenario that will benefit everyone.

The community hopes to see the benefits of the initiatives, as other protected areas with government backing and support of the community have from the preservation of the resources around them, as is the case of the 27 pools of Damajagua in Puerto Plata.

The Carey is an ideal choice to contribute to the sustainable development of La Caleta Submarine National Park. Located just minutes from Santo Domingo, divers and marine life can enjoy swimming together in the park's crystal clear waters.



HAITI'S REEFS MOST OVERFISHED IN THE WORLD

FEATURE REEF CHECK'S EXECUTIVE DIRECTOR DR. GREGOR HODGSON

In February, we completed our first round of surveys of Haiti's reefs – the first ever comprehensive survey of coral reefs in the country. The work is part of a 3-year MacArthur Foundation-funded Marine Resource Management Project to build conservation capacity. The team included a Haitian marine biologist, Erika Pierre-Louise and a Creole-speaking graduate student from Harvard, Edward Beudler.

We carried out two types of surveys – manta tows for rapid large area surveys and standard Reef Check protocol surveys. Using this mix, we were able to survey about 120 km of coastal reefs. The initial surveys covered the coast around La Gonave – a large offshore island, and near St. Marc on the mainland. The high biodiversity reefs feature a full complement of Caribbean fish and invertebrate species, and the reef structure still provides excellent fish habitat. What was astonishing was the high diversity and quality of Haiti's coral reef structures and the lack of fish.

Haiti's coral reefs must have been truly world class in the 1970s with dramatic drop-offs and huge stands of coral with high vertical relief. At this point, Haiti's reefs are hanging on with some large stands of the Elkhorn coral, now on the US Endangered Species List, but we saw almost no food fish of reproductive age. The largest Reef Check indicator fish we observed was about 6 inches (15 cm) long. Every 100m along the reefs, we observed a large fish trap, fishing net, spear or line fisherman. What is amazing is that almost all fishing in Haiti is still done from paddle or sailboats.

Our survey results indicate that Haiti's coral reefs are the most overfished in the world. In a classic "fishing down the food chain" scenario, overfishing has also destabilized the entire coral reef ecosystem by removing herbivorous (plant-eating) fish – allowing fast-growing algae to overgrow and kill adult corals while blocking settlement of coral larvae. As a result, while the reef structure is intact, living coral typically occupies less than 10% of most reefs surveyed while algae and sponge occupy over 50%.

There are three objectives of the project: 1) survey the reefs of Haiti, 2) train local teams of Reef Check EcoDivers who can regularly survey Haiti's reefs, 3) based on the survey data, recommend to the government the establishment of a network of marine protected areas. Haiti is the only country in the Caribbean without a marine protected area.

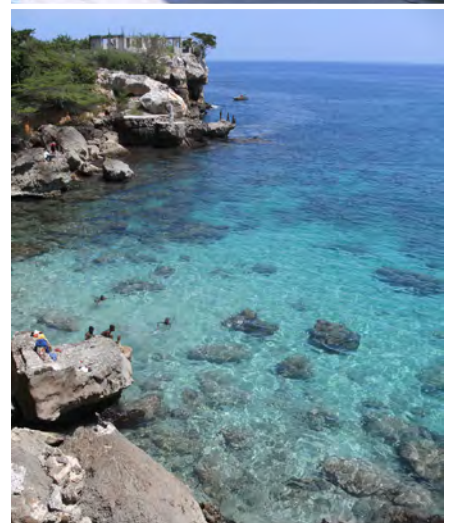
Healthy coral reefs can provide up to 35 metric tons of fish per square kilometer, whereas overfished reefs such as those in Haiti provide a tiny fraction of this amount.

By setting aside areas of coral reef where reef fish can grow and breed without disturbance, more fish and larger fish will produce millions of new young fish every year which would increase the available fish supply for Haitians.

Even before the earthquake, Haitians were short of food with 58% of the population under-nourished and some children reportedly being fed mud cakes seasoned with salt. The 10 million people of Haiti make up 25% of the total population of the Caribbean and are growing rapidly at 2.5% annually. Haiti ranked 148th of 179 countries on the United Nations Development Programme Human Development Index prior to the earthquake; 76 percent of Haitians live on less than \$2 USD per day. Haiti imports 48 percent of its food.

Unfortunately, despite millions of dollars spent on environmental work in Haiti by aid agencies, almost all of it has focused on terrestrial issues, neglecting the potential that improved management of coral reefs and associated fisheries could play in improving food supply and nutrition. Haiti is an island country surrounded by coral reefs. Most experts have assumed that Haiti's reefs were destroyed by sedimentation long ago. Sedimentation does affect some large areas of reef.

The project has been generously supported by Philippe Bayard of Haiti Audubon Society and Einar Madsen. We are very grateful for the wonderful hospitality, advice, accommodation and boat time.



A NEW PHASE FOR CORAL REEF MONITORING IN BRAZILIAN FEDERAL MPAS

FEATURE **REEF CHECK BRAZIL**



The Brazilian National Coral Reef Monitoring Program started in 2002 with a two-year pilot phase to test and adapt Global Coral Reef Monitoring Network (GCRMN) protocols to Brazilian reefs. The adopted protocol is Reef Check (RC) compatible, expanded to include more indicators and identification at species level, individual size measurements as well as abundance, and to incorporate more refined measurements for coral bleaching and diseases. The program has run now for seven years and one of the objectives is to monitor the effectiveness of Marine Protected Areas (MPAs) under different management regimes. The Program has been executed by Instituto Recifes Costeiros – IRCOS and the Federal University of Pernambuco – UFPE, with support by the Brazilian Ministry of the Environment (MMA) and grants from AWARE and Wetlands for the Future (WFF). The Participation and support of NGOs, research institutions and local volunteers has been essential to its success, and the key for the sustainability of the program.

In Brazil, the Chico Mendes Institute for Biodiversity Conservation (ICMBio) is the governmental entity responsible for the administration and monitoring of MPAs. In 2010, ICMBio started the process of incorporating the Coral Reef Monitoring Program as a regular activity of the MPAs under its administration, thus guaranteeing their frequent and long-term monitoring. This shift also aims to generate more efficient answers faster to the management of these marine areas.

In October and November 2010, joint meetings were held in Cepene facilities, located in Tamandaré, with the presence of ICMBio parks managers and analysts, representatives from the Brazilian Ministry of the Environment, and researchers from the monitoring team lead by Dr. Beatrice Ferreira (Brazilian RC coordinator). These meetings have resulted in the agenda for the 2011 monitoring campaign on several important Brazilian reefs, such as Abrolhos Reef, Fernando de Noronha Archipelago and the Atol das Rocas Biological Reserve. Also, trainings in Tamandaré (Coral Coast MPA) and in Fernando de Noronha (National Marine Park) were conducted with ICMBio personnel, the majority of the participants had previous experience with diving and underwater surveys.

Severe bleaching events occurred in 2010 in Brazil, when temperature anomalies reached alert level 2 according to the NOAA coral watch system. Volunteer divers observed bleaching of 10 to 100% of coral colonies depending on the coral species. Following this event, ICMBio and RC Brazil jointly mobilized two monitoring campaigns to Fernando de Noronha and Atol das Rocas, in November and December 2010 respectively, to monitor coral recovery. More campaigns and trainings are planned for 2011 to establish an effective, real time monitoring of Brazilian reefs.

REEF CHECK DATA

IN REEFS AT RISK REVISITED REPORT

FEATURE **REEF CHECK PUBLIC**

RELATIONS INTERN **REMY FRANKLIN**

World Resources Institute (WRI), a global environmental think tank, released a report this month called Reefs at Risk Revisited. The report compiled data from numerous government agencies, international organizations, research institutions, universities, non-governmental organizations, and initiatives. Reef Check was an important partner in the report's analysis.

The new report finds that approximately 75% of the world's coral reefs are currently threatened by local and global pressures. Local pressures pose the most immediate threat – especially from overfishing and destructive fishing, which is particularly widespread in Southeast Asia.

Other key findings of Reefs at Risk Revisited included the following:

- The majority of the world's coral reefs are threatened by human activities.
- Local threats to coral reefs are the most severe in Southeast Asia and least severe in Australia.
- Threat levels have increased dramatically over a ten-year period.
- Changes in climate and in ocean chemistry represent significant and growing threats.
- While over one quarter of the world's coral reefs are within protected areas, many are ineffective or only offer partial protection.
- Dependence on coral reefs is high in many countries, especially small-island nations.
- Degradation and loss of reefs will result in significant social and economic impacts.

Reefs at Risk Revisited builds on WRI's 1998 report, Reefs at Risk, which served as "a call to action for policymakers, scientists, nongovernmental organizations, and industry to confront one of the most pressing, though poorly understood, environmental issues". The initial report played a critical role in raising awareness and promoting action to protect marine areas and lessen risks.

Reef Check has helped to develop a new, detailed assessment of the status of and threats to the world's coral reefs by assisting with the Reefs at Risk Revisited project. According to WRI's Executive Summary, the project evaluates threats to coral reefs from a wide range of human activities, and includes an assessment of climate-related threats to reefs. It also contains a global assessment of the vulnerability of nations and territories to coral reef degradation.

The results of this project will act as a catalyst for changes in policy and practice that could preserve coral reefs and the benefits they can provide for future generations.

EQUIPMENT GUIDE: SCUBA REGULATORS

FEATURE **LANIA LAING** INDEPENDENT INSTRUCTOR & MANAGING PARTNER OF SCUBA UAE.COM



Your regulator is your most important piece of equipment. Think about it for a second. Your dive cylinder has usually between 200 to 240 bar of pressure. If you tried to breathe that kind of pressure directly, your lungs would explode!

How do Scuba Regulators work?

Scuba regulators break down that massive amount of air pressure and deliver it to the diver in easy to inhale breaths that are delivered on your breathing demand.

So, how is this accomplished?

There are a lot of different methods to get the job done but the basic concept is the same; all regulators break down air pressure. It takes two stages of pressure regulation (hence the name regulator) to get the job done.

What brand of scuba regulator do I choose?

There's a lot of brand loyalty among divers and everyone swears by their brand alone. Buy a brand with a good reputation that's sold and serviced locally.

Scubaue.com only sells global market-leading brands with excellent reputations. All our products are supported with manufacture-approved servicing. We will send you an annual reminder that your equipment is due for a service (the general rule is to get your equipment serviced annually or every 100 dives).

FIRST STAGE REGULATOR

The first stage of a regulator is the part that connects directly to your cylinder and is the first place your air goes to once it leaves your scuba cylinder. This first stage's main job is to divert air from your tank to your high pressure hose so you can gauge how much air you have. At the same time, it breaks down the pressure from around 210 bar to 10 bar and delivers it down a low pressure hose into your second stage at ambient pressure.

DIAPHRAGM AND PISTON FIRST STAGES

Breaking down that much pressure is very demanding and it requires a precise

mechanism to accomplish it safely. Regulator manufacturers have their own ideas of how to best accomplish this task, but they generally settle on some version of a balanced/unbalanced piston or balanced diaphragm based system (a diaphragm regulator can't be unbalanced).

BALANCED AND UNBALANCED FIRST STAGES

An unbalanced regulator is one in which extra pressure must be applied to the seal because the full force of the air in the tank is constantly trying to push into the regulator.

By contrast, a balanced regulator equalizes the force of the air coming from the cylinder so that no extra force is necessary to maintain a seal. Sounds complicated? Don't worry, all you really need to know is how a balanced regulator performs verses an unbalanced one.

Back in the early days of modern regulators, the difference between balanced and unbalanced regulators was huge. Balanced regulators were easy breathing to the last breath and unbalanced regulators became more difficult to breathe with as the tank's pressure went down.

At that time, a lot of people preferred unbalanced regulators because they could tell when they were running out of air (high pressure gauges were not standard then). These days however, modern technology has closed the gap between balanced and unbalanced regulator performance. Unbalanced regulators are still more difficult to use at lower pressures but nowhere near as difficult as they used to be.

DIAPHRAGM AND PISTON FIRST STAGES

As far as the difference in performance goes, it is negligible. The average diver will not be able to tell the difference. In fact, the difference barely registers on sophisticated diagnostic equipment. However, there is a difference in regulator maintenance and repair.

A diaphragm regulator is sealed from the environment. The water pushes in on the diaphragm which transfers pressure and allows the regulator to operate as it would on the surface. Being sealed from the elements has its advantages. A diaphragm regulator will corrode less than a piston regulator but this advantage is offset by the number of moving parts it takes for a diaphragm regulator to work.

On the reverse side, a piston regulator usually lets water into the first stage. There is no need to transfer pressure since the water is always present and transfers the ambient pressure directly. Of course, having saltwater inside your regulator means it is more likely to corrode.



OCEANIC EOS FDX10

Environmentally sealed, diaphragm 1st stage with balanced 2nd stage and adjustable flow control.

Your after-dive maintenance route is very important for a piston regulator. On the plus side, these regulators have only one major moving part and are durable.

So which is better, Diaphragm or Piston?

When it comes to choosing between the two, consider whether or not you are willing to follow an after-dive maintenance program religiously and make sure that the regulator you choose is one that is comfortable when you dive. Consider other factors like size and weight.

SECOND STAGE REGULATOR

The second stage of a regulator is the piece you put in your mouth. Once the air reaches this point, the air is blocked by a piston-like device. When you inhale, you create a vacuum in the second stage which pulls in a rubber gasket, this in turn presses down on a lever. That lever moves the piston and breaks the seal keeping the air back, once the seal is broken all the air you need is delivered into your mouth.

Dive regulators can be simple or complicated. Prices also vary greatly. It all depends on what you want and need and choosing a scuba regulator is a very important decision.

Like all diving equipment, the best regulator will depend on the type of diving you do.

CHOOSING A SCUBA REGULATOR

There are many reasons to own your own scuba regulator. First of all, a scuba regulator is the most important piece of dive equipment. Nothing can ruin your day like having your rental regulator fail at 30m/100ft. Secondly, the regulator is the most intimate piece of equipment in diving. You are actually putting it in your mouth!

Put those two factors together and you can see why it is vital that you own and maintain your own regulator set. Unfortunately, regulators are also very technical looking pieces of

equipment. Most beginners are intimidated by the thought of spending hundreds of Dirhams on something that looks like you would need a degree in engineering to understand. The truth is, choosing a scuba regulator can be made simple.

For basic open water diving, there are only a few things you need to consider when choosing a scuba regulator. Lets have a look at the basic features.

BALANCED OR UNBALANCED

As mentioned earlier, regulators can also be balanced or unbalanced. This feature can get a little technical; basically a balanced regulator will deliver the same easy breath of air when your tank is close to empty as it would when your tank is full. Unbalanced regulators breathe harder as your tank gets closer to empty. Of course, the easy breathing of a balanced regulator usually comes with a higher cost. You need to decide whether the added cost is worth it for you.

ADJUSTABLE OR NOT

Some regulators have little knobs on the side of the second stage that you can use to adjust your regulator to make it easier or harder to draw a breath.

Why would anyone want to make it harder? Because the easier it is to draw a breath, the easier it is for a strong current to depress your purge button and cause a free flow. An adjustable second stage helps you adjust your regulator to match your diving conditions.

OTHER CONSIDERATIONS WHEN CHOOSING A SCUBA REGULATOR

There are a number of other considerations when choosing a scuba regulator. The material is one. Do you want brass or titanium? Brass is heavier than titanium and can corrode but it is around one third of the price.

REGULATOR REPAIR AND MAINTENANCE

Once you have parted with your hard earned cash, make sure you know how to look after your scuba regulator; not only did it cost you a lot of money but it will also keep you alive, so take care of it!

Scuba regulator repairs and maintenance are simple and easy. While it is important to take care of all your dive equipment, it is especially critical to take proper care of your regulator. Of all the equipment you own, your scuba regulator is the most important. Often it is also the most expensive. Fortunately regulators are well built equipment and only require basic care from authorized service agents. Remember to keep your regulator service annually or every 100 dives and it should never fail on you mid dive.

ALTERNATE AIR SOURCES

The most common Alternate Air Source is your Octopus. The brightly coloured extra

regulator you have on your set up. This is the one you do not want to have to use, because if you do, either you or your buddy has run out of air!

There are a number of different choices for Alternate Air Sources, have a look here to help you decide what is best for you.



MARES AIR CONTROL REGULATOR
Alternate air source combined with low pressure inflator.

TYPES OF ALTERNATE AIR SOURCES

There are basically four different kinds of alternate air sources. Two of them are redundant regulators and two of them are redundant air supplies.

OCTOPUS

This is the one most everyone knows and uses in recreational dive training. An octopus is a redundant second stage regulator that is usually on a long hose. The regulator is usually a bright yellow or green, so that it is easily recognisable in an emergency situation.

This is the least expensive of your alternate air source options. As long as you keep it maintained as you would your primary regulator, an octopus will perform well in an emergency. Unfortunately, if your regulator's first stage fails or you otherwise run out of air, your octopus is useless. In a situation like this you hope your buddy has enough air to get you both back to the surface safely.

In addition, the long hoses used with an octopus can be unwieldy and prone to snagging the reef. It is also one more hose that could get severed if you brush up against something sharp like the side of a wreck.

ALTERNATE INFLATOR

These devices work under the same premise as a traditional octopus does, except these are attached to your BC's low pressure inflator hose.

Whereas a traditional octopus is meant to be handed to your buddy, an alternate inflator is meant to be used by you. You pass your primary regulator to your buddy and you use your alternate inflator. These are generally about 35 – 50% more expensive than your traditional octopus but they are much more streamlined. With an alternate inflator you eliminate an entire hose

from your equipment.

SPARE AIR

This device is a small cylinder with a modified regulator directly attached. They are small and easy to attach to your equipment. They are a bright yellow colour which makes them easy to find in an emergency.

The main benefit of a Spare Air cylinder is that it is a completely redundant air supply. However, its small size and capacity means that if you are diving deeper than 18 metres/16ft you may only get a few breaths out of it.

PONY BOTTLES

The pony bottle is the ultimate in safety. It is a completely redundant air source with a first and a second stage regulator and enough air to get you safely to the surface. Often you will even have enough air for a safety stop.

The main disadvantages to a pony bottle are price and bulk. These are much bigger than Spare Airs and will take up a considerable amount of space whether you decide to mount it on D-rings or your cylinder.

ABOUT SCUBAUAE.COM

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SPARE AIR
Completely redundant back-up miniature SCUBA system

ScubaUAE.com is giving a complimentary Dhs 50 Gift Voucher to EDA members with every regulator purchased to redeem against your next order at www.scubauae.com.

FEATURES

REBREATHERS ARE CAUSING A BIT OF A STIR IN THE DIVING WORLD TODAY! THE QUESTION IS WHY?

FEATURE **MARC CRANE AND GLENN CAMPBELL**



Rebreathers have been around far longer than the original scuba regulator “the Aqualung”, but have been reserved for the most part by military and commercial divers. However, they have been used extensively in the last decade by recreational technical divers due to the many advantages rebreathers offer:

Rebreathers offer us divers many distinct benefits including but limited to bubbles operation which is great for closer interaction with the marine environment, warm and moist breathing gas reducing the risk of decompression sickness and unnecessary fatigue, extended dive times due to efficient gas usage and rebreathing, best nitrox mix for every depth as the rebreather diver uses a constant partial pressure of gas, not as standard SCUBA with a constant % of oxygen.

SO HOW EXACTLY DO REBREATHERS WORK? Essentially all a rebreather is, is a gas recycling system. It comprises of a couple of smaller tanks usually one pure oxygen and one diluents (air), a counterlung system which acts as a gas reserve reservoir for the divers next breath and a filter or scrubber. This scrubber is essential as it removes the carbon dioxide that we produce on exhalation. As anyone who has completed CPR/First Aid training knows,

when we humans exhale the gas we breathe out, it is still oxygen rich so we are not making effective use of air or other gas mixtures when we are diving with traditional SCUBA as the majority of the gas we exhale into the water in the form of noise bubbles is still a very good gas. Rebreathers collect this gas in the counterlungs before passing it through the scrubber to remove the carbon dioxide that we have produced through metabolism and then analyze this gas to check if the oxygen content is within safe limits, adding oxygen from the oxygen cylinder if necessary before the diver inhales again. This super efficient use of gas allows rebreather divers to extend their dive times far beyond that of SCUBA with tanks that are normally between 2-3ltr in size.

Another enormous benefit of diving with rebreathers is that they in most part use a constant partial pressure of oxygen (PpO₂) in the breathing loop (the flow of gas within the rebreather system). When using SCUBA we are diving with a constant fraction of oxygen in the gas mixture whether that be 21% oxygen as is the case when we dive with AIR or 32% oxygen when we dive NITROX, that does not change. All that happens is as we descend the PpO₂ of the gas increases. Those of you who hold a NITROX qualification are taught

the basic principles of Maximum Operational Depth (MOD) and are aware that the MOD of a NITROX 32% is a maximum of forty meters when the PpO₂ reaches 1.6bar. This PpO₂ is seen as the absolute maximum level of PpO₂ before the diver risks an oxygen induced convulsion. With rebreathers, the diver selects which PpO₂ they wish to breathe, usually selecting a PpO₂ range of between 1.2-1.3bar. This allows the rebreather diver to avoid any problems with MOD as well as making oxygen exposure calculations really easy. The major advantage of diving with a constant PpO₂ is that the fraction of oxygen is constantly change giving the rebreather diver the “best mix” at all depths. For example, if the rebreather diver is diving to 30m with a PpO₂ of 1.3bar the gas mix in the loop is effectively a NITROX 33%, however when the rebreather diver gets up to their safety stop depth they will be breathing a NITROX 87%. This dynamic breathing gas in the rebreathing loop increases no decompression time as well as shortening decompression schedules dramatically.

Currently, rebreathers are still seen to be technical diving equipment but this is in fact not true. It does depend on the diver themselves and what they want to achieve. Rebreathers can be used in recreational diving



Training and try dives can be arranged through Coastal Technical Divers.

THE DISCOVERY is the world's first rebreather that has been solely designed for recreational diving. This unit is currently designed only to perform dives within the recreational depth range to a maximum of forty meters and only using air as a diluent. It is not suited to any form of advanced recreational or technical diving and has been discussed in detail in the March '11 issue of *Divers for the Environment*.

Training and try dives can be arranged through Coastal Technical Divers.

Whatever your diving goals or objectives are, whether you want to get up close and personal with the marine life, maximize your in water time, create more detailed natural photos, explore wrecks or just boldly go where no one has gone before, then rebreathers are for YOU. Contact Glenn Campbell your local rebreather instructor at Coastal Technical Divers today and give it a go. You will not regret it.



MARC CRANE

Marc Crane is an IANTD rebreather instructor trainer at all levels and sits on the board of advisors for two training agencies and a prominent rebreather manufacturer.

GLENN CAMPBELL

Glenn Campbell is an IANTD Trimix Instructor Trainer and E-CCR instructor at all levels and Manages C.T.D.

Contact Glenn on +971 50 869 6707

www.coastaltechnicaldivers.com

just as easily and successfully as technical diving. With training agencies now splitting up how they teach rebreathers into two distinct groups of either recreational or technical rebreather diving much the same as SCUBA is separated into recreational and technical diving. Here, recreational is diving in the depth range to a maximum 18m (similar to the Open Water Diver) and with more training to a maximum 30m but all being conducted within No Decompression Limits, where a direct ascent to the surface is possible. Technical rebreather diving is then a continuation of this but allows the diver to increase their depth and also to conduct dives that require a limited decompression time (between 10-15mins of decompression stop time) where it is recommended and sometimes required that they carry additional staged gas for "bail-out". This training can then be further extended and the diver is introduced into the concepts of using TRIMIX as a breathing gas allowing them to explore further in the depth range 60-100m.

Currently, there is a large selection of rebreathers on the market with the majority of these units being CCR's (Closed Circuit Rebreathers). Although there are other types of rebreathers out there, it is only CCR's that are being looked at in this article. The most popular CCR's and up and coming CCR's currently on the market include but are not limited to:

- **THE INSPIRATION/EVOLUTION** by Ambient Pressure Diving www.apdiving.com the world's most popular unit.
- **THE rEvo** by rEvo Rebreathers www.revo-rebreathers.com taking over the R and D with truly innovative design features.
- **THE MEGALODON** by Innerspace Corp. www.isc.com.
- **THE DISCOVERY** by Poseidon www.poseidonsweden.com.

These units offer the diver a variety of options and safety features.

THE INSPIRATION/EVOLUTION is probably the world's best selling rebreather that and was

also the first commercially available CCR on the market being released in 1997. Since then, the unit has undergone major development and with the new software system integrates a dive computer calculating NDL's and deco time, has a scrubber monitoring device that displays the health of the "scrubber" in real time underwater; has an audio alarm as well as a Head Up Display (HUD) which sits directly in front of the divers mask, immediately drawing the divers attention if there should be even the slightest problem with the rebreather and carries adequate on board gas for safely getting to the surface if diving within the recreational range. The Inspiration/Evolution is suited to both recreational and technical diving.

Training and try dives can be arranged through Coastal Technical Divers.

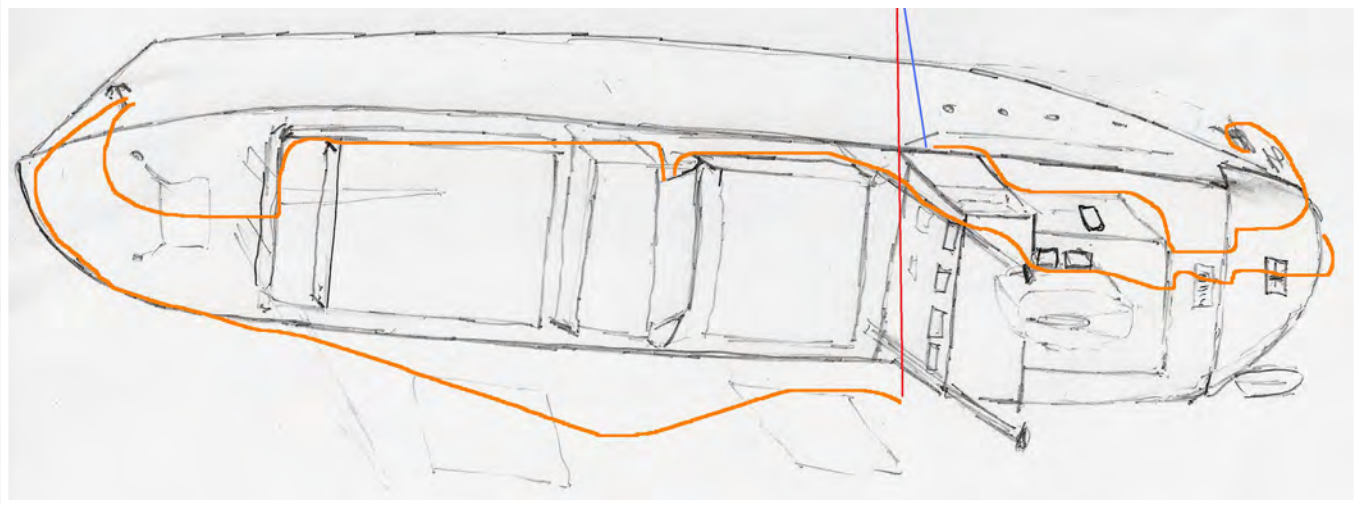
THE rEvo rebreather has seen fast and steady growth in the last few years becoming very popular with wreck and cave divers due to the units low profile and constant weight, reducing the amount of weight you need to carry with you to almost nothing. The other advantages of this unit are its simplicity, triple redundant electronics and dual scrubber design topped off by one of the easiest of breathing rates available today. It is also fitted with a dual HUD and the computer controller is supplied in the form of the ever popular Shearwater Predator with OLED display, integrating real time decompression via the oxygen cells. Although the rEvo is suited for both recreational and technical diving, it may be better suited for advanced recreational or technical diving due to the fact it does not currently have an integrated bail-out and therefore a stage cylinder must be carried on all dives.

Training and try dives can be arranged through Coastal Technical Divers.

THE MEGALODON has a large fan base due to its modular design and rugged build quality. It too has an integrated computer system calculating decompression times as well as a HUD. PpO2 monitoring is redundant with two individual handsets displaying your inspired oxygen content.

ZAINAB, A JEWEL OF DUBAI (IF YOU ARE A DIVER THAT IS!)

FEATURE **ANGUS CARLISLE**



In the March edition of EDA's magazine I challenged the Editor to consider some of the excellent wrecks we have here in the UAE and all that goes with these underwater edifices being there.

In my view the wrecks we have just off the coast here in Dubai offer some of the best combinations of convenience and challenge to be found anywhere in the World, especially if, like me, you live in Dubai and manage to go diving every week of the year.

If I am going to issue a call for more articles to appear perhaps it's not right to then sit back and wait to see what pops up. By way of encouragement I thought, therefore, to keep the ball rolling by writing about one of the principal observations I make as a diving instructor living in Dubai – how to – OR perhaps – how not to – dive a wreck.

I'm not here to teach old dogs new tricks, if you have got your method and know what you like, stick to it, but there are many visitors to the UAE who are not getting the most out of their limited time off and maximising the rewards from their diving trips. To keep the article tight today I'll focus on one of the most popular and accessible wrecks – the Zainab.

I could get the whole matter out of the way in two words – "slow down" – but that would be a bit boring. So here is a bit more to help you along the way.

I'll start with the most important matter to divers, time underwater. I have made many observations that divers can do a great deal better by thinking about their gas consumption from the outset. I have done too many dives where on arrival down to the wreck the buddy gas check reveals that gas is already at 130 bar

or so! Where did it all go? As a solution to this 'problem' I have learnt that divers entering the water from the boat should make sure they use their snorkel or swim on their backs to the start of the descent line, without guzzling all the gas in their tank(s). On most dives there is always a current running on the UAE wrecks (because we don't dive at slack) and where a short surface swim puffs you out. A few minutes on the surface to get your breath back relaxes the body hugely before sucking on your regulator and descending the line. I also recommend a nice gentle drop down the line without finning (unless you are a tecky sort with a descent rate target) and a gas check when you hit the bottom to reveal a generous 190 bar or so left for the remainder of the dive.

The next issue I am conscious of, and one that is a universal issue with every first time visitor I have taken to the Zainab, is then to dive "slowly". All this rushing about, who needs it! First your gas consumption plummets and secondly you can see so much more than your buddy's fins in front of your nose. Some find this hard at first to the extent that I tend to carry a buddy line (or is that a dog lead) and a good hard yank on it will slow even the most enthused diver. If I can get you to dive like this you will soon be hitting a 50 minute dive on the Zainab, maybe with a little deco, having plenty of gas to spare when you get back to the surface.

So now to the wreck itself. If suitably trained there is plenty to do on the inside, if not there is even more on the outside. There is a sketch of the wreck here and a suggested outside route, down the red line, along the Orange and up the blue is what I am about to describe.

The ship lies on its port side on a sandy

sea bed. The ship has two holds for carrying fuel, the hold covers are lying in the sand. All along the length of the ship in the sand right up and under the bow, Rays of various sorts love to hide, look carefully for the outline of their shape in the sand and then look for the movement of their gills and eyes. The visibility can be either fantastic or completely poor and even after three years of diving on it I can't seem to forecast the conditions, but whatever, there is no reason to have a poor dive. If it happens to be poor viz, stay close to the ship.

Once you have travelled the sand to see who is hiding, it's time to inspect the bow. Anchor winches sit proud off the foredeck, abundant shells and small marine life, the current will be pulling you around the edges, the deepest part of the dive is in the scour under the bow, there are a few old anchor and fishing ropes hanging there and as I have not mentioned it yet, now is the time to ensure you have a really nice torch. Without a torch everything looks grey and boring and there seems to be no life at all here. Put a torch on it and the bright reds and purples suddenly appear as well as the movement from little critters. As you drift by, colour movement catches your eye.

Your journey back along the ship can take either a high level or low level profile, as you leave the bow the deck drops to reveal the doors to the forecabin, one on the port side near the sea bed and the other high up on the starboard. I personally like the high return route as there tends to be many nudibranchs on the side of the hold plates and the visibility is always a little better than at the bottom.

In the middle of the ship, between the fore and aft hold, there is a deck structure. At the forward part there is nothing much to see but at the rear there is a deck hatch covering and



The engine room, with row of large valve springs and rockers.

it is possible to squeeze behind this and drop to the sea bed for a bit of a swim through, as you drop down you pass the entrance door to the deck structure.

Continuing rearwards from the deck structure, you pass the rear hold and come to the bridge. Look carefully for the windows of the ship to identify three levels of deck. Look in the middle of the bridge to see the horn and identify the ship's mast pointing off to the north. Travelling to the right at this time, to the top of the bridge and then rearwards to the funnel, past the funnel, the engine room hatches, down two deck levels and to the rear of the ship. All the time looking at features of the ship, more winches, entry doors to the bridge, a lifeboat on the seabed, heavy mooring ropes waving in the current, the three port holes of the kitchen and finally the stern rail. Current allowing, swim over the stern rail to visit the prop before returning to the stern of the ship.

What I have described above, if you have gone nice and slowly will have taken you about 30 minutes (rather than a 15 minute rush that we see so much) and now you can think about gas, time, deco and slowly ascend to the starboard side of the ship to hopefully find the anchor line for your ascent back to the surface. Again a nice and steady swim looking carefully will identify lifeboat davits, entry doors, windows and hatches and the crew walkway on the starboard side. Ascending the line slowly, look out for the barracudas who appear to cast their hungry eyes on you and circle as you ascend (here's a question, do they always circle anti clockwise?).

If on the other hand you are suitably trained and experienced, the Zainab is also a very interesting penetration dive with three distinct areas to think about. I shall describe these in the briefest of details. I don't want to provide a 'guide' as it may produce unwelcome results

from those who are not properly trained/experienced – I'm sure you understand.

The most urgent message to get across to divers is as a wreck penetration opportunity, the silt inside the Zainab is a huge issue (as with most wrecks in the Arabian Gulf). With water of crystal clarity on the way in, it can quickly change to something completely different within seconds and you might not be able to find your way out. At the Desert Sports Diving Club we have a big story from some years ago now, to tell prospective divers about this issue and why you don't take short cuts regarding this matter.

However, if you do know what you are doing, it really is excellent diving;

FORECASTLE: The forecastle is fairly large and open and it is possible to enter the port door, swim up and inspect all the junk inside and then exit the starboard door. Doing it the other way is not so smart as there is a lot of ceiling silt that will drop down on you and create a silt cloud for your entire time in there. Possibly a little disconcerting, are the gas cylinders jammed in the top of this part of the wreck, are they going to drop at some point, you can't be sure.

MIDSHIPS: As noted above, there is an entrance to the deck structure in the middle of the ship which is a single room with two ladder hatches going down into the holds. As this ship used to carry fuel, why you would want to go in the holds is beyond me, but I have been told of one particularly thin (and very experienced diver) actually going down inside some years ago.

BRIDGE: Accommodation and Engine Room. There are two staircases in this part of the ship and with associated passage ways, it makes it possible to enter the engine room and exit at

the bridge. The route requires knowledge of the layout and extreme care to be taken due to obstructions (a steel door is jammed in the rear staircase making it a bit of a squeeze). I would say it took me 20 dives on the Zainab to know the full layout and understand where to go, learning bit by bit with a line and reel. While there are passages and staircases, the wooden walls of cabins have long gone with perhaps the entry into the kitchen presenting the most unusual manoeuvre for a fully kitted diver. The engine room is quite spectacular with the top of the engine visible with its row of large valve springs and rockers. Unfortunately the engine room is also full of silt and it easily kicks up and you quickly lose sight of the exit in such circumstances. The accommodation section presents itself as a large section passing under the row of portholes on the starboard side of the ship, there is no clear exit from the accommodation section and because of the layout it's not obvious where the exits are (or entrances were). Note the danger of this and that divers must be lining off to guarantee an exit. The lower and upper bridge sections are less formidable with door openings to the outside in both and if you are small like me, you can just swim in through the bridge windows to have a look around.

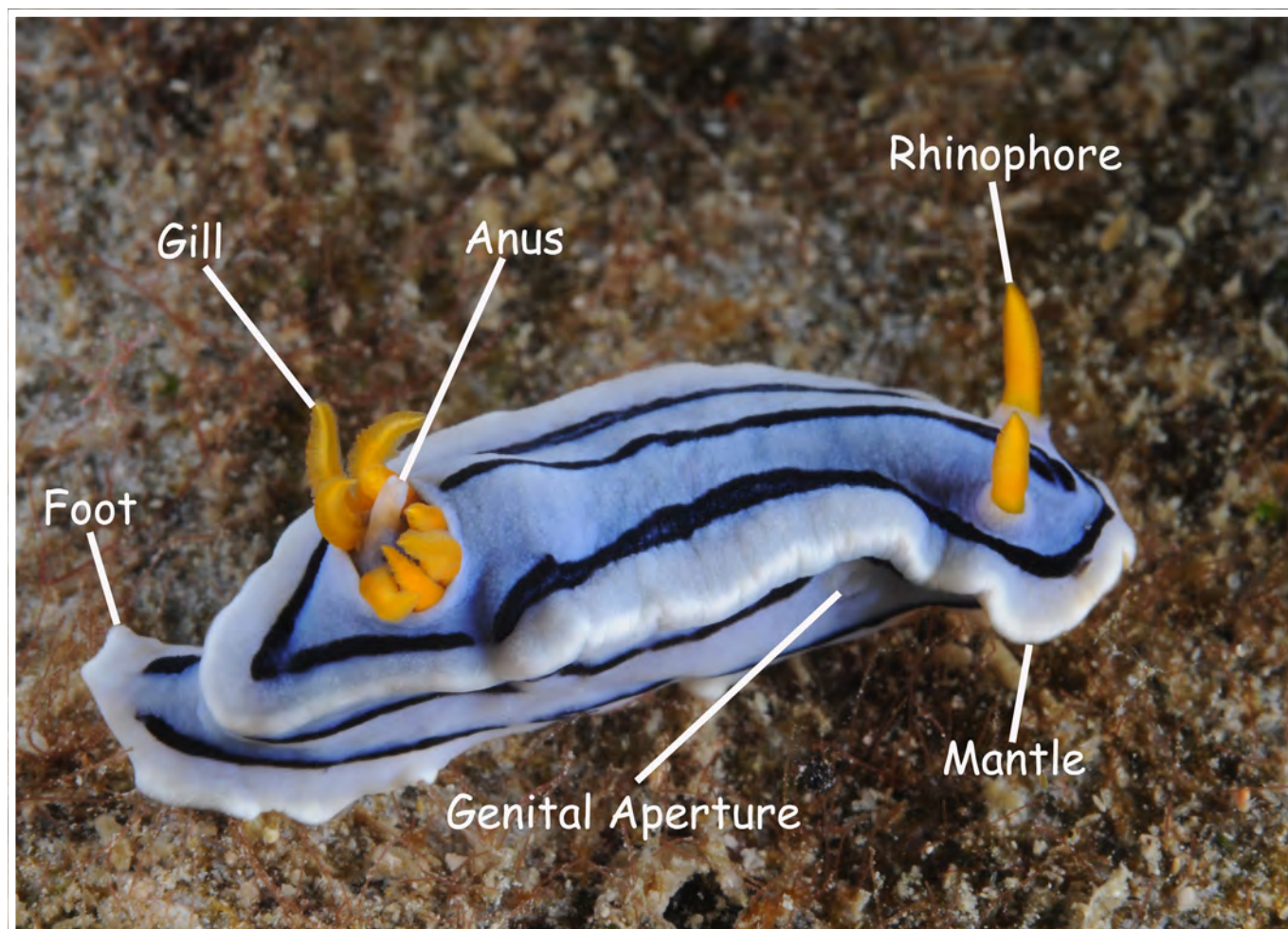
The most appealing thing to me about the Zainab and the other Dubai wrecks, is the sheer convenience. I can fall out of bed, have a cup of coffee and a 40 minute boat ride gets me to the Zainab. Some are further, others are closer and as I write, I have been looking at photos of some rather good visibility dives on the SMB wreck this weekend. Whatever your style of diving and your desires when underwater, the UAE has a great selection. It's not just about marine life, although the wrecks attract that too, but it's also a lot to do with adventure, exploration and learning new skills. Remember though, stick to your training to keep it enjoyable and your diving safe.

Angus Carlisle is a BSAC qualified Advanced Instructor and has just finished his year of being the Chairman of the Desert Sports Diving Club. Living in Dubai, he dives most weekends and is now using a rebreather to maximise his time underwater. He first dived in the UAE in 1992 and much of his recent diving has been with a video camera, including film from the inside of the Zainab, the wreck featured in this article – www.desertsportdivingclub.net/video_gallery.htm to see some of the output.

When wreck diving on the Dubai sites, DSDC insists all divers carry their own DSMB and reel so that they can abort their dive at any time and ascend with the boat able to see where they are. The currents on the Zainab mean that without, a diver can surface 500 metres or more from the wreck and in waves, might not be easily seen by the surface support. At DSDC, penetration dives are only carried out by those with the appropriate qualifications/experience.

NUDIBRANCHS

FEATURE AND PHOTOGRAPHY **GORDON T. SMITH**



Addictive, quite possibly, obsessive is almost pretty close to the truth!

Ever since I started diving in tropical waters and of course being a photographer, it is impossible to ignore photographing nudibranchs, for several reasons.

1. They are extremely colourful (well the majority are).
2. They don't move too fast so it is easy to take more than one shot, in fact I have been known to shoot a whole roll of film in the past on one subject.*

* For those of you too young to remember film cameras, limitations were in place due to the size of a roll of film in the camera to record the images. It would be like using a 125kb SD card.

There are many books written about these amazing creatures that have been studied for years and several prominent names reappear time after time such as Neville Coleman, Nathalie Yonow, David Behrens and Bill Rudman to name but a few.

For me the delight in photographing these amazing creatures is purely self-satisfaction, and at the same time I learn more about their habits and lives. It is unfortunate however that some of them are sacrificed in order to be studied but that is just a fact of science and the study of any creature at some stage involves dissection, so really nothing to feel guilty about. Especially as many, certainly the nudibranchs, only live one year.

SO A QUICK BIOLOGY LESSON FIRST:

Phylum Mollusca => Class Gastropoda
=> Subclass Opisthobranchia => Order Nudibranchia

There are four sub-orders of Nudibranchia and the key one being looked at here, is the sub-order Doridina (or Dorids as they are commonly known), and more specifically the family Chromodorididae. With over 6,000 individual species of opisthobranchs, it will take more than a short article like this to cover them, and there are already many books on the subject. What you see here is from my own personal experience of diving in the Red Sea, Persian Gulf, Gulf of Oman, as well as in

the seas around Thailand, Malaysia, Indonesia and the Philippines.

FAMILY CHROMODORIDIDAE

A large family with some spectacular members of variable sizes from a few mm to several cm in length, with brilliant colours not just on the bodies but also the rhinophores and gills. The colours of course are a signal to predators "don't eat me I taste awful", as they have a special toxic chemical defence mechanism obtained from their main food source, sponges. These acquired toxins are stored in the body and in some cases, such as the Ceratosoma, there are special extensions next to the gills.

Let us briefly look at some of the physiology taking this *Chromodoris lochi* as an example:

FOOT: Well, they have got to move somehow, and this is actually more delicate than one might think, having the ability to grasp on to even minute parts of the reef structure that are threadlike.

RHINOPHORES: One of the most important organs, primarily chemical receptors that

detect food similar to a mammalian nose but with the additional ability to taste. The Rhinophores are also ciliated allowing them to function as part of a hearing system, detecting changes in pressure. Generally they can be retracted for protection.

GILLS: Respiratory apparatus, working similar to that found in fish extracting oxygen from salt water. These organs can be retracted in order to protect them in some species and as can be seen from this example, they are arranged around the Anus.

GENITAL APERTURE: Nudibranchs are hermaphrodites and after copulation, which can last from a few minutes to days, both partners lay their own eggs. Most egg masses are toxic preventing them from being eaten by predators.

MANTLE: The front part of the nudibranch above the mouth of most chromodorids is often flapping whilst the nudibranch is moving, but not always and reasons for doing so are not clear. But it can give the opportunity to see the mouth parts if one observes closely.

There are several genera within the chromodorid family, such as Ardeadoris, Cadlinella, Ceratosoma, Glossodoris, Hypselodoris, Miamira, Orodoris and Thorunna. This article will focus only on selected examples of the 84 (according to nudipixel.com), Chromodoris species. Further articles covering the other genera of the chromodorid family will be in future issues.

Chromodoris annae



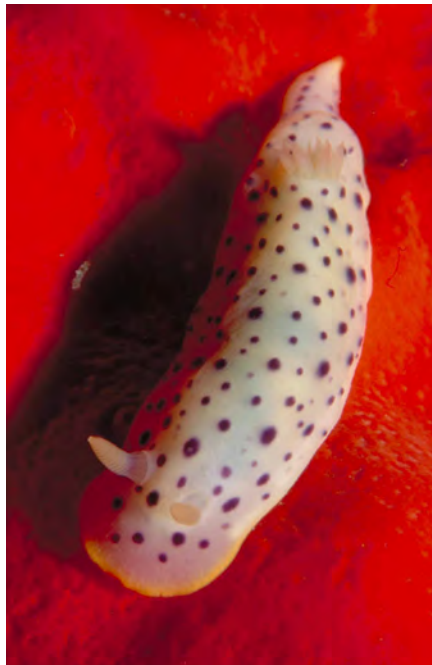
SIZE: Up to 40mm
Generally found feeding on sponges to depths of 30m, fairly common in the Philippines as well as Malaysia and Indonesia.

Chromodoris annulata



SIZE: Up to 60mm
Found only in the Red Sea, Persian Gulf and Gulf of Oman. The Persian Gulf examples as seen above and below, always have a line joining the rings around the rhinophores and gills. Frequently found on wrecks and debris, and according to literature, these little slugs can move up to 20m in one day.

Chromodoris aspersa



SIZE: Up to 50mm
Usually found in shallow water, and therefore not so easy to photograph if there is surge or waves. Frequently found whilst snorkeling in lagoons in the Red Sea. Can be found throughout the Indo-Pacific region, but I have yet to see one in UAE waters.

Chromodoris cazae



SIZE: Up to 70mm
Found only in the Persian Gulf, and discovered by a local underwater photographer Carole

Harris, after whom the species is named (Caza being a nickname of Carole). Recently found on the A300 wreck near Jumeirah Palm.

Chromodoris charlottae



SIZE: Up to 80mm
Only found in the Red Sea and, in fact all of the examples I found were in Sharm Obhur (Jeddah Creek) generally on night dives.

Chromodoris diana



SIZE: Up to 60mm
Fairly common around the "Nudibranch Triangle" of Malaysia, Indonesia, and Philippines. Easily confused with similar species such as *C. lochi*.

Chromodoris geminus



SIZE: Up to 55mm
Not uncommon in the Red Sea, and also found off the west coast of Africa and in Thailand.

Chromodoris lochi



FEATURES

SIZE: Up to 40mm

Generally found feeding on sponges, but also observed on ascidians. Common in Malaysia, Indonesia and Philippines.

Chromodoris magnifica



SIZE: up to 90mm

A magnificent slug with a widespread geographical range over the western Pacific. Fairly common in Malaysia, Indonesia and Philippines.

Chromodoris obsoleta



SIZE: Up to 50mm

Originally thought to be endemic to the Red Sea, but occasionally found in the Gulf of Oman.

Chromodoris quadricolor



Probably the most common nudibranch in the Red Sea; however easily confused with other *Chromodoris* spp. with similar patterns and colours and generally a real close examination is required to compare with their siblings *africana* and *strigata*.

Chromodoris reticulata



SIZE: Up to 60mm

Occasionally found in shallow water; and easily spotted on the black lava sand of some Indonesian dive sites. This species is frequently found in coral rubble around Malaysia, Indonesia and Philippines.

Chromodoris tinctoria



SIZE: Up to 80mm

Found in the Red Sea as well as the Gulf of Oman.

FAST FACTS

TYPE: Invertebrate

DIET: Carnivore

AVERAGE LIFE SPAN IN THE WILD: Up to 1 year

WEIGHT: Up to 3.3 lbs (1.5 kg)

DID YOU KNOW? Some nudibranchs are solar-powered, storing algae in their outer tissues and living off the sugars produced by the algae's photosynthesis.

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Debelius, Helmut; Nudibranchs and Sea Snails, Indo-Pacific Field Guide, 1996

Gosliner, Terence M., Behrens, David W., and Valdes, Angel; Indo-Pacific Nudibranchs and Sea Slugs, 2008

Yonow, Nathalie; Sea Slugs of the Red Sea, 2008

Many thanks to Nathalie Yonow for her assistance with this article.

ONLY ABOUT FIVE PERCENT OF THE BODY OF A JELLYFISH IS SOLID MATTER; THE REST IS WATER

FEATURE NOAA – NOS (NATIONAL OCEAN SERVICE)

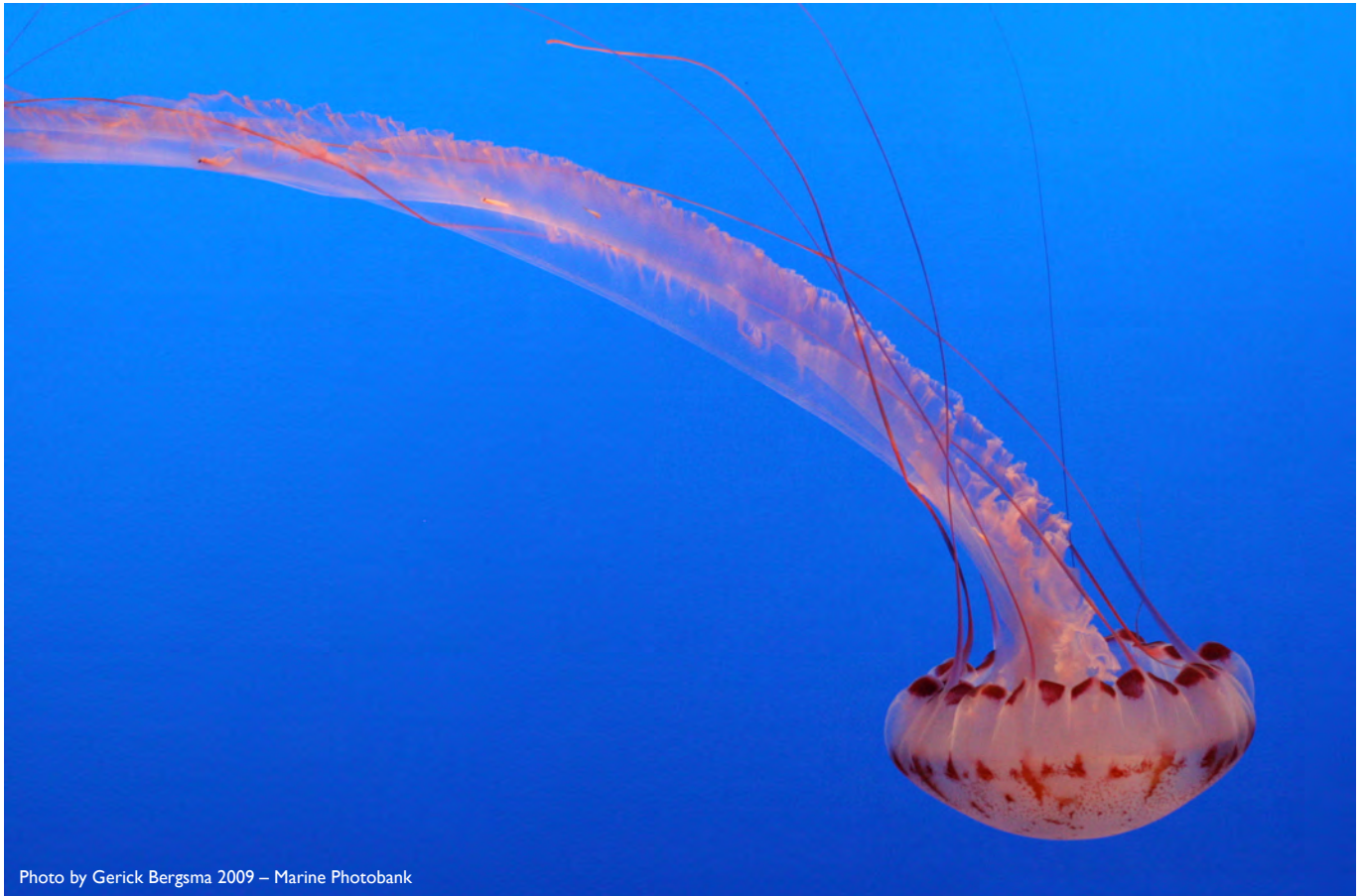


Photo by Gerick Bergsma 2009 – Marine Photobank

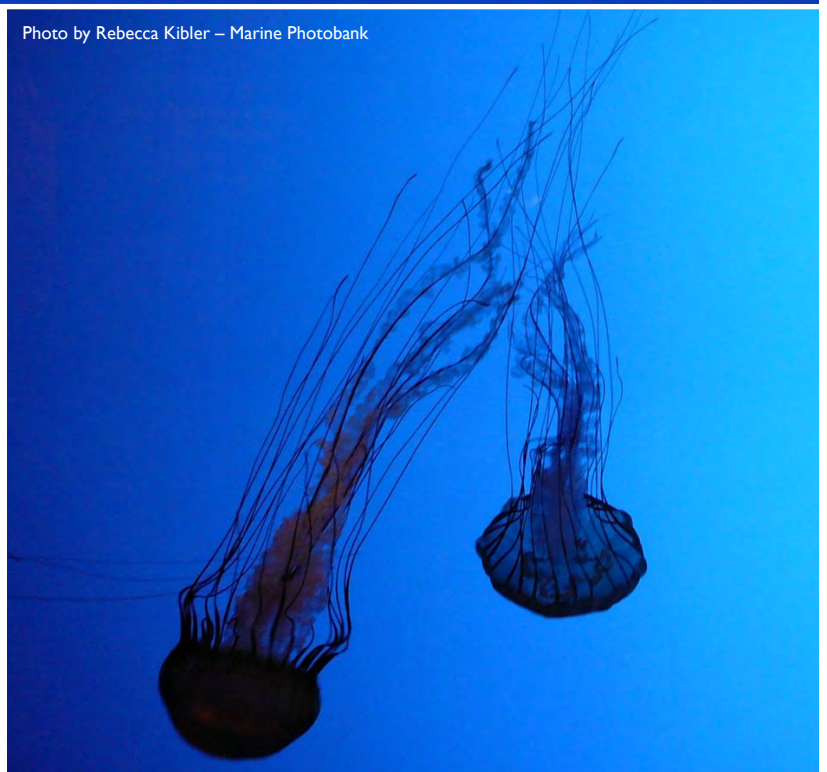
Fascinating, elegant, and mysterious to watch in the water; take a jellyfish out of the water; and it becomes a much less fascinating blob. This is because jellyfish are about 95 percent water.

Lacking brains, blood, or even hearts, jellyfish are pretty simple critters. They are composed of three layers: an outer layer, called the epidermis; a middle layer made of a thick, elastic, jelly-like substance called mesoglea; and an inner layer, called the gastrodermis. An elementary nervous system, or nerve net, allows jellyfish to smell, detect light, and respond to other stimuli. The simple digestive cavity of a jellyfish acts as both its stomach and intestine, with one opening for both the mouth and the anus.

These simple invertebrates are members of the phylum Cnidaria, which includes creatures such as sea anemones, sea whips, and corals. Like all members of the phylum, the body parts of a jellyfish radiate from a central axis. This “radial symmetry” allows jellyfish to detect and respond to food or danger from any direction.

Jellyfish have the ability to sting with their tentacles. While the severity of stings varies, in humans, most jellyfish stings result only in minor discomfort.

Photo by Rebecca Kibler – Marine Photobank



JELLYFISH BLOOMS: A SUMMARY

FEATURE **EDA** PHOTOGRAPHY **VICTOR HUGO CASILLAS ROMO – MARINE PHOTOBANK**



In recent years, the increment of anthropogenic activities has caused many changes in marine coastal ecosystems, such as harmful algal blooms (red tides), hypoxia, and loss of biodiversity. In addition, it has recently been noticed that there is an increase in jellyfish (Cnidaria and Ctenophora) populations in a variety of coastal regions world-wide. Different studies have already shown scientific evidence of an increase in jellyfish populations in areas such as the Black Sea, Bering Sea, China and northern Gulf of Mexico. Although scientific evidences are unavailable in many other coastal regions, it is believed that these blooms are also observed in many other countries, as there have been reports and personal communication from scientists and fishermen observing the changes in the occurrence of jellyfish in their own regions.

The increased acidity of the oceans, the increase of sea water temperatures, the population decrease of jellyfish predators, such as fish and other wildlife, have all privileged jellyfish. While most of the organisms are negatively affected by the fertilizers that people have been washing into the seas, jellyfish seem to thrive on them. Eutrophication, overfishing, aquaculture, coastal development and climate change are all possible contributory factors facilitating credible mechanisms for the proliferation of jellyfish blooms.

Different factors leading to jellyfish blooms

can act at different life stages of the jellyfish, from their planulae form (free living stage), their polypoid form (sessile stage) and to the final and dominant form, the medusa (free living stage). According to the jellyfish spiral theory proposed by Uye and Ueta (2004) it is believed that the observed variations in jellyfish populations may be associated with numerous influences such as:

- 1) **Overfishing of planktivorous fish (food competitors) and natural predators:** Many jellyfish (medusa stage) preys primarily on mesozooplanktons such as copepods, cladocerans, larvaceans, and larvae of various benthic animals and fish eggs. Jellyfish are therefore a competitor as well as a predator of zooplanktivorous fish. If there are significant decreases in the population of their fish competitors and predators due to overfishing there is an increase in jellyfish populations.
- 2) **Increase in overwintering populations due to warming of sea water temperatures:** An increase in sea water temperatures during winter may lead to an increase in the overwintering population of different jellyfish (medusa stage). An increase of sea water temperatures during fall, will lead to a planulae release stage for a long period of time, leading naturally to an increase in medusa numbers.

- 3) **Increase in polyp attachment area due to waterfront constructions:** The increase in coastal developments in different regions in the world, especially waterfront constructions, provide increased polyp attachment areas. Jellyfish polyps can increase in numbers, which may eventually lead to the increase in the medusa population.

- 4) **Increase in jellyfish food due to eutrophication or modification of nutrient composition:** The increase in the nutrient levels also increases the numbers of small zooplankton which increase the jelly fish population, as explained in point 1. The low dissolved oxygen in sea water in some areas also lead to a higher survival fraction for jellyfish against fish decreasing the competition levels.

As large jellyfish blooms may have prejudicial effects on fishery resources and ecosystem functions, they can diminish the food supply of zooplanktivorous fish. There is a need to understand and study in more detail the factors that lead to jellyfish blooms. According to studies conducted up until now, if an improvement in coastal marine ecosystem health is not seen soon, jellyfish blooms could be sustained and may even spread from locations in which they now occur to other new areas around the globe.

THE DTRP: MAKING A DIFFERENCE

FEATURE **DUBAI TURTLE REHABILITATION PROJECT**

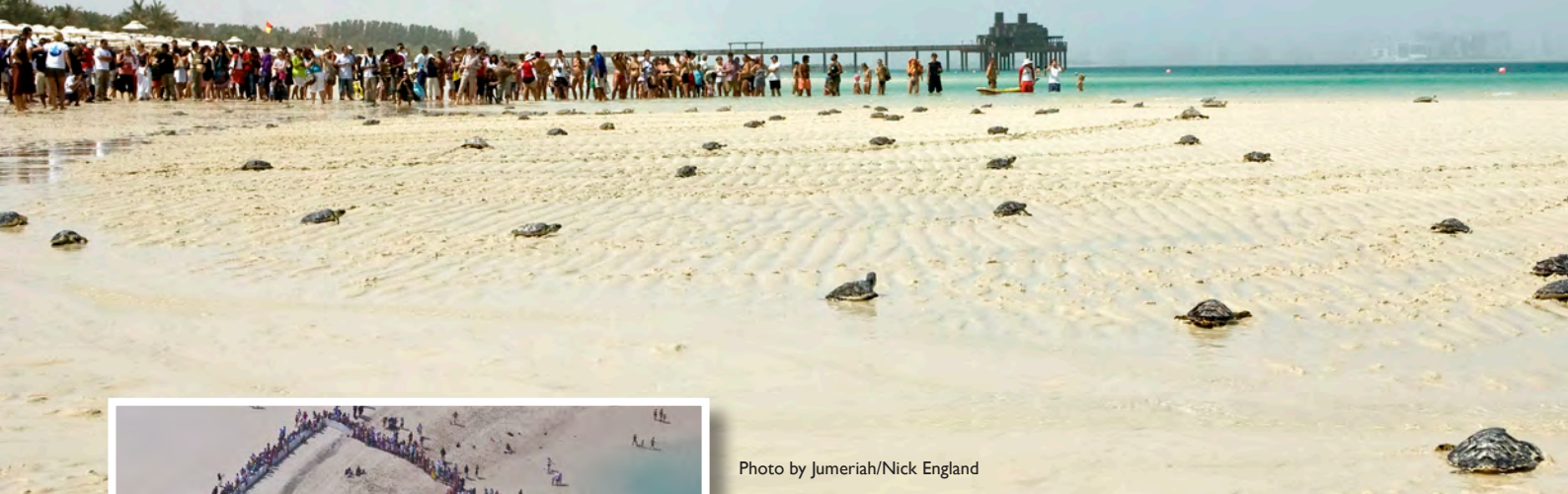


Photo by Jumeriah/Nick England



Photo by Pradeep Kumar Thechan Balan

Since December 2010, the Dubai Turtle Rehabilitation Project (DTRP) have received over 360 sick or injured sea turtles from the people of Dubai and environmental organizations such as EMEG. 90% of the animals washing up are juvenile hawksbill turtles between the weights of 200 and 500 grams. Similar events have happened on an annual basis since the project started in 2004 although this year the amount of animals is unprecedented. We attribute the annual 'stranding' of this particular age cohort of hawksbill turtles between the months of December and March to be associated with but not entirely due to a phenomenon known as 'cold stunning'. Turtles are cold blooded and as such gain their body heat from the surrounding environment. In Dubai between the months of December and March, the water temperatures can reach as low as 15 degrees. We think that these cold temperatures severely affect the juvenile hawksbill turtles as they are the main demographic affected by the cold water temperatures.

Almost without exception the turtles respond positively to intensive care, part of which involves elevating the water temperatures to up to 10°C more than the ambient water temps in Jan. Frequently this alone prompts the turtles to start feeding and gaining condition. This supports the theory that the cold water temperatures are at least partially responsible for the onset of debilitation.

This year has been a particularly cold winter

with lots of storms and high waves and prolonged periods of stormy weather without respite. On one day in January alone after a particularly aggressive storm, the DTRP received 45 turtles. We think that the harsh winter coupled with a good nesting year and increased awareness of the

project are the main factors involved in the huge numbers of turtles we have received this year. Social media networks such as Facebook have allowed us to reach many people and raise awareness of the project to levels that were not possible only a few years ago.

Once the water temperatures warmed to 'turtle friendly' levels we started the release process of the animals back into the wild. On April 8th we joined forces with EMEG who have rescued over 75 turtles this season alone. We spent the morning with them and their guests and then released 40 juvenile hawksbills back into the wild from their Ghantoot reserve; an event that was enjoyed by everyone who attended.

On April 22nd the DTRP and Jumeirah Group organised a release for 100 turtles in celebration of 'World Earth Day'. The event was attended by hundreds of people and 100 children were chosen to release the turtles back into the wild on the beach in front of the Burj Al Arab.

The juvenile hawksbills have stopped washing up now and we attribute this decline in strandings to the warming sea temperatures which allow the turtles to be able to thrive in their environment.

To date the DTRP have released 250 rehabilitated sea turtles back into the wild, 140 of those animals have been in 2011 alone. The remaining animals are still undergoing

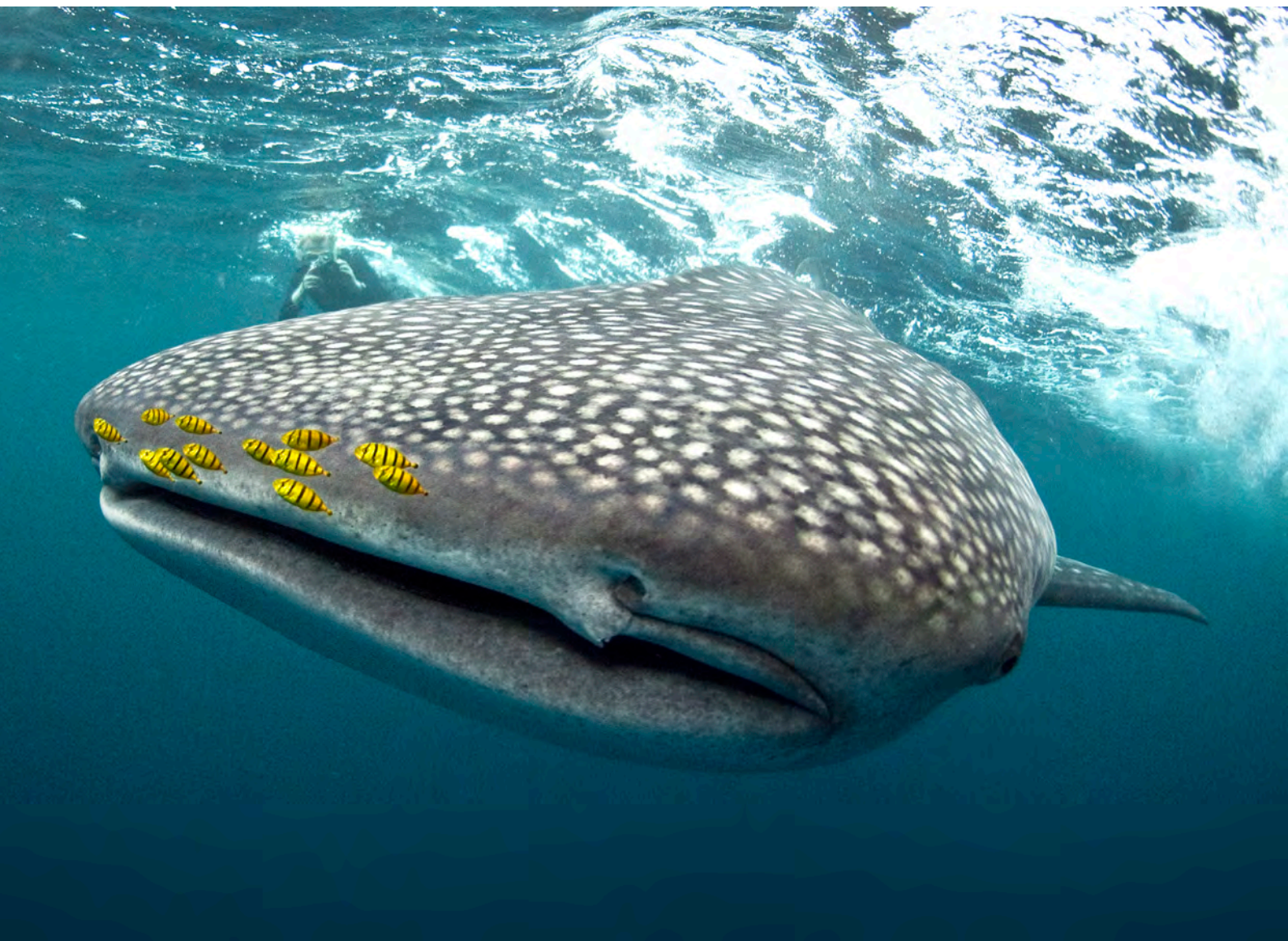
rehabilitation and can be seen at our public enclosure located at Madinat Jumeirah. If you find a sick or injured turtle then please call the DTRP team on +971 4 301 7198. For more information visit www.jumeriah.com/turtles or visit us on facebook at <http://www.facebook.com/turtle.rehabilitation>.



Photo by Simone Caprodossi

SHARKWATCH ARABIA DATABASE UPDATE: THE SHARKS ARE BACK!

FEATURE **DAVID P. ROBINSON, JONATHAN ALI KHAN & WARREN BAVERSTOCK**
PHOTOGRAPHY **WARREN BAVERSTOCK – WWW.VERSTODIGITAL.COM**



Photograph taken using Nikon D3Xs with Nikkor 10.5mm Fisheye f11 S250 ISO 400

Since the last update and after a winter with very few sightings, the whale sharks have finally started to return to the area. The first official sighting was recorded from an oil rig worker off the coast of Abu Dhabi on April 4th, 2011 and since that date there have been sightings in the Musandam on an almost weekly basis. We are hoping to start seeing more sightings along the East Coast of the Musandam and UAE during the next couple of months. Unfortunately, not many photographs have been taken to back up the sightings in order to facilitate the processing of the shark's unique spot pattern; with only one new shark recorded in the database so far this season. So we

would like to call on all divers to remember to please take a camera with them whilst diving and hopefully we can collect more images of our regional sharks!

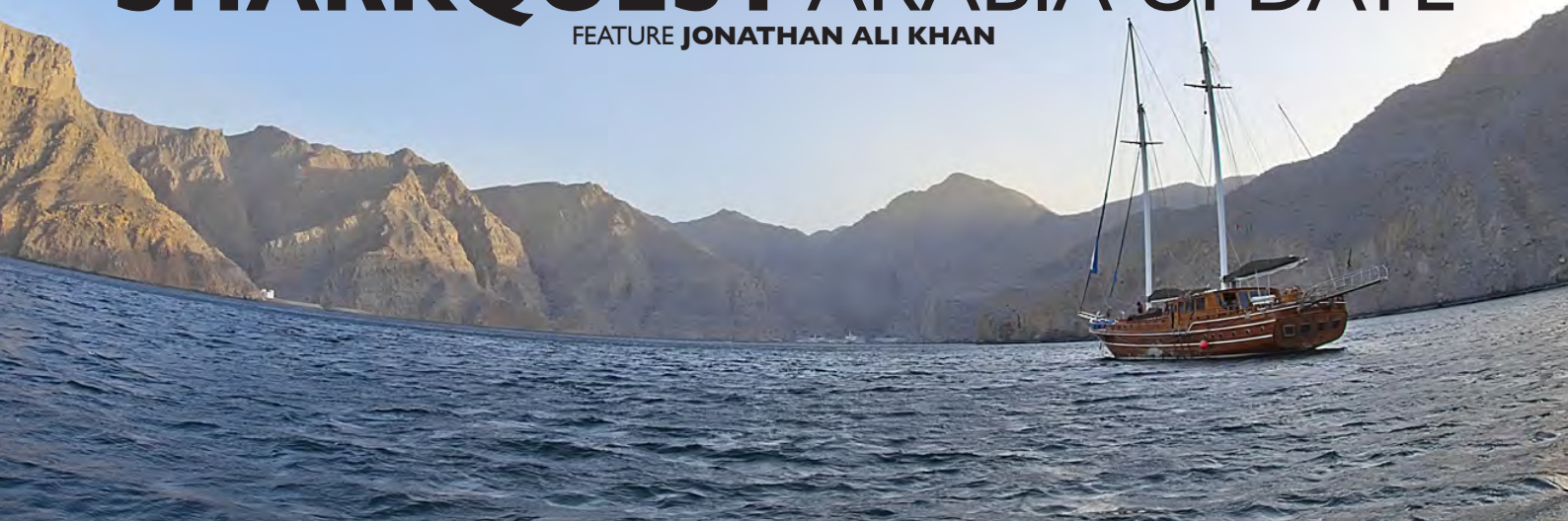
MANY THANKS

We would like to take this opportunity to thank the following individuals for their support and for sending in sightings to Sharkwatch Arabia: Neil Sheppard, Ruth at Desert Sport Dive Club, Chris Chellapermal from Nomad Ocean Adventure and Edward Crowley.

If you encounter a whale shark in this region, please visit www.sharkwatcharabia.com and report your sighting.

SHARKQUEST ARABIA UPDATE

FEATURE JONATHAN ALI KHAN



THE MY. EKATERINA This new liveaboard operating in the Musandam from Fujairah with diving operations managed by Nomad Diving Adventures was home to the Sharkquest Arabia and Oman Shark Project expedition for a month. Photo by Thomas Vignaud.

Recently JAK (as he is called by friends and colleagues), was asked to talk at TEDxAbuDhabiU on the subject of Sharkquest Arabia. In this write up, JAK gives us the low down on his film project and what he has learned about Arabia's sharks.

As a natural history filmmaker, I am totally obsessed with the science and wonders of the natural world around us; especially in this region that has been my home for 25 years. In that time, I have dived and filmed in every nook and cranny around this coastline and seen some amazing sights. I have also witnessed a lot of changes to the marine environment in that time, including many that are obviously cause for serious concern.

Some of you will know by now that Sharkquest Arabia is a 2-film TV documentary and awareness project using natural history as a way to communicate the issues facing sharks throughout Arabia's waters. I chose sharks as a study subject because I feel that what is happening to sharks around the world is the most shameful and biggest commercial sellout that man has ever perpetuated against the natural world. The consequences of the global shark fisheries for the fin trade is alarming at so many levels – and in my opinion is in fact one of the biggest threats to our marine environment. I believe the shark story reflects the worst of mankind's capacity and highlights the disconnection people now have from the natural world around us. If people are capable of allowing this genocide to continue to the point of extinction, then it is clear we are failing to communicate the right message.

It took nature over 400 million years of evolution and natural selection to create what is the perfect apex marine predator, positioning it at the top of the food chain to manage the resources of life on the reef and open oceans. It has taken man less than a hundred years to reduce their numbers to



20% of their populations in less than 50 years in most of our planet's seas. I find that totally unacceptable and when I found out what role this region plays, I knew I had to try to open up the story for people in this region to start tackling the issues.

For me natural history television and films are the best ways to reach a wide audience with educational and factual content about wildlife conservation – and may well be one of the best chances that sharks have. My previous series "Arabia's Cycle of Life" reached 25 million viewers in the MENA region by broadcasting simultaneously on Showtime and Al Arabiya News. It later went on to Animal Planet Asia reaching another massive audience. But sadly, natural history is still not widely supported by this region's TV industry, as it is not deemed commercially profitable with the media sales and advertising executives that sell sponsorship and airtime on regional channels. It's sad to say that we really struggle to find support financially for this genre of programming as these executives in effect control what goes on air. I've actually been told

there is no place for natural history on Arab TV channels with virtually no natural history TV content featuring Arabia's wildlife being aired on any channels these days. That's not something that's going to change soon unless we keep pushing the issue and keep trying to show decision makers just how fascinating this region is.

So, much of my time is spent on trying to raise sponsorship to find the last top-up budgets that we need to complete the 2 films and I am now reduced to only filming piecemeal as and when we have enough money to put together an expedition. In fact, what started off as a '2 year in the making project', may take us 3 years to complete due to budgetary restrictions.

However, it seems our pushing is finally paying off as we have just received a much needed letter of intent from National Geographic Television International for distribution of Sharkquest Arabia's non-MENA rights. I opted to retain the MENA region rights in order to be able to maintain our educational and conservation awareness objectives. But it's not over yet as we now have to somehow turn that letter of intent into investment or sponsorship from somewhere for our top-up budgets. But it should make it a little easier as any potential investor will be reassured there is significant international interest or for sponsors to know we have airtime for this project which may be enough to get them off the fence. For me, the financial reality of this project's film budget needs (not to mention our own actual living expenses) is tough to balance against the desire to ensure these projects actually do something good. Maintaining the educational and conservation messages this region needs in order to generate awareness about sharks and the issues they face is a tough task given TV channel's preferences for pure entertaining adventure. Hence our decision to retain control over the MENA rights.

FEATURES

Like many divers here that have been diving these waters over the last 25 years, I used to see sharks on both sides of the UAE and Oman with common frequency. Bull sharks and black tips off the Daymaniyats, lemon sharks off Fahal Island near Muscat, hammerheads, grey reef sharks and Zebra sharks in the Musandam and just about everywhere else in Oman, as well as tigers off Murawah and Fiyah in Abu Dhabi's Western region with massive rays and other carpet sharks all over the place. But I also know people who started diving here in the UAE only 3 to 4 years ago that have never seen a single shark their entire time they have lived here.

At a recent conference in Sharjah, I was surrounded by eager students asking questions, confessing they didn't know we had sharks in these waters and more importantly, asking why we should care about them. I used up all the cliché answers about 100 million sharks being killed every year, etc. and began to detect a tinge of skepticism in my own voice and thoughts! All of these important global statistics seemed so far away and disconnected from the mind-set of these youngsters. It made me realize that we need to find a way to communicate to them in a manner that actually makes sense to them. I tried to explain that the role of sharks is to manage the food chain, much in the way a CEO runs a company. With good leadership the company prospers and everyone wins. Without leadership, by forcibly removing the CEO, the company will face huge problems

and may fall into bankruptcy and fold. That's just a simple analogy. The more complex one is that sharks have been created by nature for a reason. It's no mistake that these animals possess a formidable range of senses and qualities that have positioned them at the top of the aquatic food chain. As the apex predator, the role they play in the fundamental law of natural selection is in fact linked to the overall health of the seas of our planet. Therefore, we can link the role of sharks directly to the overall welfare of our oceans. If sharks disappear, resulting in fish and invertebrates spiraling into a chaotic flux of imbalance, this will effect what happens to us. Unless we link the demise of sharks to something that will affect us directly, mankind will for now continue to ignore the ramifications resulting from the eventual extinction of sharks.

I won't go on to you about this as I know this is being read by shark advocates and since starting this project, I have to say that I have become more understanding towards the predicament of shark fishermen in this region. For the most part, the overall consensus of Omani fishermen for example, is that sharks are only an opportunistic catch and more than often not the main target. However, the scale of that opportunity is huge! So even if their intent was to catch tuna (which is generally more profitable for them on a good day), the conditions here allow them to catch staggering numbers of sharks. But more recently, fishermen are clearly aware that numbers are down as they are catching fewer sharks than

10 or 20 years ago. But despite that, they are still very happy to land sharks as the unit value of a single shark increases all the time. So a shark that might have earned them Dhs2,000 a couple of years ago, can now earn them between Dhs5,000 to Dhs10,000, depending on the species and size. Try to tell a fisherman not to land a big hammerhead with rates like those! But on the other hand, we have also been impressed after seeing efforts to self-impose a 6 month ban on landing sharks by fishermen in a village in the Musandam in an attempt to give sharks a chance to repopulate the area. Although the intention is good, the effectiveness is totally lost as sharks are slow to reproduce and gestate, not like other fishes that spawn billions of larvae repeatedly throughout the year. Sharks on the other hand may only have between 20 to 50 pups depending on the species and some will only reproduce once every two years. But equally important – if sharks become extinct in a specific area, there is little if any genetic recruitment in sharks from other areas and that fished out area may remain so for ever!

All the same, I am encouraged that it might be possible to work with these fishermen to create a better management of their resources, especially since they have been trying to do so themselves as they seem to understand what is happening. But like anywhere, it is a matter of enforcement that weakens the process. If the village is not doing well financially due to poor catches of other species, they will break their own self-imposed ban in order to bring

JAK filming Dareen placing one of the baited remote cameras (BRUVs). Photo by Thomas Vignaud.



in the money. The moment one starts, the others follow suite.

But if we put this in context, the threat to sharks has been a threat for well over 25 years; since the organized trade of fins first recognized this region's potential as a major source. These villagers have been catching sharks for well over 500 years or more, since a time when abundance was unaffected by the lack of significant human presence in the region. In those days shark meat was simply dried and salted for human consumption. But in recent times, the fin trade has catapulted shark interest to totally unsustainable catch levels. Dangerously, the shark trade issue went largely unnoticed for decades here as it had simply been overshadowed below the strata of amazing regional growth and development to a degree that no one realized shark fishing was as significant as it was. Certainly no one realized it was a serious threat to the marine environment as much of the science that has started to educate the world is relatively recent. In talking to just one shark fin trader in Dubai, I have been told how they used to ship 7 containers of shark fins to Hong Kong every month just 20 years ago! The volume of shark fins involved was staggering. Now he claims it is just around 450,000 kilos a year and predicts the end of the shark fin trade in the UAE in 5 years time. It's a shame we will get to that point for all the wrong reasons.

We've learnt that the UAE is not a significant shark-fishing nation in itself, although it is the main regional shark fin trading hub; collectively re-distributing fins throughout the whole region, including Somalia, Eritrea, Yemen and Iran along with all the other GCC states. According to FAO, it is supplying around 8% of the fins reaching Hong Kong alone. These stats may be conservative and the number a lot higher. Seeing as there are no trade controls, it's hard to know.



A pile of dead hammerheads landed in Oman near to Ras Madrakkah. Photo by JAK.

As more and more awareness about the plight of sharks spreads across the world and even here through conservation authorities and decision makers, we believe that the next CITES conference will be different. Last year, CITES held their international meeting in Doha. For the first time ever, the international community was prepared with proposals to add 8 shark species to the CITES Appendix II list. Amongst those species proposed, 5 occur here in the seas of Arabia and are actually a big component of the shark landings and fin trade from our waters. Sadly the only species that made it through is the porbeagle shark (which doesn't occur here). I consider this a lost opportunity for the region as the whole world's international conservation community was focused on this region. Al Jazeera International covered the conference and generated considerable public interest along with the other media. As Sharkquest Arabia, we were provided the opportunity to present our promos and Dareen Al Mojil spoke to Arab delegates on our behalf at a special screening organized by IFAW. All the same, the Japanese and Chinese lobbies were too persuasive and the tuna issues stole the moment. But despite the negative outcome, what has since transpired since is an opportunity to enter into dialogue with conservation authorities

and ministries. They know they need to address this issue and we all need to encourage them to do so. I firmly believe that it might be possible to ban the fin trade in the UAE with the right arguments.

So what we need to focus on is that stalwart of change – awareness! Normally awareness happens at the end of a conservation project based on the outcomes and deliverables of years of research, etc. In this case, we need to shift the onus of awareness to the front end and in so doing, highlight the need for more scientific research (upon which to base the right management decisions) and in order to target decision makers with a view to making them realize there is actually more than enough information and motivation to stop the fin trade or at least to educate the fishermen as to how they can better manage their resources. It all comes down to exposing honest and care driven information delivered in the right way. And that is why I believe Sharkquest Arabia is an important contribution to regional conservation efforts.

EXPEDITION UPDATE

We recently returned from a month long expedition to the Musandam with the Oman Shark Project team at Sultan Qaboos University on board the 120 foot gulet called MY Ekaterina. The expedition was supported by sponsorship from IFAW (International Fund for Animal Welfare), Atlantis Dive Centre (ADC) and with considerable logistics support from ADC, Nomad Diving Adventure, Dunamis and the Burj Al Arab Aquarium. We were joined by shark researchers Al Reeve (SQU), Dareen Al Mojil (KERA), Rima Jabado (UAE University), Dr. Ralf Sonntag (IFAW Germany), Thomas Vignaud (a French PhD shark researcher studying genetics), Julia Spaet from KAUST (King Abdullah University of Science and Technology) and Ali Al Hafez



Leopard moray eel. Photo by Thomas Vignaud.



Healthy corals. Photo by Thomas Vignaud.



Jonathan Ali Khan shooting with the Sony HD EX1 in a Gates housing with super-wide zoom optic. Photo by Thomas Vignaud.



Daren Al Mojl and Ali Al Hafez working their charms on Khumzari fishermen. We spent days talking and interviewing fishermen about the trials and tribulations of shark fishing in the region. Photo by Thomas Vignaud.

(who worked with me as part of the SQA team as well as in his capacity with KERA).

In addition, we were joined by supportive members of the diving community intent on giving us a significant boost to help cover the costs of the trip. ADC supplied us with a string of hard working Dive Masters to oversee all the diving logistics along with tanks, weights and bits of kit, etc. Extra tanks were provided by the Burj Al Arab Aquarium and Nomad Diving Adventures supported us with dive boats and Omani skippers. Despite the unsettled weather and changing transitional water conditions (a bit late this year), we experienced a fascinating expedition focusing largely on the life trials and tribulations of Khumzari fishermen.

The saddest realization for us all was that despite our attempts to place baiting stations and chum the water, we only managed to satellite tag one lemon shark and film one other shark whilst all around us, fishing boats were buzzing back and forwards landing huge bull sharks, hammerheads and black tips. Many were even pregnant and the picture soon emerged that despite our own bad luck, sharks were definitely out there in important numbers.

True to its nature, the Musandam reminded us of it's natural magnificence. A vibrant dynamic cauldron of life stirred into action by nutrient laden currents and plankton rich upwelling. Within a 3 day period we witnessed an incredible explosion of jellies, salps and tunicates that formed a primordial soup of life. This gave the bizarre and sometimes unnerving impression that we were diving in cold green temperate waters off the UK! Despite the absence of sharks within our range of sight, there was no shortage of fish life and clear evidence the coral communities are doing well.

The weather had stumped us! We were too early for whale sharks and although we were there at the peak of the shark pupping season, the trip ended on a down note – but also with a solid resolve to head straight back out there in June! This time, we will be armed with a PSAT tag sponsored by Le Meridien Al Aqah for at least one whale shark. Now the whale sharks are back, it's only a matter of a few more weeks before this tag adds more data to David Robinson's PhD and the Sharkwatch Arabia database!

So if anyone is interested to contribute and help out directly with a two-week expedition in June, please contact Jason Sockett at Atlantis Dive Centre or myself.

For more up-to-date information about the project or to watch the first of our SHARK TALK interviews on-line, please join us on the Sharkquest Arabia page on Facebook. In closing, I would just like to extend a huge thank you to the EDA and to all of you members who are trying to help us get this story told.



Above: JAK, Dr. Ralf 'Perry' Sonntag and Al Reeve plan the anchorage sites enroute to the Northern Musandam. Photo by Ali Al Hafez.

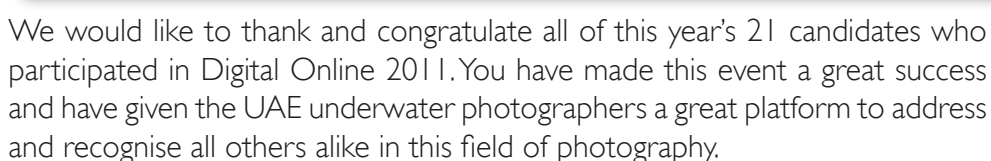
Top Right: Ali grinds the rather aromatic chum! Photo by JAK.

Bottom Right: Jonathan Ali Khan, Sharkquest Arabia, Project Leader, Director and U/W cinematographer.





Divers descending the wall at Jazirat Musandam into emerald green nutrient rich waters. Photo by Thomas Vignaud.



	FISH	Total
1	Warren Baverstock	81.25
2	Simone Caprodossi	77.25
3	Adam Skrzypczyk	75.5
4	Peter Mainka	70.25
5	Josofina Ng	69
6	Alexander Nikolaev	68.75
7	Marc Vilorio	68.75
8	Philippe Lecomte	68.5
9	Alastair McGregor	68.5
10	John Hager	67.75
11	Roy Alexis Sison	66
12	Gordon Smith	66
13	Claire Barker	65
14	Ahmed El Agouza	64.75
15	Colin Wu	61
16	Dominique Zawisza	59.5
17	Abdulla Shuhail	47
18	David Thiesset	40.75
19	Karim Saad	38

	WIDE ANGLE	Total
1	Adam Skrzypczyk	82.75
2	Warren Baverstock	81.5
3	Dimone Caprodossi	79.5
4	Ahmed El Agouza	77.5
5	Alastair McGregor	68
6	Colin Wu	67.5
7	Gordon Smith	65.75
8	Philippe Lecomte	65.25
9	Roy Alexis Sison	63.75
10	Marc Vilorio	61.75
11	David Thiesset	61.25
12	Karim Saad	60.5
13	Jonathan Clayton	51
14	Peter Mainka	49.75
15	John Hager	49
16	Alexander Nikolaev	48.25
17	Claire Barker	45.5
18	Dominique Zawisza	44.5
19	Abdulla Shuhail	35









2nd PLACE MACRO © Warren Baverstock – www.verstodigital.com



3rd PLACE MACRO © John Hager







2nd PLACE WIDE ANGLE © Warren Baverstock – www.verstodigital.com



4th PLACE FISH © Peter Mainka



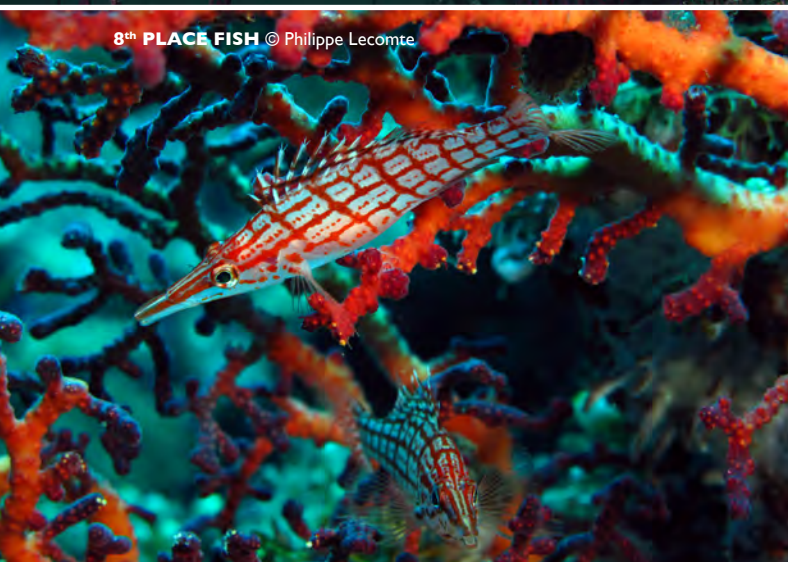
5th PLACE FISH © Josofina Ng



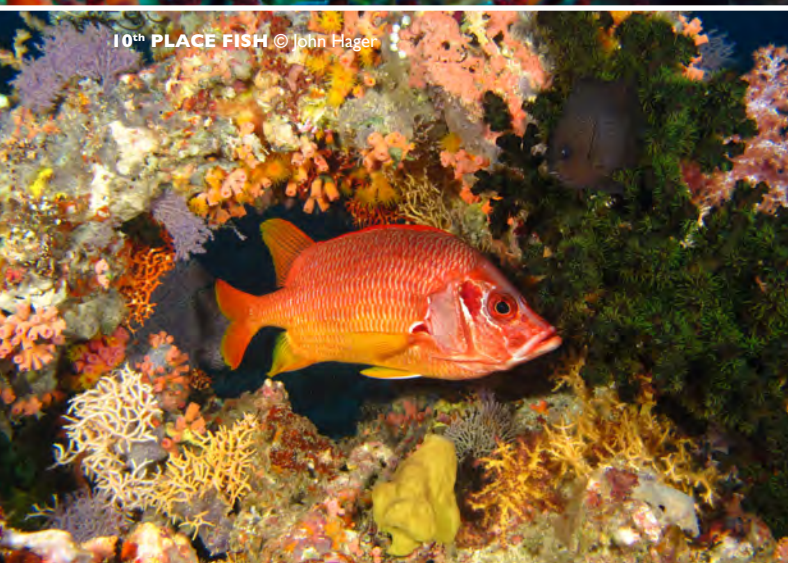
6th PLACE FISH © Alexander Nikolaev



6th PLACE FISH © Marc Vioria



8th PLACE FISH © Philippe Lecomte



10th PLACE FISH © John Hager



11th PLACE FISH © Gordon Smith



8th PLACE FISH © Alastair McGregor



11th PLACE FISH © Roy Alexis Sison



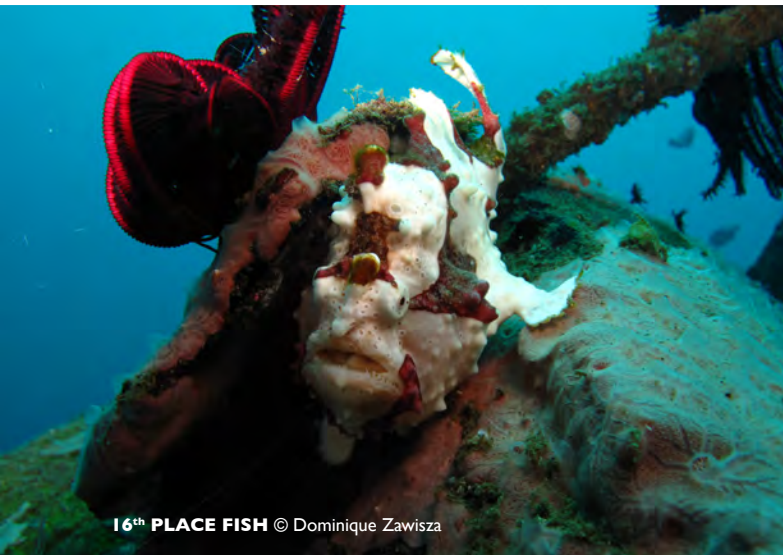
13th PLACE FISH © Claire Barker



14th PLACE FISH © Ahmed El Agouza



15th PLACE FISH © Colin Wu



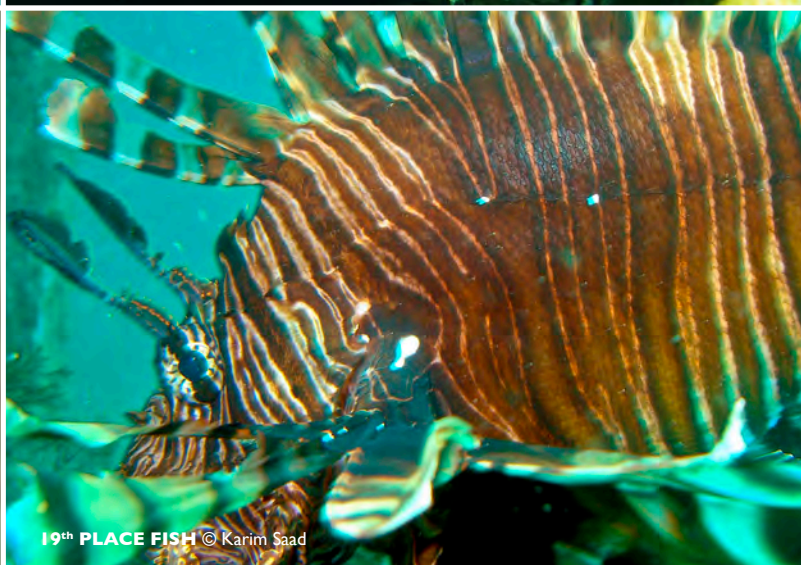
16th PLACE FISH © Dominique Zawisza



17th PLACE FISH © Abdulla Shuhail



18th PLACE FISH © David Thiesset



19th PLACE FISH © Karim Saad



5th PLACE MACRO © Alastair McGregor



6th PLACE MACRO © Gordon Smith



4th PLACE MACRO © Simone Caprodossi



7th PLACE MACRO © Alexander Nikolaev



10th PLACE MACRO © Marc Vioria



8th PLACE MACRO © Philippe Lecomte



9th PLACE MACRO © Jonathan Clayton



11th PLACE MACRO © Peter Mainka



12th PLACE MACRO © Claire Barker



13th PLACE MACRO © Roy Alexis Sison



14th PLACE MACRO © Dominique Zawisza



15th PLACE MACRO © Karim Saad



16th PLACE MACRO © Josofina Ng



17th PLACE MACRO © David Thiesset



18th PLACE MACRO © Ali Mohsen



4th PLACE WIDE ANGLE © Ahmed El Agouza



5th PLACE WIDE ANGLE © Alastair McGregor



6th PLACE WIDE ANGLE © Colin Wu



7th PLACE WIDE ANGLE © Gordon Smith



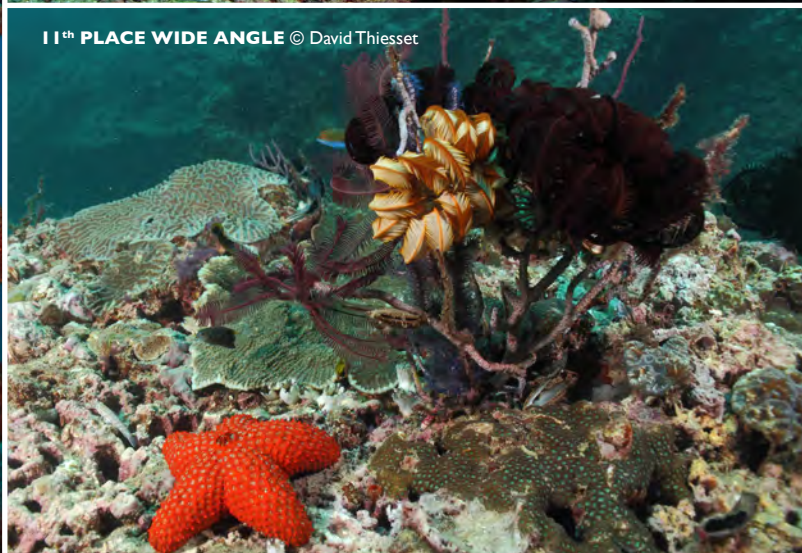
8th PLACE WIDE ANGLE © Philippe Lecomte



10th PLACE WIDE ANGLE © Marc Viloria



9th PLACE WIDE ANGLE © Roy Alexis Sison



11th PLACE WIDE ANGLE © David Thiesset



12th PLACE WIDE ANGLE © Karim Saad



14th PLACE WIDE ANGLE © Peter Mainka



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LITTLE JEWELS OF ABU DHABI

FEATURE AND PHOTOGRAPHY **PHILIPPE LECOMTE**

Abu Dhabi is often described as a concrete jungle with little to offer divers. On the outskirts of the city, the eye will see highways surrounded by endless mounds of sand and clusters of mangroves, but there actually are little treasures for the underwater photographing diver in Abu Dhabi waters.

Even if your first or second dive in Abu Dhabi is not as colourful or the marine life is not as active as the waters you've seen or heard about in the Maldives, get in a little closer to things and you will start to find that those that did not appear to be anything special at first, turn out to be little jewels especially when you have a camera and macro lens. The sea life is always rewarding for those who search a little bit.

On the sandy bottom you will find seashells, cuttlefish, soles and so much more. If you are patient, stay an arm's length away from a hole in the sand and you will see a goby appear followed closely by his buddy the "snapper shrimp". This team make an awkward couple but they are a perfect match. Avoid any sudden movements otherwise they both disappear. You can find many species of these little fish in the area: Butterfly goby, Decorated goby, Luther's shrimp goby, Six-spot goby and the Triplefin.

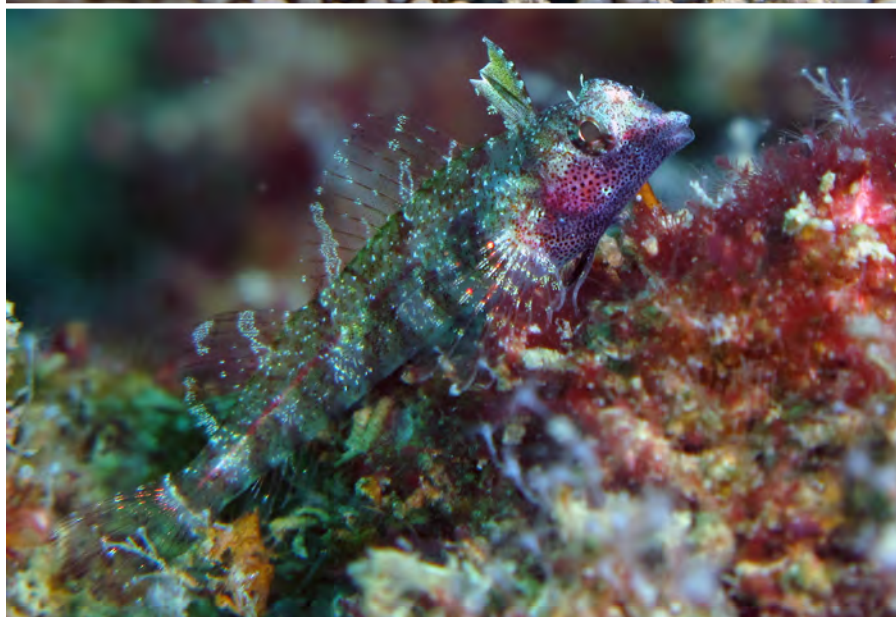
You can try to find the beautiful Gulf blenny which is found running along coral or hiding in small holes. It's very easy to recognize as it has a star in its eyes. Male and females are very different and they like to follow you and disappear as soon as you look at them.

If you look closer, you will discover different species of shrimps. If you have a very good eye and good buoyancy control, you can approach to have a closer look in the coral or under a rock, and you will have a chance to see the different kinds of shrimps and crabs living there. One of the most beautiful is the Marble shrimp. They like to be near the long spine sea urchin where they can find a safety place. Long arm shrimps can be seen under a rock, Imperial partner shrimps in a cave and Cleaning shrimps or Dancing shrimps are seen outside on a night dive! You can sometimes find the Anemone carpet (*Stichodactyla* spp) so look carefully in it and you will see the beautiful Clown shrimp (*Periclimenes brevicarpalis*). They are almost transparent and you can sometimes see the couple with the male being smaller than the female.

There is so much to find and photograph in and around the area! Most of the time, you will find them to be the most unusual and beautiful of creatures. Take your time if you do a dive in Abu Dhabi and you will be rewarded by the end of it.

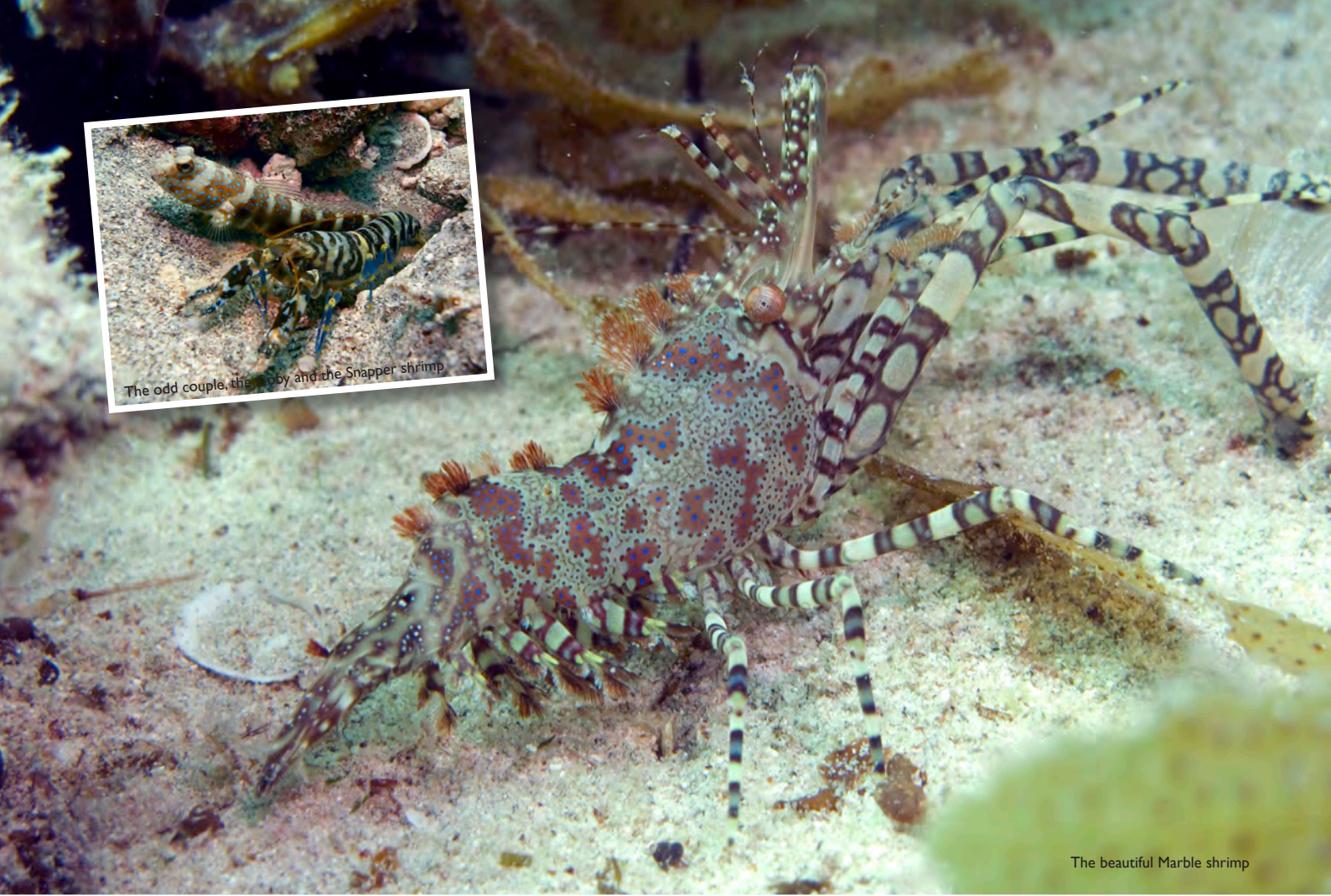


Anemone carpet and Clown shrimp





The odd couple, the Noddy and the Snapper shrimp



The beautiful Marble shrimp



DELVING INTO UNDERWATER PHOTOGRAPHY & ITS GADGETS

FEATURE AND PHOTOGRAPHY **ALASTAIR MCGREGOR**

CAMERA: Nikon D90 in Aquatica AD90 housing.

EQUIPMENT: INON Z-240 & 220 flash, TLC arms, STIX floats, Nikon 60mm, 105mm VR, 17-55mm, 10.5, SIGMA 15mm and 10-20mm lenses and KENKO tele-converters, snoots and a +8 wet diopter.

I learnt to dive here in Dubai (2003) and I think that like most UAE based divers my first ever dive experience was the Cement barge. I remember going down the anchor line and being amazed to see the wreck materialize before me and a huge school of barracuda hovering over the wreck. I completed my training and I was hooked with the underwater world. I went on to complete my PADI Dive-Master and then I also completed my IANTD normoxic trimix but at the end of the day it was photography that had the greater attraction for me.

The first was and still ranks as one of the most impressive dives that I have ever done and it was a sea mount at the top of the Musandam Ruq Sawaq. As we descended we were surrounded by Tuna and other fish; a silky shark was sighted as well as marble rays and devil rays. It was on this dive that I also started to notice the camouflaged, bizarre and some of the more minute creatures of the underwater world. My first camera was a motor marine II with a YS-60 strobe, which I still have – it sits in my cupboard alongside my newer cameras. The best thing about this little yellow box were its wet lenses which you could screw on and change underwater; this meant that I could do wide angle, portraits and macro on a single dive although this led to a lack of focus on my earlier photography dives.

In 2005 or so, I upgraded from film to the Nikon D70 my first digital SLR. I did my research and settled on Aquatica for my first SLR housing; I ordered the flat port dome port, focus rings, port extensions for the 60mm and my 18-70mm lenses. After a few test dives and average results, mainly due to lighting, I realized a new light source was needed, the YS-90 was an auto strobe and had no power level settings as the D-70 could not at the time use TTL to measure light and balance flash exposure, so I acquired an Inon Z-220 this was paired with the YS-90 providing fill light on slave mode. I used this combination for a year or so. During this time I had added a 105mm macro, 15mm FE, and also a 10.5mm fisheye to my lens collection. I moved to Qatar in 2006 and a new Inon Z240 type 3 was added to better balance my 220 and off we went to Dahab. I have been back in Dubai since 2008 – which means I can dive the Musandam and east coast as much as my work allows me! I really do believe that the Musandam has some of the best diving that I have experienced. The area has an interesting mix of Indian Ocean, Red Sea and the Arabian Gulf. A lot of the photos with this article are from the Musandam and the east coast of the UAE.

When I moved here I was still using the D70 but I was looking for a new camera with quicker autofocus, bigger LCD and a higher resolution. I was looking at the D300, dreaming of a D700, but economics came into play and I got the D90 and again an Aquatica housing which meant that all my old ports and fittings were compatible. The new housing is a dream as it fits the D90 like a glove and is very small, ergonomic and compact underwater. I have added a few more toys to my underwater arsenal in the last year including a macro-mate wet diopter – this gives me twice the life size reproduction – and a set of snoots. I am still experimenting with these, but it is safe to say they are permanently clipped to my BC.

You can view more of my photos on:
www.McGregorUW.smugmug.com









PHOTOGRAPHY ADVENTURES IN THE MUSANDAM...WITH WHALE SHARKS

FEATURE AND PHOTOGRAPHY **WARREN BAVERSTOCK** – WWW.VERSTODIGITAL.COM



to focus on their photographic technique and with poor light/visibility; even a camera equipped with a wide-angle lens struggled to capture anything remarkable. With that said, it was a wonderful drift dive enjoyed by all.

With a three-hour surface interval ahead of us, everyone enjoyed the late afternoon sun while the liveaboard made its way back down to Al Maqtah where we would do our night dive over night stop. With torches and camera strobes re-charged, all the photographers descended onto the dive site that was covered with rich marine life. Like something out of the Abyss, the torches, video and focus lights shone brightly lighting up the reef. This dive site was perfect for macro photography and was full of tiny critters that only come out at night. Those without macro were very fortunate to see some of the Musandam's night time predators including a bunch of large marbled stingrays that swam over the reef looking for food. For me, the amazingly shy and stubborn coral crabs that I had been trying to photograph all day were everywhere and I was very happy to come away with a few close up shots of one in its coral.

The next morning the group entered the water for the first of three dives of the last day – Ras Sarkan. Again, visibility was still very much limited down to a green six metres making wide-angle photography difficult. However, equipped with mid range lens (17-55) I set off to try and bring a half decent Musandam marinescape to the surface. As some of the team descended they bumped into a six metre female whale shark covered in remoras. These lucky divers were easily distinguishable once back on the boat by the size of their smiles. Meanwhile, oblivious to the giant encounter, my buddy and I navigated the site looking for something special to photograph. Eventually my patience paid off and as I experimented with strobe positioning, aperture and shutter speeds, I eventually got the shot of a giant honeycomb moray framed with soft corals and fry.

Heading closer towards home, the liveaboard made its way towards Limah for its final two dives and while gliding through the very calm sea, we spotted another whale shark swimming at the surface. With the boat engines cut and everyone on the sun deck looking down into the water, the team watched as this amazing five metre female whale shark circled the boat. After watching it do two circles of the boat, members of the team jumped into the water to have the encounter of a lifetime. As the shark continued to circle the boat, more of the team jumped in to join it and by its

One weekend during the month of the May I joined a bunch of like-minded divers from the Atlantis Underwater Photography Club and headed off on an unforgettable two day Musandam dive trip. Being a group of photographers of all levels of experience our primary goal was to have fun, share and learn from each other as well as all working hard to get three photographs for our 'share and discuss' presentation at our next club meeting (first Tuesday of every month). Of course, with whale shark season well under way, everyone was eager for the Limah Rock dives as many other local dive operators had been claiming their sightings.

With the boat loaded up and everyone ready to go, the Al Marsa liveaboard slowly manoeuvred out of Dibba port and headed for the Jazirat. The sea conditions were perfect and while everyone got to know each other a bit better, the sun slowly set behind the dramatic mountains of the Musandam. The next morning the sea conditions were pond like and as the boat did the last leg to Jazirat Bay, dolphins and rays were seen jumping in the distance. Arriving at the destination, everyone transferred to the rib for the first of four dives of the day – Tawakul. This is a very colourful sloping dive site with a stunning array of colourful soft corals in and around the ledges and overhangs at around 15m. It goes without saying, the marine life was extraordinary and while descending many of the group were treated to a leopard shark encounter.

Back on the liveaboard and with breakfast ready and waiting, everyone exchanged encounters and chatted about the photographs and video that they had taken during the dive. With the surface interval done and everyone back on the rib, we eagerly set off for our second dive of the day at Jazirat Bay. After a current check, the dive plan was re-confirmed. Once everyone had entered the water, the team descended together. The profile of this dive was very easy, making it perfect for photographers of all experiences. Sadly the visibility was quite limited but everyone did well at adjusting to the conditions and continued to work on getting their photographs. As I followed the slope of the site, I noticed several fresh leopard shark eggs, which was quite satisfying, considering the challenges sharks face in this region. Looking for something really interesting to photograph, I eventually found a small whip coral with a few gobies swimming up and down it. With my buddy close by, I relaxed and just experimented with different lighting techniques knowing that there were no worries about keeping up with fast swimming divers.

With cameras rinsed in freshwater and a quick shower it was not long before it was lunch time and although everyone was still excited by the mornings activities, it was more that apparent that we were going to take the two hour rest period to catch up some with sleep. Our third dive site of the day, Raz Jazirat, was a very tough dive from a photographer's perspective. With a strong current, some people struggled



seventh lap, all of the team were in the water swimming with this gentle giant. Taking photographs from the sun deck I spotted another whale shark about thirty metres away from the boat and then, like the sharks were communicating, both of them disappeared simultaneously. With sex confirmed, left and right identification photographs taken for Sharkwatch Arabia (www.sharkwatcharabia.com) the liveboard's engines restarted and we lazily continued our journey for Limah.

Sadly, the dive at Limah Rock did not bring the whale shark encounter that everybody thought might happen. However, after what the team had experienced from the morning, nobody was disappointed with the dive and everyone continued to use their cameras and record their experiences.

For myself, what I wanted from the Musandam was a nice seahorse photograph. As we set off for our last dive site at Ras Limah I was keeping my fingers crossed. Like all the other dives, the visibility was not great, but all of the sites were buzzing with fresh young marine life and healthy looking corals. Eventually we got to a spot where a large female sea horse was searching for food amongst the sandy bottom and our small group of photographers all waited in turn to get the photograph we wanted. Waiting for everyone to leave I took my time and got the best shot I could.

Sailing back to Dibba Port and while everyone got together for a group photograph it was apparent that the whole team thoroughly enjoyed the adventure with some once in a lifetime experiences thrown in for good measure. I certainly have no doubt there will be a lot of interest for the return trip in June.

I would like to give a big shout out to our Divemaster, Brian Asistido, who was simply brilliant.

If you own an underwater camera and want to use it more, or you want to share and develop with other people that are at the same level to you then join us at the Atlantis Underwater Photography Club. Its not serious, it's a bunch of like-minded divers that get together and photograph stuff underwater. For more information, ask for Vladimir Radnic (photography club leader) at the Atlantis Dive Centre on +971 4 426 3000, check Facebook or just be at the Atlantis Dive Centre at 6.55pm on the first Tuesday of every month.

Perhaps you may be interested in joining us on our next underwater photography Musandam Adventure – for further information on the date of our next trip, contact Jason at the Atlantis Dive Centre on the same number.







WHITE ROCK

FEATURE **STEPHANIE DAVIES – SCUBA DUBAI**

White Rock is one of the many reef dives found in the Musandam, Oman. It is one of the sites farther North, coordinates N26°14'11.9" E56°29'42.6" and getting up there does depend a lot on the weather and the type of boat used, therefore not many divers use this dive site on a regular basis. The best harbour to go from is Dibba, which is in Little Oman and requires a passport which will be checked by the border patrol.

There are a few companies running trips up the Musandam, some of them based in Dibba. Most run day trips on dhows, although there are a couple that use twin engine outboard boats, commonly known as fast boats. This type of vehicle is best if you want to go as far North as possible in one day, although most dhow companies will run overnight trips, making a nice alternative and allowing you to really feel the magnificence and solitude of the fjords. Sleeping is generally on the dhow, with a BBQ on one of the small cove beaches. Some of the more expensive dhows have air conditioned cabins.

If you have your own sea transportation, then a satellite navigation system is definitely required as none of the sites in the Musandam are buoyed and care should be taken when anchoring so as not to damage the beautiful coral gardens. Sites with rock features may have a rope that you can attach a painter line to, which is advisable.

White Rock is also known as Sydney Opera House or by the local name of Ras Shessah. It

is a small rock island that is ideal for snorkelling around, although care should be taken as surface currents and under currents can occur. It is advisable to check the tides before embarking on this dive and making sure that all divers are experienced and comfortable enough to dive this site safely. For a safer dive ensure that you enter the water at a low, neap tide, although remember tides can change very quickly!

Due to the possibility of currents, it is highly recommended that all divers carry a surface marker buoy. This can be in the form of a DSMB (delayed surface marker buoy) and reel, or a surface flag, and always make sure there is somebody on board that can keep an eye on divers surfacing and in which direction they may pop up.

The temperature here, just like everywhere else, varies depending on the time of year. It is certainly possible to dive it all year round, providing the weather is not too windy and you wear the right protection against the elements. During the winter months (December to February) it can get quite cold at around 16°C, so a 5mm-7mm wetsuit would be appropriate. From March to April/May, the temperature rises to 22-24°C and it is possible to wear just a 3mm wetsuit. As June approaches it starts to heat up quite a bit, 26-28°C. For hardy divers, shorts and rash vests are perfect. However, some still prefer to wear a 0mm-3mm long wetsuit, as much to protect them from jelly fish or other poisonous marine life, as to protect them from the cold thermo

clines that can occur, especially at depth.

Visibility ranges from 5-12m, this can often be affected by plankton blooms and an increase in particulates. Although this can make diving a little more challenging, high plankton blooms will also attract fish, especially large fish, so it is actually possible to see more, at closer range.

On the rocky side this site drops down to around 40-50m, so each diver should dive to their personal limits. Dive computers make this much easier, and can vary in price range, and capabilities. Just decide if you want one that can be set only to air (21%) or one that will also allow you to dive on a nitrox mix. It seems that a lot of people are now diving on nitrox as it has many benefits, like allowing longer bottom time and less risk of decompression illness. However, you will have to consider what depth you will be diving to, as the stronger the nitrox mix, the lower the maximum operating depth (MOD)!

I last dived here in May 2010. This is my type of diving! There are many fissures and shelves covered in green whip coral, purple gorgonian coral and a green covered tube like coral. In amongst these, we saw lots of the smaller life – beautiful coloured nudibranchs, blue cleaner wrasse, small green boxfish, gobies, and damsel fish. There was an anemone with a family of resident anemone fish, commonly known as clownfish. Did you know there are around 29 types of clownfish, all of them immune to the toxins found within the anemone, allowing them to hide away from predation?



My dive was with friends on a private boat. If you can arrange your own dive then just head to the coordinates N26°14'11.9" E56°29'42.6" and have a great time. Otherwise, I strongly recommend using Sheesa Beach Dhow Cruises based in Dibba Oman. This long established company has a strong history of successfully providing dhows for diving purposes. They have a high standard of service, listen to their clients and understand divers. Recently they have started to provide guided tours and teach scuba diving. Try them – they are great.

Sheesa Beach Dhow Cruise contact details.

Diving section:

www.sheesabeach.com/diving

Live-aboard dhows:

www.sheesabeach.com/dhow-cruises-fleet

Email: info@sheesabeach.com

Tel: +971 50 333 6046 for bookings and info.

Whatever you do – have fun and do it safely!

STEPHANIE DAVIES

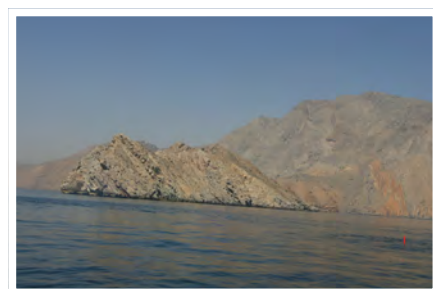
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www.scubadubai.com

Tel: +971 4 341 4940

Email: info@scubadubai.com

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The partnership between the anemone and clownfish is an example of mutualistic symbiosis, as the clownfish also provides protection for the anemone, eating small invertebrates that could otherwise harm the sea anemone. The clownfish then excretes faecal matter, allowing the anemone to absorb the nutrients from it.

A family of clownfish usually comprises of a breeding pair and some smaller non reproductive males. The interesting thing is that all clownfish are born male and change as and when needed. If the female of the family dies, the dominant male changes sex and becomes female, leaving one of the non reproductive males to take over the role as "daddy".

The usual sea life was also present – snappers, blue striped fusiliers, butterfly fish, large bat fish, and a three-horned trunkfish. As we swam

around the rock we looked up to see a large shoal of barracuda and trevally patrolling their territory – an awesome sight.

Eventually we came to a pinnacle 20m deep, and where the current was fairly strong, and as we hung on watching the fish life swimming about, we suddenly noticed a cow tailed ray hovering right in front of us, tail facing in our direction about 5m away. I don't think it even knew we were there as it seemed to be enjoying itself so much. After being mesmerised by its graceful dance, we moved off only to be greeted by another, even larger marbled cow tailed ray. What a great end to a brilliant dive. We then let the current carry us south and about 60m off the rock, where we deployed our DSMB and waited for the boat to pick us up.

DIVING THE RED SEA

JEDDAH, KINGDOM OF SAUDI ARABIA

FEATURE AND PHOTOGRAPHY **GORDON T. SMITH**

I first stuck my head underwater in the Red Sea way back in 1986 off a beach somewhere in North Obhur, Jeddah. It would be impossible to define exactly where it was even as it was the only hotel beach at that time, run by the Red Sea Palace Hotel. When I moved to Jeddah in 1992 from Riyadh, most of North Obhur was being developed with very little free beach access.

Where there was free access, the dive sites had exotic names such as "Hole in the Wall", "Pizza Hut Gap", and the "Ironworks". There was and still is paid beach access through hotel beaches and during the last few years when I lived there I shared a cabin with 35 other people from my place of employment on a private beach. Fortunately it was never busy except on Fridays, but several of us used to stay overnight on Wednesday, make a night dive and two early morning dives on Thursday on a weekly basis before the crowds arrived.

As my business travel brings me to Jeddah frequently, I have been lucky enough to still manage to occasionally dive here.

My recent trip to Jeddah in March gave me

an opportunity to dive at the Sheraton Beach Resort as well as take a trip out on a boat run by Desert Sea Divers, both of which resulted in some really good diving.

At the Sheraton Beach Resort, I was accompanied by two Australians, Russell and Kate, and although the weather was a bit choppy we managed two leisurely dives off the beach.

On the first dive I was greeted by a small barracuda, which posed for a few seconds and decided I was too big to hang around with, and then a nice slow dive down to about 20m with the usual Red Sea reef fish going about their daily business. Russell spotted a massive Stone Fish and there were plenty of Hawkfish, *Paracirrhites forsteri*, hanging around allowing me to get close. Water temperature was a nice 27°C and visibility a good 15m.

The resort has a dive shop for tanks and weights as well as any other equipment that is required. They can arrange NITROX but this has to be ordered beforehand.

Entry to the resort is free if staying at the

Sheraton Hotel, however I was fortunate that Russell and Kate are members, so I was admitted as a guest for 110 Riyals. Air is available at 10 Riyals per tank, and weightbelt with weights for 10 Riyals.

Kate also runs an expat dive group for women in Jeddah called the "Jeddah Mermaids" and can be contacted via jeddahmermaids@gmail.com.

The following day, Mark, one of my friends living in Jeddah, arranged a boat trip with Desert Sea Divers, who run regular boat trips to the outer reefs. The weather was a tad choppy when I dived at the Sheraton Beach the previous day and had not changed much on Friday morning.

The plan was for 3 dives, but I was not so sure if this was going to be possible due to the weather. There were 12 divers on board and we set off at 8am down Obhur Creek and then out into the Red Sea. The sea was quite rough but once at the first dive spot (South Tower Reef) the boat anchored in the leeward side of the reef and it was fairly calm. There was plenty of food and drink on board and



Citron Goby – *Gobiodon citrinus*



Coral Goby

White Bellied Damselfish – *Amblyglyphidodon leucogaster*



Juvenile Blackside Hawkfish – *Paracirrhites forsteri*



Adult Blackside Hawkfish



lunch was also provided after the second dive. All this for a mere 300 Riyals, inclusive of 3 tanks and weights.

The boats that Desert Sea Divers use are well set up, and the dive briefings were very professional. Overall a fantastic package compared to some other operators that I have used in the past. They even hang a bottle from the boat with regulator at 5m for any emergency deco stop should it be required.

The diving was very good although the temperature was down a degree at 26°C but visibility was at least 20m, beautiful diving although a fair bit of current making it hard work at times staying still to take photographs.

The second and third dives were at Anas Reef and this was a beautiful spot, visibility on the first dive was 20m but slightly less on the second dive as the seas around had become a bit rougher. Lots of Blue Spotted Rays, *Taeniura lymma*, and a chance to photograph some Citron Gobies, *Gobiodon citrinus*, plus the usual Red Sea reef fish. The corals were in really good condition and an ideal reef for photography with lots of nooks and crannies to explore.

The boat ride back to Jeddah was pretty rough, as the wind had picked up considerably, definitely a ride for experienced sailors and not for those who suffer from motion sickness. Fortunately the boats used by Desert Sea Divers are well designed and everyone kept fairly dry.

The only negative point was the lack of NITROX on the boat dive, even for the deco stop bottle. I was told that it could be provided but they did not have an analyzer, which was pretty poor really. Apparently a customer had dropped their analyzer overboard a couple of weeks earlier, and it had not been replaced as he had not paid for it. Next trip I will bring my own.

Access to Saudi Arabia is restricted, not exactly a prime tourist destination for non-Muslims, but if travelling to Jeddah on business then take the opportunity to stay a few days longer if possible and enjoy the diving.

Desert Sea Divers can be contacted on +966-2-656-1807 and the Sheraton Beach Resort on +966-2-234-2264.

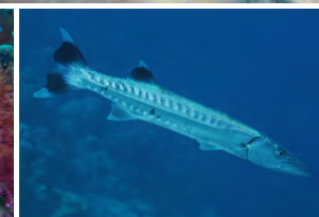
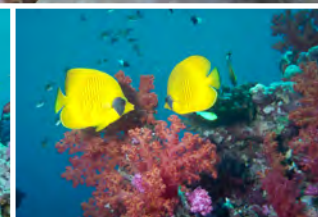
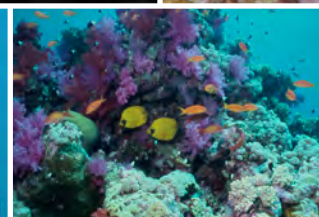
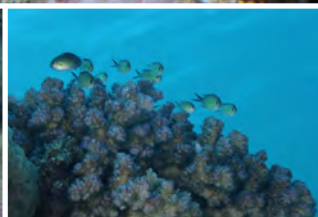
There are many dive shops around Jeddah, including several off Tahlia Street near the Danube supermarket, Red Sea Divers (+966-2-660-6368), The Arab Circumnavigator (+966-2-665-1304) and Blue Reef Divers (+966-2-661-3931).

Most Jeddah dive shops are open every day and Red Sea Divers is open from 7.30am to 11.00pm on weekends.

Female Anthias – *Pseudanthias squamipinnis*
Got their make up on to go out for the night by the looks of things.



Stonefish



DIVING DESTINATIONS

DAYMANIYAT ISLANDS

FEATURE AND PHOTOGRAPHY **PHILIPPE LECOMTE**





One of the best places to dive close enough to Abu Dhabi or Dubai is the Musandam or the Daymaniyat Islands in the Sultanate of Oman. It takes about 2-3 hours (depending on your driving pace) to reach the Dibba Port to get a boat to the Musandam and if you're more adventurous, it takes an extra hours drive to Al Sawadi Beach Resort. This hotel is the nearest place to stop over for the night to dive at the Daymaniyat Islands. The road from Al Ain to Sohar has been renovated making it much easier to get there.

The Daymaniyat Islands are a group of uninhabited islands located approximately 18 kilometres offshore of the Batinah coast. They are Oman's only marine nature reserve, and have been under UNESCO protection for the past 21 years.

IMPORTANT: Visitors are not permitted to land on the islands between the beginning of May, until the end of October.

These islands offer numerous dive sites with beautiful coral gardens, reefs, walls,

and large pelagic fish, turtles, rays, leopard and black tip reef sharks are common and if you are really lucky, whale sharks.

The Daymaniyat islands consist of many submerged rocks, in an east to west alignment, which form the base for well developed coral reefs. Abundant coral growth extend up to a 20m depth, in water that has the highest clarity of any coral growing area in Oman. Due to that, the ecosystem for this area is magnificent.

The most western island, Jazirat Jun, is around 18 to 20 kilometres north east of Ras Al Suwaidi, and 27 kilometres roughly north west of Seeb (which is well worth a visit to see the small markets there, where fishermen still sell directly from their boats).

Approximately 2 and a half kilometres north west of Jun, there is a nice wall dive which goes down to around 25 metres.

The choice to dive (or even snorkel) around the Daymaniyat Islands is almost overwhelming, with plenty of cauliflower, table, bush, and boulder corals near the beaches. Dive potential is plenty with sand slopes, boulders, caves or drift dives.

THE DIVE SITES

WESTERN DAYMANIYAT ISLANDS

1. Clive Rock
2. Starburst Central
3. West Wall
4. Central Wall
5. Coral Garden
6. Suzannes Drift
7. Barracuda Central

CENTRAL DAYMANIYAT ISLANDS

1. Garden of Eden
2. Logans Run
3. Black Tip Reef
4. Charlies Drift
5. Three Sisters
6. Police Bay
7. Hayuts Run

EASTERN DAYMANIYAT ISLANDS

1. The Aquarium
2. Market Garden
3. The Rockies
4. Sams Reef
5. Rocky Ridge





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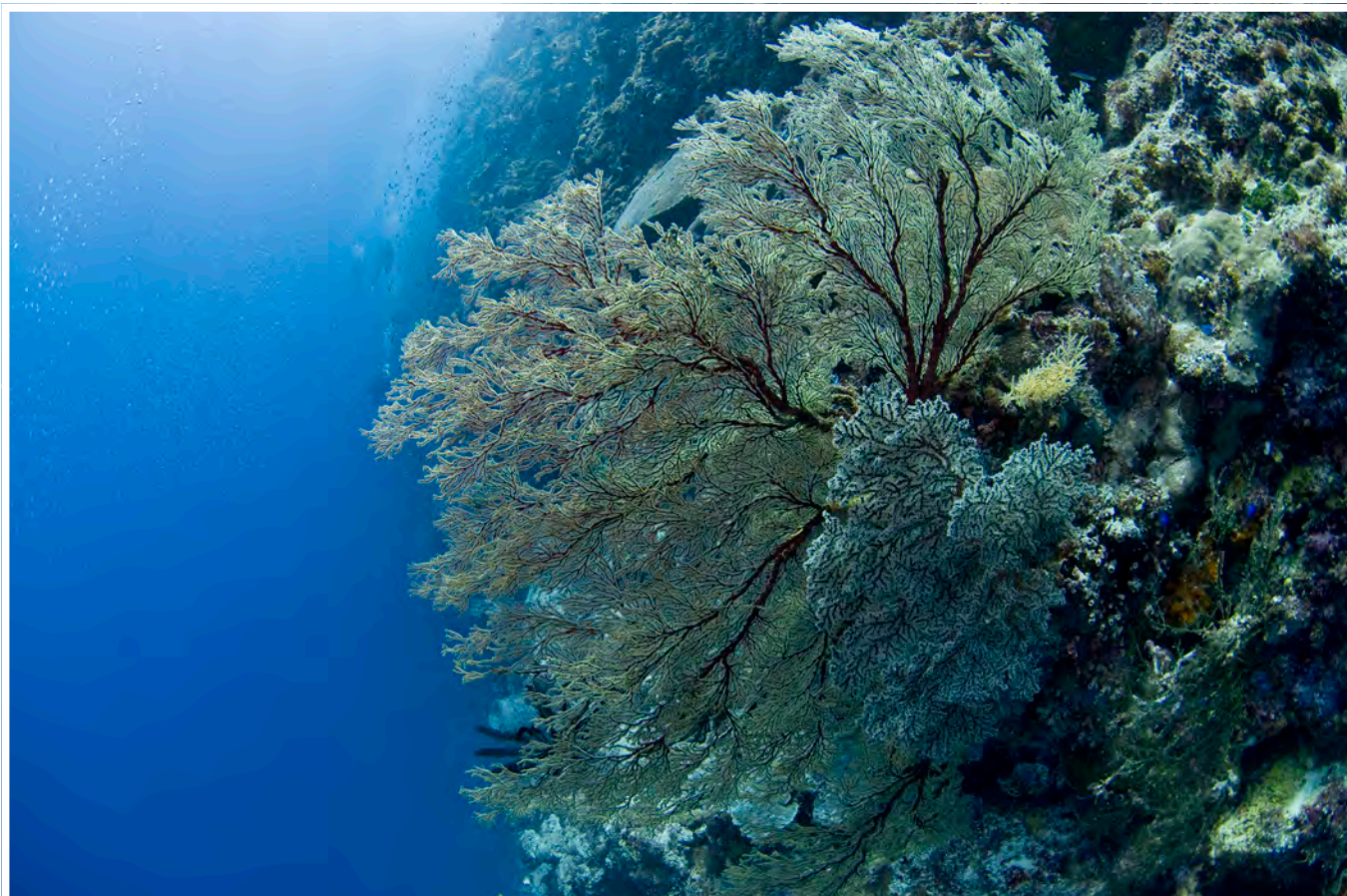
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TUBBATAHA: THE WONDERS BENEATH

FEATURE AND PHOTOGRAPHY **DES ARELLANO** UNDERWATER PHOTOGRAPHY **LENE & CLAUS TOPP**
(COURTESY OF THE TUBBATAHA MANAGEMENT OFFICE)



I woke up early on a Friday morning to excited calls from the fellow divers aboard the Hans Christian Andersen. They point to a pod of dolphins racing playfully along the horizon.

As we did our first dive a few hours later, we watch in wonder as reef fish swim side by side with reef sharks cruising the shallows of one the most fascinating coral attols in the world.

This is Tubbataha Reefs National Park, Sulu Sea, Philippines.

A WORLD HERITAGE SITE

Declared as a UNESCO World Heritage site in 1994, Tubbataha Reefs National Park (which means "long reef exposed at low tide" in the language of Sulu's seafaring people) is a 33,200 hectare marine park whose reefs, walls and drop-offs are home to diverse marine life.

According to a World Wildlife Fund (WWF) Philippines report, researchers have recorded 396 species of corals in the area, which is about half of all coral species worldwide. This is apart from the numerous species of fish, algae, sea grass, sea birds, whales, dolphins, rays and sharks (hammerheads!) that make Tubbataha the amazing center of biodiversity that it is.

The park is at the heart of the Sulu Sea, west

of the country. The nearest land mass would be Palawan 150 kilometers northwest or 10 hours via sea travel. It is comprised of two attols, simply referred to as the North and South attols, with 16 listed dive sites to explore.

And explore I did. I signed up for a six-day, five-night liveaboard trip for a more in depth look – pun intended.

DIVING THE NORTH ATOLL

Smaller chase boats took divers to the dive sites, all of which were about five minutes away from where the main ship was moored. Our first day was spent exploring the southeast corner of the North Atoll, with three leisurely dives at Malayan Wreck, Wall Street and Sea Fan Alley – gentle slopes that go down to 15 meters, followed by walls that offer the best of both worlds. Turn to your left and gaze at a reef teeming with fish, hard and soft corals and sea fans in a multitude of colors. Look out into the blue expanse on your right (and below) and see wrasses, groupers, sweet lips, jackfish and other big pelagic fish oblivious to divers swimming among them.

We then sailed off to the atoll's north face on day two, where we braced ourselves to a more exciting day underwater: At Shark Airport, reef sharks rest within the wall's crevices, calling to

mind sleek gray jets on a hangar; ready for take-off.

Halfway through the second dive of the day, we chanced upon a sizeable school of jacks and two playful manta rays circling the area, gliding along like it had all the time in the world.

On a clear day, visibility could reach up to 45 meters, with the sea looking like clear glass in all directions, according to old timers in the know of Tubbataha's shifting currents.

DIVING THE SOUTH ATOLL

We did two dives at Delsan Wreck on the third day, which could be the equivalent of an underwater theme park. Divers into photography were spoilt for choice and didn't know where to look first: Would it be fair to focus on the school of barracuda? Should they go for the tuna, the reef sharks or the turtles surfacing for air before plunging into the water again?

That afternoon we decided to check out Triggerfish City, where, as the name implies, triggerfish – a lot of them – are resident. We proposed to re-name the site as Turtle City, as there were several turtles ready for their close up.

On the trip's final diving day, as we sailed back

DIVING DESTINATIONS



to the North Atoll, we came up with a plan: go down to 18 meters at Malayan Wall and veer towards the blue, in our quest for hammerheads. They proved to be elusive, but the search proved to be an exhilarating experience.

BOUNCING BACK

Looking at Tubbataha's marine life, it's difficult to imagine that it once fell prey to destructive fishing techniques such as dynamite and cyanide fishing. Depleted fishing populations in their respective home countries have lured foreign fishing vessels to poach into the park's waters.

As Tubbataha became known to divers and researchers worldwide, efforts to protect the reef grew. In 1988, then President Corazon Aquino signed the Presidential Proclamation 306, which made Tubbataha the country's first marine protected area (MPA). This prohibited fishing and the gathering of corals, wildlife and marine life from the site.

Conservation, however, remains a constant challenge. Operating on limited funding, representatives from the Tubbataha Management Office (TMO), the Coast Guard and the Navy, with assistance from dive operators, maintain a presence in the park to conduct surveillance operations.

The park rangers deserve a special mention. They are based on a ranger station sitting on a sandbar on the North Atoll, living in isolation for two months at a time. They are on the lookout for any illegal activity, at times apprehending fishing vessels larger than the patrol boats they use on duty.

And from what we've seen, their hard work through the years seems to have paid off. Tubbataha is proof that with proper management and concerted efforts, the sea is indeed resilient, bouncing back to sustain lives and amaze us of its wonders for generations to come.

WHEN TO GO

Tubbataha Reefs National Park is open from March to June of each year. Due to erratic weather conditions (possibly because of climate change), it's best to plan a trip towards the end of April.

GETTING THERE

From Manila, take a domestic flight to Puerto Princesa city, the capital of Palawan. Then hop on the live aboard ship that will take you to Tubbataha.

DURATION OF THE TRIP

Six days and five nights, with four days of diving.

WHERE TO SIGN UP

There are eight accredited live aboard operators plying the route. Two of these are the Hans Christian Andersen (www.hcadivecruise.com) and the Expedition Fleet (www.expeditionfleet.com).

HOW YOU CAN HELP

Conserving Tubbataha's marine resources is an immense collaborative effort. You could help by contributing to the TMO's operational fund, which is utilized for enforcement activities and education programs. Log on to www.tubbatahareef.org for more details.



STONEFISH AND STINGRAY ENVENOMATIONS

FEATURE **BARBARA KARIN VELA, MD**



Observing marine animals in their environment and the interaction with them is one of the main reasons why people learn to dive, but at the same time it is also the reason why some never want to dive. Even though injuries from marine animals are very rare, they still happen. In the last issue of the EDA magazine, I covered traumatic marine injuries with first aid and in this article I am going to describe the most common fish envenomations.

Venom is poisonous fluid secreted by animals and typically injected into their prey or aggressors by biting or stinging. Many fish have spines and a venom apparatus, usually for protection (venomous fish are usually lying on the bottom and therefore are easy prey) or for incapacitating their prey. Spines may be either concealed, like with the stonefish, or highlighted as an apparent warning to the predators (with the lionfish). The spines jab the diver's skin, and the venom is released into the diver's body system. Venom is a protein that once absorbed by the body, interacts with its functions by blocking muscles or nerves. The first symptom of a sting is instant excruciating pain, increasing in intensity over the next few minutes and lessening after a few hours. At the site of the injury there are puncture wounds, with an inflamed zone and a swelling around it. As the venom works into the body, the injured can have some generalized symptoms which can be as mild as fatigue, nausea, vomiting and sweating, but sometimes they can also develop into cardiovascular and respiratory arrest.

Even though there are many fish that can cause spine punctures and envenomations (Scorpionfish, Zebrafish, Lionfish, Stonefish, Stingrays, Turkeyfish, Catfish, etc), there are only small differences in the symptoms, which can aggravate the identification of the fish species responsible for the event. However, there are some differences in severity of the symptoms, from local reaction to generalized symptoms, but for all of them the first aid is the same. The patient should be laid down and reassured, and the affected area should be rested in an elevated position. Surface venom should be gently washed off, and all obvious spines should be gently removed. The wound should be immersed in hot water (temperature up to 45 degrees Celsius) for 30-90 minutes, since fish

venoms are destroyed by heat. As the wound from venomous stings can have lower sensitivity to change of temperature, it is important to immerse some healthy skin above the injury in hot water to avoid burn injury to the same area. It can be impossible to immerse the whole limb in hot water; an alternative is to wrap a limb with a towel soaked in hot water, and to pour additional hot water over it. The wound should be scrubbed with soap and water, and irrigated generously with fresh water. Once the wound is cleaned, local antiseptic or an antibiotic can be applied. The injured diver should be monitored as allergic reactions or cardiovascular collapse and respiratory depression can happen. In cases of fish envenomations, the injured diver should get medical treatment provided by a doctor. As the pain is the most severe symptom, it should be managed appropriately, usually by injecting local anesthetic through the puncture wound which provides considerable relief. Some wounds need exploration and debridement, removal of any broken spines, treatment by antibiotics, tetanus injections and suturing by secondary intention (sutures are applied on the wound, but it stays open for a few days till it is made sure that there is no infection). In case of general symptoms, symptomatic treatment can be given according to the clinical features.

The most serious fish injuries causing envenomation come from stonefish and stingrays. Stonefish can grow up to 30cm and lie dormant in the shallow waters, and are practically indistinguishable from the surroundings. It has 13 dorsal spines; each of them is connected to two venom glands. When pressure is applied over the spines, the glands discharge venom into the wound. Each spine can discharge 5-10mg of venom. Stonefish venom causes narrowing of the blood vessels and therefore tends to localize itself. It can affect all the muscles including the heart by blocking the conduction in these tissues which can result in the loss of function (paralysis), inadequate breathing, widening of blood vessels, shock and heart failure. Symptoms can be local, from the site of the injury, or general, from the interaction of venom with the tissues. Upon the injury, there is severe pain increasing in intensity over the next 10 minutes which can be so excruciating that it can cause unconsciousness, and thus drowning. Dr J.L.B. Smith described his experience of a stonefish injury in an article published in 1951 in the scientific journal *Copeia*: After 5 minutes "...insane desire to ease the mounting agony by rolling on the ground"; next 2 hours "...perspiration dripped to the floor; little recollection of events, close to collapsing". The area of injury becomes pale, followed by a blue or purple color of the skin, swollen, hot, numb in the centre and extremely tender in the periphery. Swelling can extend up the limb. General symptoms include pale color of the skin, sweating, low blood pressure and fainting when standing.

Inadequate breathing can be due to pulmonary edema, depression of the respiratory centre, heart failure, and paralysis of breathing muscles. Reduced or irregular heart rate and arrest (cessation of heart beats) can also happen. Gradual recovery from a stonefish injury can take many months, and may be characterized by periods of weakness and nausea. Antivenom against stonefish is developed by Australian Commonwealth Serum Laboratories, and if available should be given as soon as possible.

Stingrays usually lie in the sand, and the unfortunate victim usually treads on its dorsal or dives over it. They cause injury by driving the spine into the limb or body of the victim and release the venom. Extraction of the spine results in laceration and may leave the spine within the wound. Stingray venom can cause electrocardiographic effects, and depending on the dose there can be minor changes in heart rhythm or complete heart block (AV block). Most of the cardiac changes can be reversed within 24 hours. As with the stonefish injury, symptoms can be local or general. Pain is usually immediate, it is increasing over 1-2 hours, and easing over 6-10 hours, but it can persist for days and it can be constant, pulsating or stabbing. Depending on the depth of the injury, the wound can bleed heavily. The area of the injury can be swollen and pale, with a bluish rim spreading around the wound in an hour or two. Local tissue death, ulceration and infection are common. General symptoms include loss of appetite, nausea, vomiting, diarrhea, frequent passing of urine and salivation. Muscular cramps and tremor can occur in the affected limb, or they can be more generalized. Palpitations, low blood pressure, irregular heart rhythm can also happen, and those usually resolve within 24 hours. With stingray injury, fatalities are possible, especially if the spine perforates body cavities (pericardium, peritoneum and pleura) which can cause immediate or delayed bleeding.

Prevention of these injuries is important. Divers and bathers should shuffle their feet when walking in shallow waters to avoid injuries by stingrays, and by doing so give them time to move (with a foot on its back, stingrays can only defend themselves and cause an injury). Wearing rubber boots and thick sole shoes will prevent most stonefish injuries but nevertheless a spine of a stingray can still penetrate them, although the severity of the sting is decreased. Divers should wear appropriate exposure protection including hoods, gloves and boots, practice perfect buoyancy control, watch the placement of their hands and avoid exhausting dives (tired divers are more likely to accidentally touch marine life) and be passive in the interactions with the marine animals.

Dr. Karin Vela is A Diving Medicine Physician EDTC/ECHM IIa and is working in the Dubai London Speciality Hospital.

UPCOMING EVENTS

WORLD ENVIRONMENT DAY – 5 JUNE

8 June, EDA School Program held for students at Raffles School

WORLD OCEANS DAY

8 June

WORLD SEA TURTLE DAY

16 June

EPIC SUSTAINABLE LIVING EXHIBITION

22-24 June, The Dubai Mall (Style Meets Sustainability)

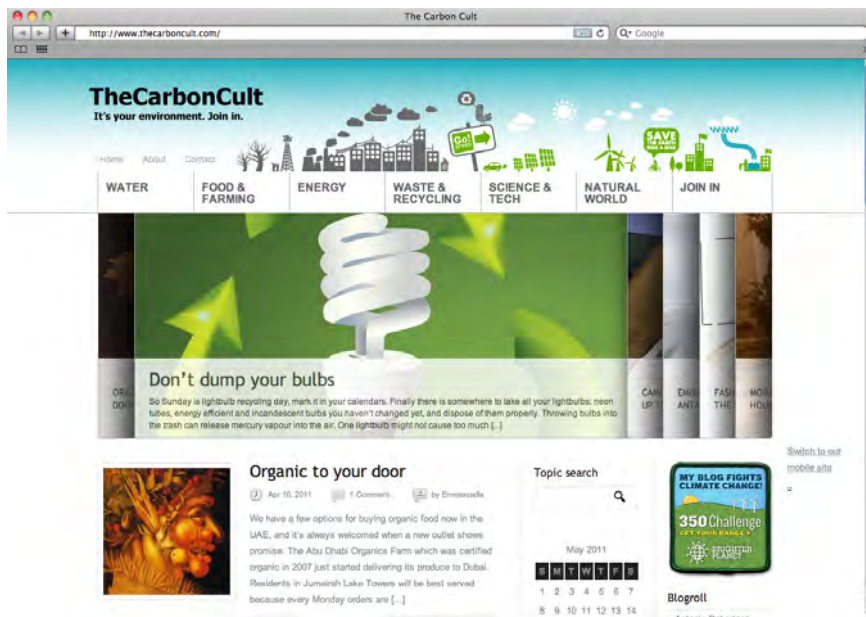
EDA MOVIE SCREENING

13 July, Cinestar – Mirdif, City Centre. (Details will follow via Face Book and Email)

INTERESTING LINKS AND RESOURCES

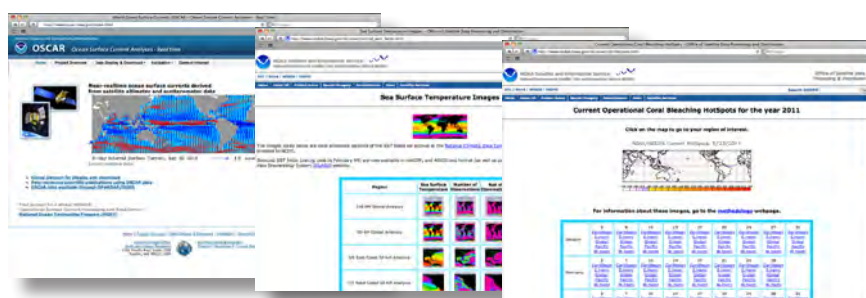
THE CARBON CULT

• www.thecarboncult.com



OCEANOGRAPHY RESOURCES

- www.oscar.noaa.gov/index.html
- www.osdpd.noaa.gov/ml/ocean/cb/hotspots.html
- www.osdpd.noaa.gov/ml/ocean/sst/sst_anal_fields.html



Chairperson Faraj Butti Al Muhairbi

Vice Chairperson Essa Al Ghurair

The Secretary General Jamal Bu Hannad

Financial Director Khalfan Khalfan Al Mohiari

Head of the Technical Committee Omar Al Huraiz

Head of the Scientific Committee Mohd Al Salfa

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MISSION STATEMENT

To conserve, protect and restore the UAE marine resources by understanding and promoting the marine environment and promote environmental diving.

LEGISLATION

Emirates Diving Association (EDA) was established by a Federal Decree, No. (23) for the year 1995 article No. (21) on 23/02/1995 and chose Dubai as its base. The Decree stipulates the following responsibilities for EDA.

- To Legislate and regulate all diving activities in the UAE.
- Ensure environmentally respectful diving practices in all EDA members.
- Promote and support the diving industry within the UAE by coordinating the efforts of the diving community.
- Promote diving safety in the commercial and recreational diving fields through standardization of practices.
- Promote and preserve historical aspects of diving within the gulf region and enhance environmental education to diving and non diving communities through EDA activities.

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