

The Cayman

Introduction text by Michael Symes
Photographs by John Collins and Peter Symes

Situated in the sparkling Caribbean Sea, the three Cayman Islands, known as Grand Cayman, Cayman Brac and Little Cayman, lie some 250 km south of Cuba and about 300 km west of Jamaica. Geographically speaking, they form part of the Cayman Ridge which extends westwards from Cuba over towards the Bay of Honduras. The Cayman Trench, which goes down to a maximum depth of 7686 meters, separates the islands from Jamaica.

The Cayman Islands were first sighted by Christopher Columbus on 10 May, 1503, when he was blown off course en route to the island of Hispaniola, now known as Haiti and the Dominican Republic. He described two very small and low islands which, like the surrounding sea, were full of turtles, and for this reason he named these islands Las Tortugas. The two islands were Cayman Brac and Little Cayman. A map from 1523, showing all three islands, gave them the name Lagartos, meaning alligators or large lizards. However, by 1530 the name Caymanas was being used. It is derived from the Carib Indian word for the marine crocodile, which is now known to have lived in these islands.

On his 1585-86 voyage to these waters Sir Francis Drake, with a fleet of 23 ships,

RIGHT: Diver and large Barrel sponge, one of the largest marine organisms in the Caymans, reaching over 2m across. Bloody Bay, Little Cayman

NEXT PAGE: Diver encounters one of the large deep water gorgonians or fan corals on the Cayman reefs

Infamous for pirates and bankers, the Cayman Islands are also a wonderful playground for divers

Islands



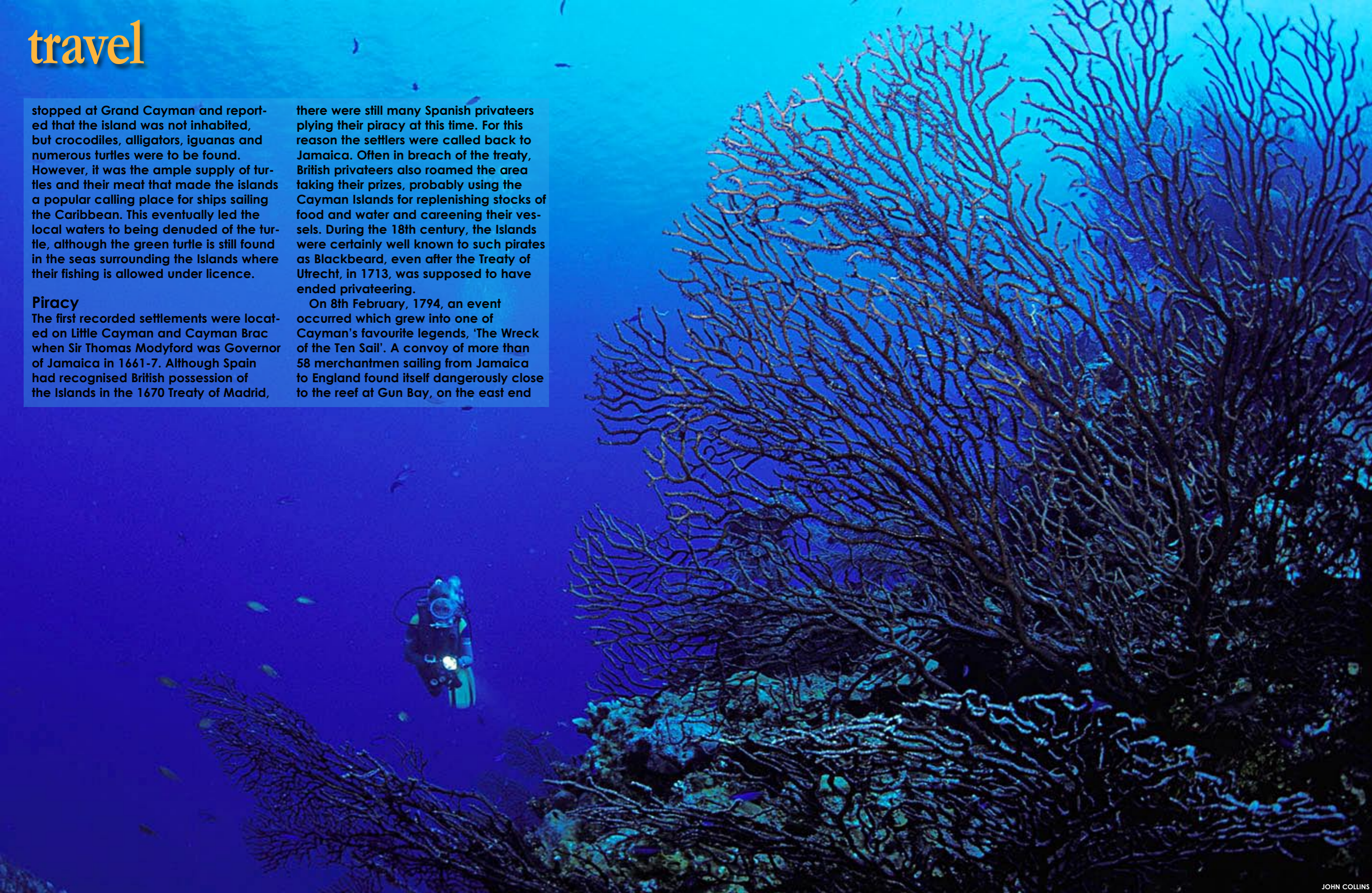
stopped at Grand Cayman and reported that the island was not inhabited, but crocodiles, alligators, iguanas and numerous turtles were to be found. However, it was the ample supply of turtles and their meat that made the islands a popular calling place for ships sailing the Caribbean. This eventually led the local waters to being denuded of the turtle, although the green turtle is still found in the seas surrounding the Islands where their fishing is allowed under licence.

Piracy

The first recorded settlements were located on Little Cayman and Cayman Brac when Sir Thomas Modyford was Governor of Jamaica in 1661-7. Although Spain had recognised British possession of the Islands in the 1670 Treaty of Madrid,

there were still many Spanish privateers plying their piracy at this time. For this reason the settlers were called back to Jamaica. Often in breach of the treaty, British privateers also roamed the area taking their prizes, probably using the Cayman Islands for replenishing stocks of food and water and careening their vessels. During the 18th century, the Islands were certainly well known to such pirates as Blackbeard, even after the Treaty of Utrecht, in 1713, was supposed to have ended privateering.

On 8th February, 1794, an event occurred which grew into one of Cayman's favourite legends, 'The Wreck of the Ten Sail'. A convoy of more than 58 merchantmen sailing from Jamaica to England found itself dangerously close to the reef at Gun Bay, on the east end





Caymans

Before slavery was abolished in 1834, there were over 950 slaves owned by 116 families.

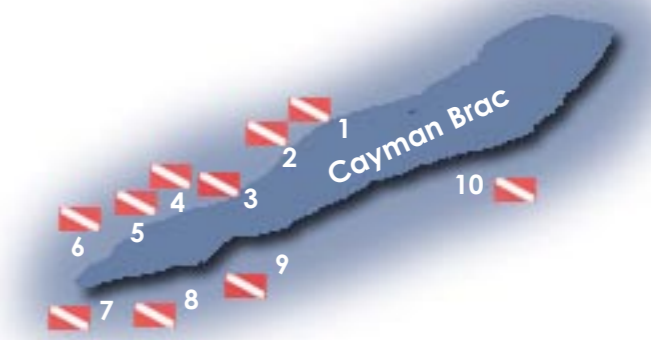
When Jamaica achieved independence in 1962, the Islands opted to remain under the British Crown, and an administrator appointed from London assumed the responsibilities previously held by the governor of Jamaica.

An airfield opened in 1953 in Grand Cayman, replacing the seaplane service which had operated since the 1940s.

The economy has now grown greatly, as governments have pursued policies aimed at developing the infrastructure,



- LITTLE CAYMAN DIVE SITES
1. Cumber's Caves
 2. Bus Stop
 3. Marilyn's Cut
 4. Great Wall
 5. Joy's Joy



- CAYMAN BRAC DIVE SITES
1. Radar Reef
 2. Plymouth Rock
 3. Snapper Reef
 4. MV Capt. Keith Tibbetts
 5. Charlie's Reef
 6. East Chute
 7. Tarpon Reef
 8. Anchor Wall
 9. Inside Out
 10. Rock Monster

BELOW: Grunts schooling in the Cayman reefs. The shallow reefs of Bloody Bay's protected marine park are healthy and full of fish life

JOHN COLLINS

Juvenile spotted drum, 5cm long, Little Cayman

of Grand Cayman. Ten of the ships, including HMS Convert, the navy vessel providing protection, foundered on the reef. With the aid of Caymanians, the crews and passengers mostly survived, although some eight lives were lost. The court martial of the fleet's leader, Captain Lawford, revealed that a current had unexpectedly carried the fleet 20 miles north of its course. The incident underscores how common shipwrecks have been in the history of the Islands. At this time the population was about 400.

The first census of the Islands was taken in 1802, showing a population on Grand Cayman of 933, of whom 545 were slaves.



- There are over 200 dive sites around Grand Cayman Island, including those listed below:
- | | | |
|---------------------|------------------------------------|-----------------------|
| GRAND CAYMAN DIVE | 7. The Aquarium | 17. Babylon |
| 1. Bonnie's Arch | 8. Doc Poulson/Mitch Miller's Reef | 18. Turtle Pass |
| 2. North West Point | 9. Little Tunnel | 19. Snapper Hollow |
| 3. Orange Canyon | 10. Trinity Caves | 20. Grouper Grotto |
| 4. Big Tunnel | 11. Happ's Pipeline | 21. The Maze |
| 5. Sand Chute | 12. Ghost Mountain | 22. Thee Sisters |
| 6. Oro Verde | 13. Stingray City | 23. Laura's Reef |
| | 14. Hole in the Wall | 24. Pedro's Pinnacles |
| | 15. Princess Penny's Pinnacle | 25. Japanese Gardens |
| | 16. Grand Canyon | 26. Eagle Ray Rock |



JOHN COLLINS



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Moray eels are commonly seen throughout the Caymans

education, health and social services of the Islands, and fostering the continued growth of Cayman's two main industries, tourism and financial services. The population of the Cayman Islands is now about 40,000, and the main language is English with Spanish frequently spoken as a second language.

Playground for tourists and scuba divers

This is a well-favoured place. The climate is mild, with temperatures seldom going below 21°C or above 32°C. Rainfall over the Islands is seasonal, with the capital, George

Town, receiving a monthly average of about 12 cm of rain. The Islands are very fertile with coconut trees, thatch palm, seagrape, almond and casuarina trees abundant. Breadfruit, papaya, avocado, citrus, and mango trees are also to be found, together with bananas, plantains, sweet potatoes, pumpkins, watermelon, cantaloup, green and hot peppers, tomatoes, etc.

The Islands themselves contain few indigenous animals, none of which are dangerous. The most common are non-poisonous snakes, iguana, the hickatee (freshwater turtle), and land crabs. Grand Cayman's rare

and endangered Blue Iguana can be seen at the Queen Elizabeth II Botanic Park. And there are more than 180 species of birds here, including the Cayman Parrot, Cayman's national bird.

However, beautiful and attractive as the Islands might be in themselves, it is the multitudinous tropical marine life of all kinds in the surrounding waters, especially in Cayman's coral reefs, that entice scuba divers here from all over the world. The underwater landscape here is dominated by the great Cayman Trench, with its famous North Wall, which plunges down to more than 7000 meters. The

Compact DX6 Advance



Aluminium Compact tech diving lightpack: rechargeable



Compact and easy to connect on your tank

Burn time 2,7 H

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Charging in end of lamp plug



Compact Long burn time Option: Extra bulb head easy maintenance



Turn on/off on lamp head

Technicall data:

Tension (volts): 6 Volt
Current (Amp/h): 9 Amp
Power (Watt): 20 W
Burn Time: 2,70 H

Reflector Dia: 51 mm
Bulb (Degrees): 12
Color Temp.(Kelvin) 3200

Weight in air: 2300 gr
Weight in water: 1900 gr

Lamp dimensions:
Pack dim: ø42 x 320 mm
Light on/off in light head
Batteri type: NIMH

Charging time(min) 10H

Description:

Lamp head made of aluminium machined in high precision, and double coated, oring sealed in front of lamp, and double sealed in back on the plug, light turn on/off just turn plug. charging of batteripack. on end of lamphead plug.

Batteri pack, made of aluminium double coated, and all plug ends are double seald.

Light system are waterprove to 220 meter.

Charger and plastic box included.

Ocean Pro is distributed worldwide exclusively by:

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E-mail: cdc@email.dk



PETER SYMES

TOP LEFT: Divers photograph the corals at Grand Cayman where large gorgonians can be found emerging from the reef

Caymans



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BOTTOM LEFT: Yellow-headed jawfish, darts from its burrow to catch passing food



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BOTTOM RIGHT: A mug shot of one of the endangered Loggerhead sea turtles raised on a turtle farm by the sea on Grand Cayman Island

CENTER: Orange ball anemone, night dive, Little Cayman

TOP RIGHT: Goby on coral, Little Cayman



JOHN COLLINS



PETER SYMES

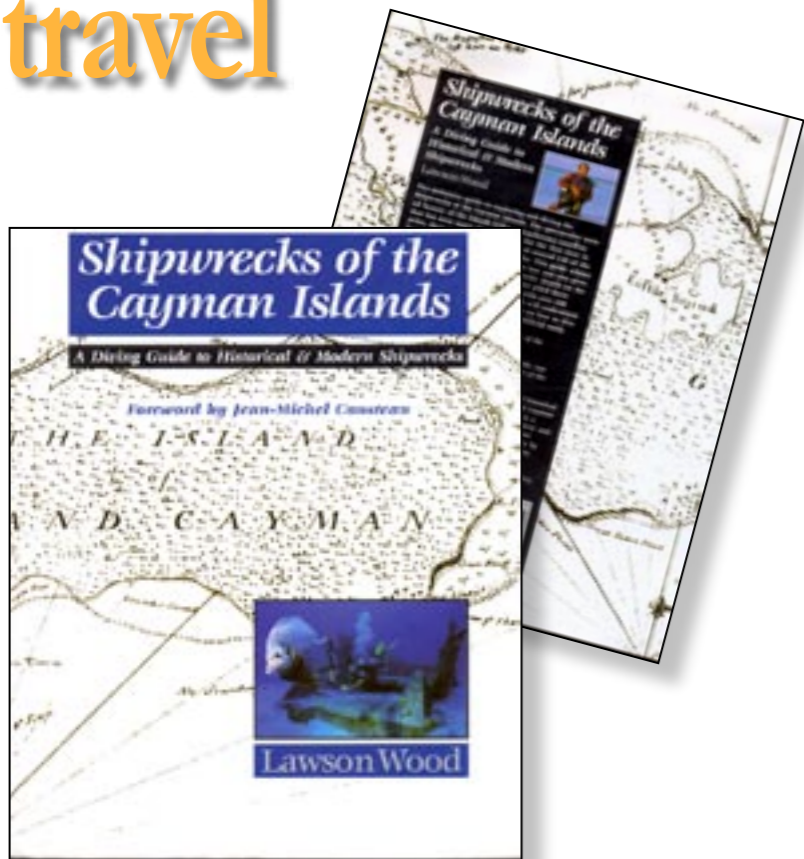
walls of this trench are covered with marine life, including sea fans, barrel sponges and sea whips. And there is also Orange Canyon, at the north end of the West Bay, with its incredible concentration of orange elephant-ear sponges, as well as giant black sea fans. Truly, a super playground for scuba divers. ■

Take Note:

Effective December 31, 2005, all visitors traveling to the Cayman Islands must have a passport, based on the US implementation of the **Western Hemisphere Travel Initiative.**



The Lost City of Atlantis is Revived on Cayman Brac



World renowned underwater photographer and author, Lawson Wood, who is a Fellow of the Royal Geographic Society, the Royal Photographers Society and the British Institute of Professional Photographers, has written two dive guides for adventurous divers who want to explore the reefs of the Cayman Islands:

Shipwrecks of the Cayman Islands

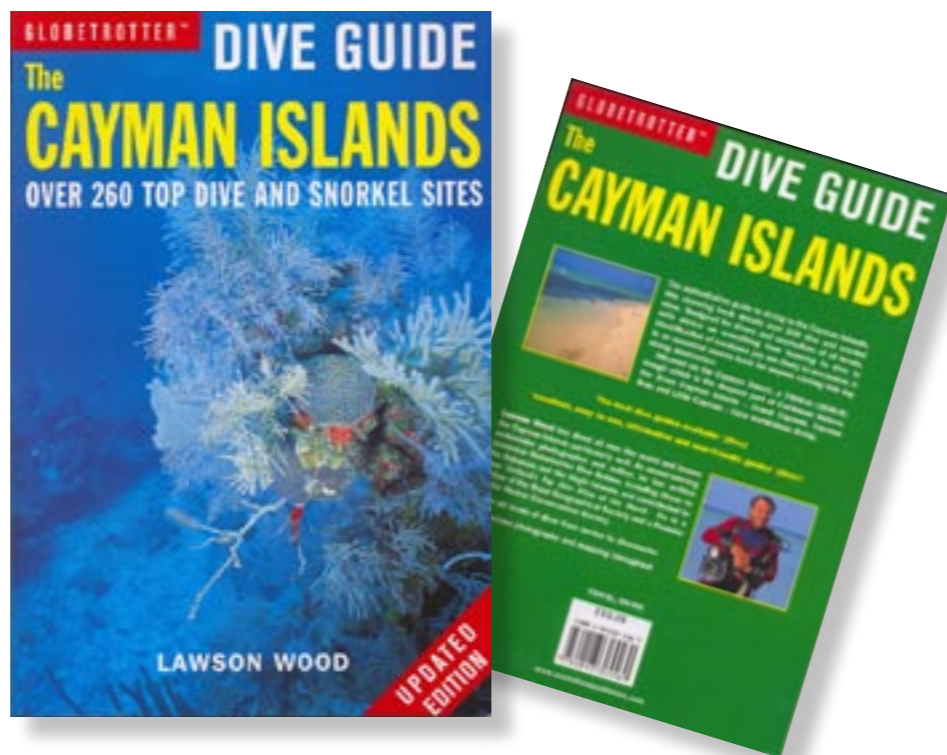
The best guide to diving and exploring the amazing natural beauty of the Cayman Islands. It offers accurate accounts of about 140 of the best-known identified shipwrecks as well as important details about the various types of sailing vessels that have piled up in the area over the last 500 years. A useful reference for any wreck diver interested in exploring the Cayman reefs, it has over 200 photographs and illustrations. Available at Aquapress.

www.aquapress.co.uk

The Dive Sites of the Cayman Islands

A beautifully illustrated guide to over 260 diving and snorkeling sites in the Cayman Seas. It offers ratings of each dive site by island and describes the marine life, depths, access and conditions found there.

www.aquapress.co.uk



A local artist on Cayman Brac in the Cayman Islands, known simply as *FOOTS* is realising a 40 year-old dream to build the *Lost City of Atlantis* and to have it on permanent underwater display. Now with the full go-ahead from the Department of Tourism and the Department of the Environment, his vision of Atlantis will unfold in the coming months. The first sections were placed underwater off the northern shore of Cayman Brac in the Cayman Islands on July 28th, 2005. Eventually there will be over 100 pieces underwater weighing upwards of 300 tons, constructed on land and placed underwater in a series of phases.

The proposed area is a popular scuba diving and snorkelling location midway along the northern protected shores of Cayman Brac at a site known as Radar Reef off Stake Bay. The Department of Environment have examined the site and have deemed it perfect for

a structure of this magnitude. The massive columns are constructed in such a way that they will attract and even aid marine life to adhere to the surfaces, thus advancing the colonisation of natural marine organisms. Each sculpture is set on a massive base, that, should another hurricane come by, their alignment and stature will be minimally impacted by a major storm. Should the columns be knocked over, they are built in such a way that they will anchor themselves to the seabed, thus further protecting the marine environment.

The city will consist of various different types of sculpture including a sundial; variously sized temple columns; a giant archway and a pyramid that will weigh in at over 30,000 pounds. The first phase is now underwater and consists of eleven columns and along with the first of the eleven Elders of

Atlantis. Phase two will include the giant archway, more columns and the sundial, they are collectively known as *The Inner Circle of Light*. Once the other ten elders are modelled, they will surround *The Inner Circle of Light*, their closed eyes and clasped hands signifying their long wait for Atlantis to rise again. The models for each of the City Elders will be moulded from life. The Eleven

who are deemed worthy will be immortalised by *FOOTS* and known as *The Elders of the Lost City of Atlantis*.

The first of these Elders is Lawson Wood, well known to many divers and underwater photographers for his numerous magazine feature articles and dive guides. Lawson has been involved in marine conservation for over 25 years and has written and co-authored over 35 diving related books. He is the founder of the first marine reserve in Scotland and a founding member of the Marine Conservation Society. His wife Lesley said, "It is wonderful for Lawson to be honoured this way, the first statue of him underwater is a testimony to his active life in conservation, protection and promotion of the marine environment". ■





Photographer John Collins takes a look beyond Seven Mile Beach to see what the Caymans have to offer

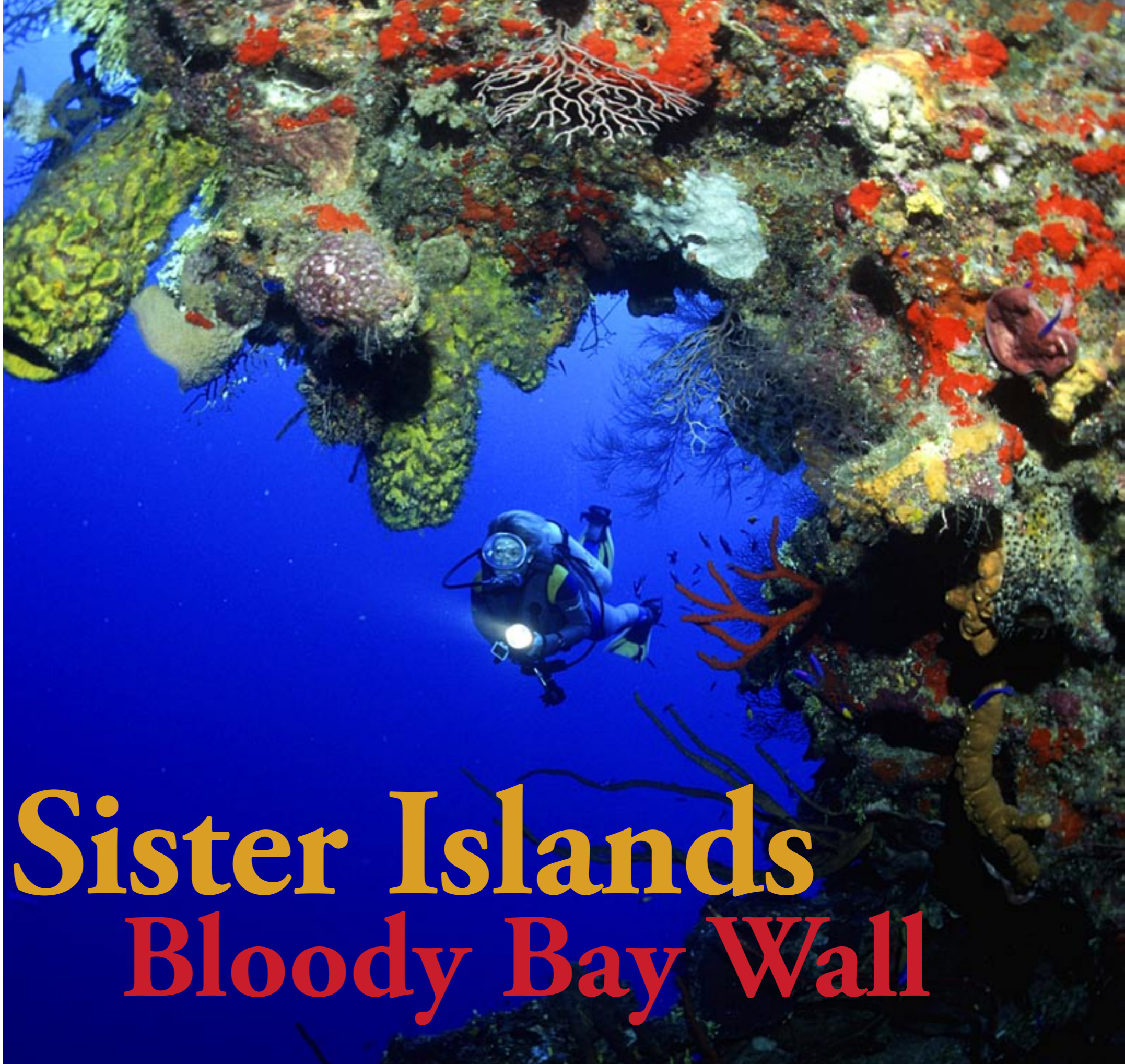
There is such a choice of quality dive operators and accommodation on Grand Cayman, it is hard to beat. It is a great holiday destination with some fantastic diving. If you venture a little further though, the Cayman islands get even better. I rate the sister islands of Cayman Brac and Little Cayman as the very best diving in the Caribbean. If you have the time and inclination, there is also an unforgettable deep diving experience, unique in the world, aboard the Atlantis Deep Submersible. These are the highlights of the Caymans to me, and should be on your wish-list for a Cayman island trip.

Cayman

Text and photos by John Collins

ABOVE: Hermit crab in sponge, Little Cayman

RIGHT: A colourful overhang looks out into the intense blue water of Bloody Bay, Little Cayman



Sister Islands Bloody Bay Wall



ABOVE: Large sponges are typical of wall dives in Little Cayman's Bloody Bay marine park
LEFT: Sponges, rather than soft corals, dominate wall dives in Little Cayman's Bloody Bay

Sister Islands

The sister islands lie 150 km north-east of Grand Cayman, about half way between the large island and Cuba. They break the surface of the Cayman Trench, the deepest part of the Caribbean, which plunges to 7500 meters. This deep water, coupled with the fact that no rivers run into it, make the underwater visibility particularly good. It can exceed 100 meters: gin-

like clarity in vibrant blue water. As they are remote from the main island, they are much quieter. Little Cayman in particular, is an oasis of calm and an ideal get-away for a tired body and mind. Best of all, its Bloody Bay Marine Park is one of the finest diving areas in the world. Year after year, diving publications and their readers award Little Cayman a multitude of *Best of...* awards, from best wall diving,

to fish-life, and healthy marine environment. Clearly, this is a very special place.

Most visitors to the sister islands fly to Cayman Brac. It has a bigger airport and a more regular service from Grand Cayman. Little Cayman can be reached by a short boat transfer or by flying into its small airport. There is a choice of fine resorts on both islands for a land-based trip or two



LEFT: Bloody bay wall, a sheer drop-off, covered in corals and sponges
 CENTER: Red night shrimp, Little Cayman
 RIGHT: Lettuce sea slug, Little Cayman

live-aboard options: the Grand Cayman based *Cayman Aggressor*, which includes the sister islands in its itinerary, weather permitting; or *Little Cayman Diver*, a Cayman Brac based boat that spends most of its seven day itinerary at Bloody Bay. I like live-aboard diving and chose this latter boat, and really enjoyed it.

On arrival in Cayman Brac, you are picked up and transferred to the boat. Once settled in, your first dive is on the wreck of a Russian-built frigate, re-named the *Captain Keith Tibbetts* and sunk as an artificial reef in 1996. It was first made safe for divers before a spectacular sinking ceremony gave it a new life on the seabed. The Cayman island authorities bought the 95 meter, 1600 tonne ship from the Russians for \$275,000 and carefully sank it

in a depth of 25 metres. While the sponges and invertebrate marine life were initially slow to grow, the ship was adopted almost immediately by fish. The bow area and guns are the most striking, though penetrating such a safe wreck is also an option. For those of us who generally do not relish the insides of wrecks, this one is a little more tempting.

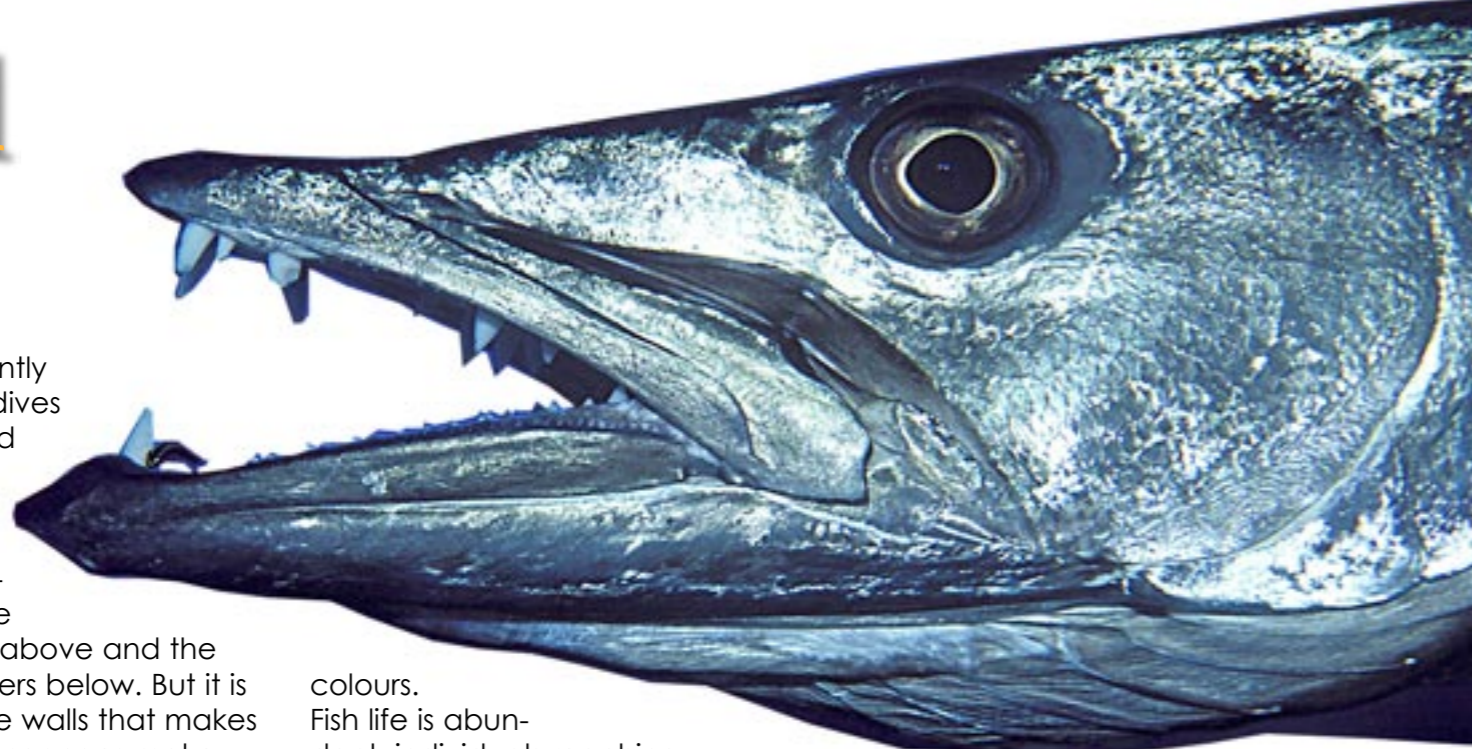
Bloody Bay

Bloody Bay Marine Park embodies all of the fine protection measures the Cayman authorities have put in place throughout the islands since 1986. It is regarded very highly by any diver who sees it, and unlike many tropical areas worldwide, many future generations of divers will continue to enjoy it. The regulations protecting the

marine parks, replenishment and environmental zones are exemplary. There are permanent moorings to prevent anchor damage at all of the dive sites, and no fishing of any kind is allowed. Divers are briefed and monitored by staff at the dive centres and boats to encourage good diving behaviour.

Typically, a diving day on any of the dive sites along this north shore of Little Cayman will begin with a deep wall dive. There are two walls in the marine park, Bloody Bay wall and Jackson wall. Many of the marked dive sites have a deep cut in the wall, creating a sandy gully which brings you back to the shallow reef at the end of the dive. Spectacular is a word frequently used to describe good dive sites, but here it is truly apt. This is thrilling drop-





off diving. I frequently paused on these dives to look around and down into the intense blue, neutral buoyancy poising me perfectly between the surface 30 meters above and the sea-bed 1800 meters below. But it is the life along these walls that makes it so special. Huge sponges make enthralling shapes, forming shelter for fellow animals and painting the wall with splashes of rare

colours. Fish life is abundant, individuals reaching great sizes in the safe haven of the marine park. This must be how many of the world's coral reefs looked in centuries past.

The second and third dives of the day are equally varied, in beautiful coral gardens. Schools of fish cruise by, disinterested in their bubble-blowing intruders;

nurse sharks snooze under coral overhangs and bigger fish enjoy a little grooming at cleaning stations. This is macro photography heaven.

I enjoyed many long moments with some of the reef's most charming creatures: the delicate ballet of a purple Pedersen's cleaner shrimp or the darting antics of a juvenile spotted drum. Dive and air time will often be finished before you feel you are ready to surface.

There are some night diving opportunities too, one of the advantages of live-aboard diving. Unusual animals are to be seen after dark, like orange-ball anemones and crustaceans that hide during the day.

ABOVE: Barracuda will often come into shallow reefs for cleaning

TOP RIGHT: Spidercrab in sponge, Little Cayman

BOTTOM RIGHT: Hermit crab, Little Cayman

BOTTOM LEFT: Parrotfish are most approachable on nightdives, when they rest in the reef





The Deep

Even if you decide to spend most of your diving time on the sister islands, there are two things you must do on Grand Cayman: the world famous Stingray City and a deep dive aboard the *Atlantis Deep* Submersible. The stingray dive is described elsewhere in this issue and the deep dive is an equally amazing underwater experience: an opportunity to dive in a three person research submersible, 300 metres into the abyss. It is a first-hand deep exploration in the spirit of pioneering dives to our deepest waters. There is even a wreck at 250 meters.

This is not a dive for the claustrophobic. The submersible is small, with room for just two passengers and the pilot. You are even weighed before the dive so that the ballast can be correctly adjusted for the dive. A boat transfer brings you to the dive site, just offshore from Georgetown.

Once aboard, you are seated right in the bow, with a large dome in front giving

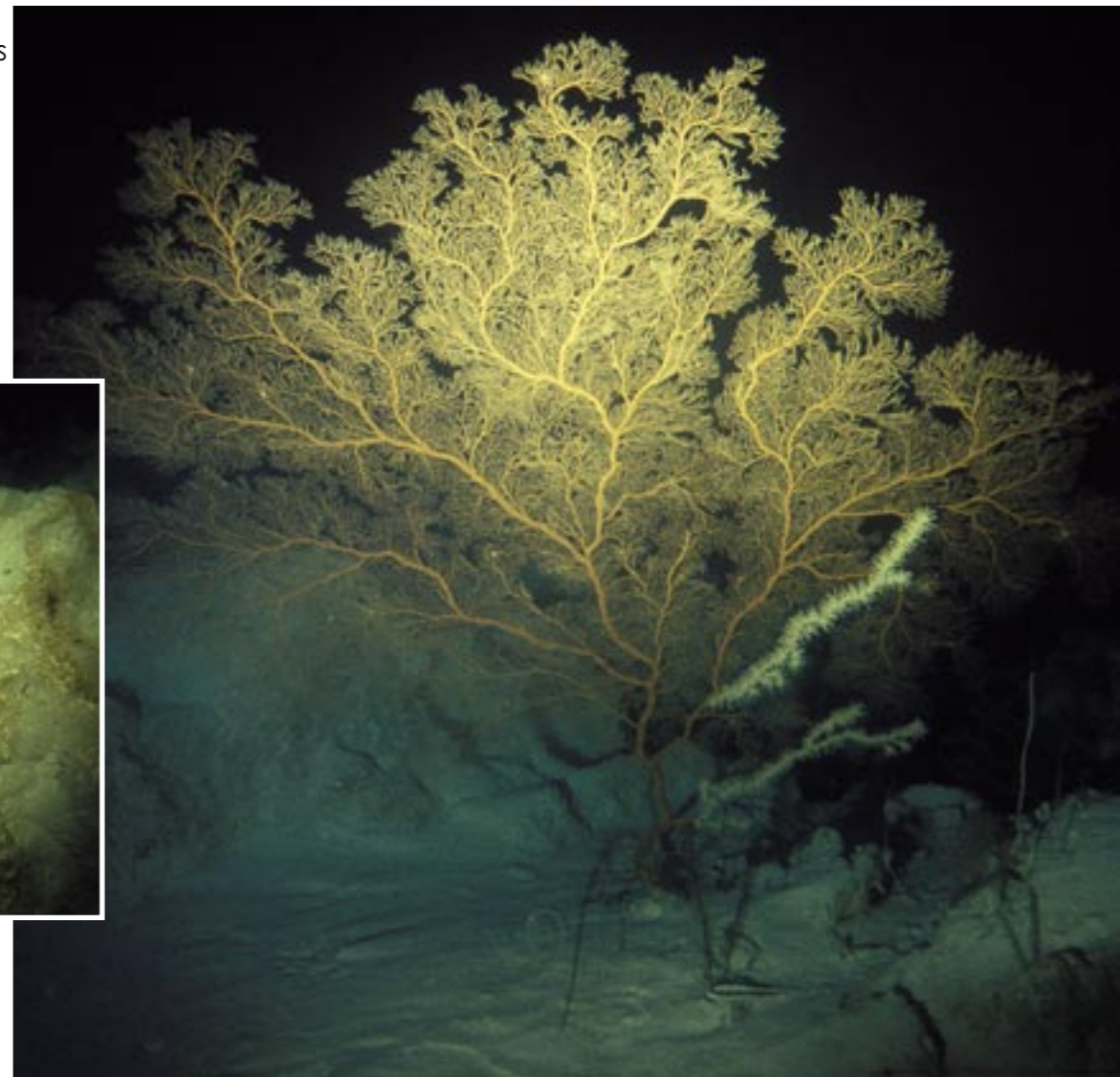
a panoramic view. The pilot makes his final checks and after a lot of noise and bubbles you are on your way. I really enjoyed the feeling of finally seeing what was beyond diving depths, so tempting on the wall dives earlier in the week.

As the light begins to fade, the blue gradually merges into darkness. More hissing and whirring and we level off, 250 meters down. The pilot turns on the lights and

amazingly, there is quite a lot of life, so far down.

Limestone *haystacks* appear like boulders, with stalked anemone-like animals

TOP LEFT: The stern of the *Kirk Pride*, lost in 1976, now rests on a rock ledge in 240m
TOP CENTER: The bridge of the *Kirk Pride*, the ship's telegraph and chart table still visible inside
TOP RIGHT: The bow area of the *Kirk Pride*, showing anchor windlass equipment



ABOVE: *Atlantis Deep* Submersible, dives to 1000ft, 300m down the Cayman trench off Georgetown
BOTTOM RIGHT: Giant Gorgonian, over 2m, in 240m, this is one of the largest measured by *National Geographic*
INSET: A stalked anemone on a *haystack*, 250m depth



Caymans



LEFT: Diver investigates the long fronds of a red finger sponge. The walls along Bloody Bay and Jackson wall are sometimes cut, allowing a swim-through back to the top of the reef

TOP RIGHT: Sponge colonies, Little Cayman

BOTTOM RIGHT: Inside the wreck of the Russian frigate, renamed the *Capt Keith Tibbets*, Cayman Brac



perched on their edges. A giant gorgonian sea fan is a remarkable sight, about 1.5 meters across. The pilot maneuvers carefully around it and continues down.

The lights go out for another minute or two as we move through the blackness. Then as the lights go back on, the incredible sight of the stern of a ship appears.

The *Kirk Pride* was lost in a storm in 1976, and is perched on a ledge, as if on display. The rusticles are reminiscent of the first images of *Titanic* when they were shown to the world in 1985. The ship is remarkably well preserved, the bridge area clearly visible, with a collapsed telegraph and chart table on the floor. A few fish move around the bow, mooring ropes and windlasses still intact.

The slow ascent back to the surface allows more time to take in the reef but the deep part of the dive is unforgettable. Due to damage from Hurricane Ivan last year, the deep submersible will not be in

operation until November 2005.

The Cayman islands clearly have a lot to offer the diver. The variety of underwater experience is remarkable and the serious protection given to the environment ensures its future. So, whether the luxury and vibrance of the Seven Mile Beach hotels appeals to you, or you prefer quieter sister islands, there are diving adventures in abundance throughout this charming island nation. ■

For more information or to order prints directly from the photographer, please visit:

www.johncollinskinsale.com

For more information about excursions on the Atlantis Deep Submersible, visit:

www.atlantisadventures.com

Little Cayman Diver

www.littlecaymandiver.com

Cayman Aggressor Liveaboard

www.aggressor.com



World Freediving Records

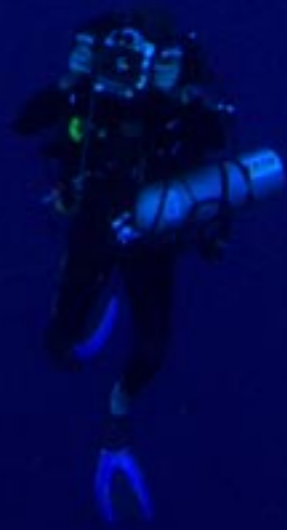
Text by Nancy Easterbrook
Photos courtesy of Divetec
at Caymans. Video clips by
PerformanceFreediving.com

Thursday, April 14th was the last day for record attempts for Team PFI (Performance Freediving International) off Divetec at Cobalt Coast on Grand Cayman. The event now sees three athletes with four new world records and one national record in the sport of freediving / breath-hold diving.

Freediving or breath-hold diving as a sport is where athletes compete in disciplines involving time, depth and distance with different subcategories in each. The competitive world of freediving emerged in the late 1940's and today is enjoying unprecedented growth and booming popularity with underwater enthusiasts the world over. Although freediving as a sport is relatively new, freediving as a means of sustenance can trace its roots back 4500 years.

Since April 14th, Team PFI has been on Grand Cayman training for a shot at five different world records and one US national record. Mandy-Rae Cruickshank (Canada), Martin Stepanek

Team PFI and Divetec support staff prepare to aid a freediver in a record attempt, Cayman Islands



A freediver returns to the surface from depth

(Czech Republic) and Dr. George 'Doc' Lopez (USA) make up the team with Mandy-Rae and Martin already holding four and five world records respectively prior to the event.

Although the Cayman Islands were damaged by hurricane Ivan September of last year, Team PFI decided to continue with their planning of this year's event. "Cayman's infrastructure was more than ready to support the extreme needs of our event from a safety and performance point of view," said Kirk Krack, coach/trainer and organizer of Team PFI. "We're very pleased with the support we've received from the many sponsors and supporters who helped make this event a reality, and without their support and financial assistance, this wouldn't have been possible."

It appears that the sport of scuba diving and freediving alike are getting deeper and deeper with every passing year. Freedivers (breath-hold or apnea divers) are pushing new limits that in prior years would have been thought impossible for a human to attain. This past April in Grand Cayman, Mandy-Rae Cruickshank accomplished a new record to 74 meters in the freediving discipline of *free immersion* (no fins, pulling up and down a line) and Martin Stephanek won the title for the world deepest freediver in the Variable Ballast discipline to 136 meters! (Riding a weighted sled down and kicking back to the surface) And all of this in only a few

minutes and on one single breath of air!

Safety strides

As we learn more about the human body and its ability to accomplish incredible feats in the freediving arena, safety and support are also being driven to new limits to figure out how to do all of this in a safe and sound fashion.

In order to provide the best possible support to freedivers, a number of new systems have been devised for safety at these great depths by Performance Free Diving. These are mechanical devices that allow a freediver in trouble several options to get to the surface quickly, including a scuba diver assisted *freediver retrieval system*, a *climbing clamp* that can be snapped onto the line with *pillow-bags* to inflate the freediver and sled and *balanced counter balance*. The key is a fast ascent. The safety divers have their own descent and safety lines to keep them away from the counter line for everyone's safety.

Freedivers enter the water without any scuba tanks, totally bubble free. Then, enters the human factor for the final safety feature — the Closed Circuit Rebreather (CCR) divers.

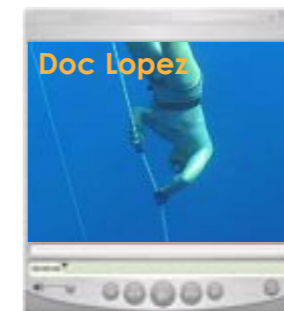
Closed Circuit divers have the advantage of a number of features that this new technology brings. First of all, there are no bubbles, so vision is unencumbered for the safety divers to be able to monitor the freedivers at all times. In Cayman, with 100 foot

-plus visibility, this is a wide range of vision. Then the advantages of a constant PO₂ comes into play by providing a constantly changing mixture of gas to the diver that varies based on their current depth, versus a constant PO₂ as in open circuit diving. This allows CCR divers to stay at depth for much longer times and not even enter decompression.

Along with a myriad of other features, the ability to use a helium based mixture in the CCR with requires an extremely low gas usage, the CCR divers form a huge part of the support and video/documentation team. The safety divers know to give the athletes no more than 10 seconds at the bottom before they deploy the safety ascent bags, that will lift the whole system and the athlete to the surface in case of an emergency.

Following over 3 weeks of intensive training, the divers get ready for the world records. After stretching and marking the line, a comprehensive safety and organizational meeting occurs. The athletes, evacuation boats, safety CCR rebreather divers, videographers, photographers, emergency personnel (two paramedics and one doctor), safety freedivers, athletes, schedules, gas blends, run times, emergency protocols, and judges are all coordinated for the world records. Everything, in fact, is done to ensure a safe and successful record day.

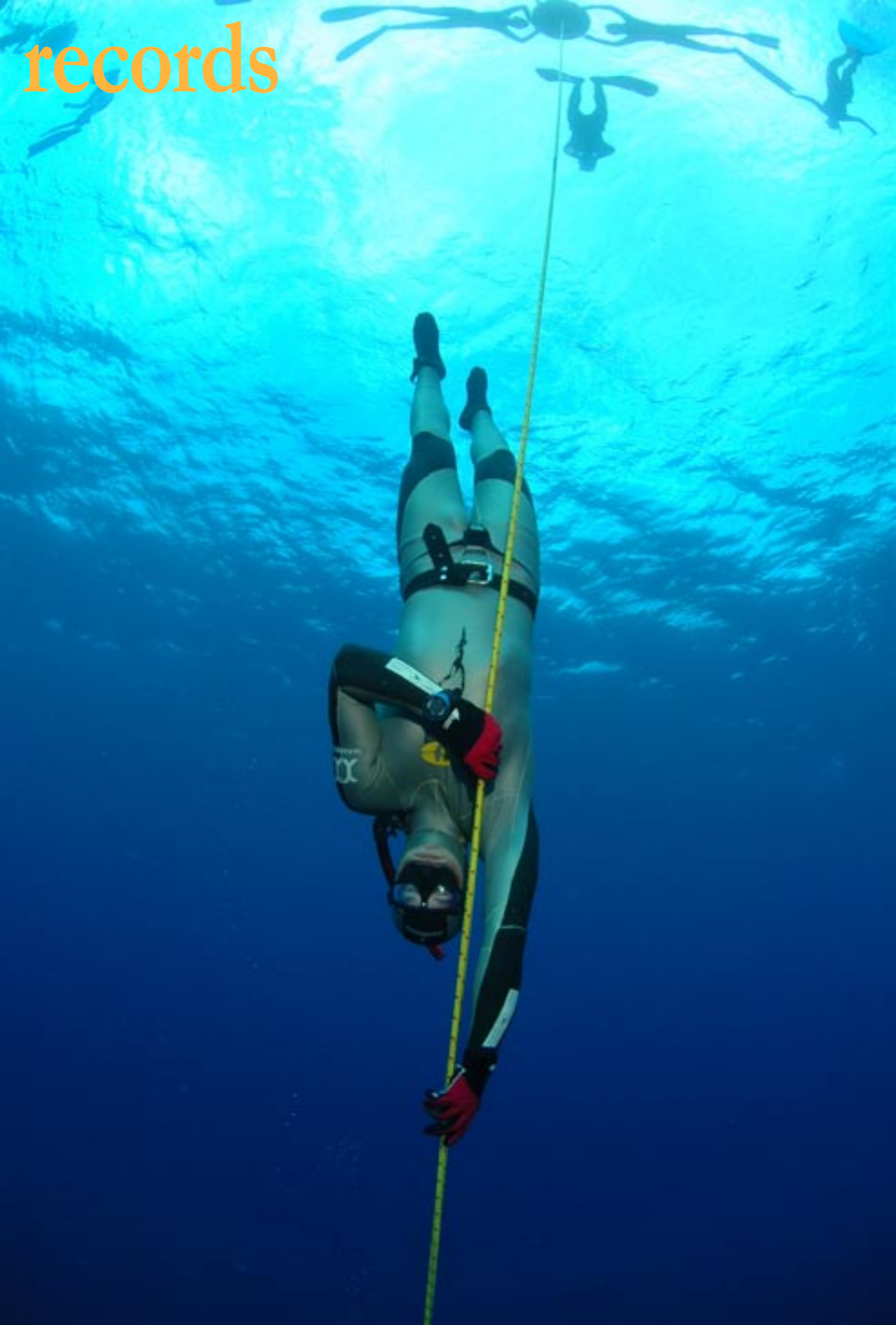
"The calculated execution of



◀ Click on the video screen to see clips from the diver's world record attempt.

Links active as of publication





the dives is hard work, regardless of the depth. Each of us has our own real and imaginary barriers that we need to chip away at piece by piece. Freediving may seem extreme, but we don't see it that way. Sure, there are calculated risks which we constantly work to evaluate, minimize and/or correct so that in the end we create the most comfortable training environment with the best safety procedures. This is what enables the athletes to perform at their best."

World record events

Divetech at Cobalt Coast Resort has hosted these world record events for the past 2 years. Divetech offers training in both free diving and technical diving, including CCR's on a year-round basis, as well as training and charters for all divers from beginners to seasoned veterans. The deep, sheer walls of Cayman are only minutes off-shore, with excellent visibility, minimal currents and abundant marine life, providing an environment for all levels of divers to enjoy.

Performance Free Diving trains athletes to be their best in the world of freediving, operating out of Vancouver Canada. Training and clinics are available on a year-round basis.

The 2006 World Free Diving Records will be hosted again in Grand Cayman from April 1 - 7th/2006. Packages are available for visitors to come and witness these spectacular events, enquire with Divetech at divetech@candw.ky for information. Clinics for everyone will take place for 4 days following the world free diving records.

Mandy-Rae is thirty years old and resides in Vancouver, Canada. Freediving competitively since 2000, Mandy-Rae has now held six world records and currently holds three including the constant ballast world record where an athlete swims to depth and back with fins and retains their ballast. In March 2004 in Grand Cayman, she achieved a depth of 78 m (256 ft) surpassing Tanya Streeter's record of 70 m (230 ft). During this event Mandy-Rae

successfully achieved a depth of 50 m (164 ft) in the discipline of constant ballast no-fins where an athlete swims down to and back from depth without fins. In addition, she also set the free immersion world record to 74 m (243 ft) where an athlete pulls to and back from depth without fins.

Joining Mandy-Rae is team member Martin Stepanek of the Czech Republic. Martin is 28 years old and a five-time world record holder now holding four world records also including constant ballast at 103 m (338 ft) surpassing Carlos Costa's record of 102 m (335 ft). In April, Martin successfully achieved a depth of 80 m (264 ft) in constant ballast no-fins breaking the previous record of 66 m (216 ft). The last record attempt of the event was by Martin who reached 136 m (447 ft) in variable ballast previously held by Carlos Coste of Venezuela. Variable ballast has an athlete riding a weighted sled to depth and then fining and pulling back to the surface unassisted.

Partnering with Performance Free Diving International is Dr. George 'Doc' Lopez, CEO of ICU Medical Inc (NASDAQ; ICUI). Doc joined Mandy and Martin in Cayman for his second year and completed a US national record for

the United States Apnea Association (USAA). Doc, a highly successful CEO, is also a blue water world record spearfisherman.

Officiating the event was the Association for the International Development of Apnea (AIDA), the world governing body for the sport of freediving. AIDA Level A Judges Bill Stromberg (Sweden) and Nicolas Laporte (Switzerland) were the officials in attendance ratifying the attempts and ensuring the strictest of safety protocols were followed.

Along with ICU Medical Inc, Divetech and Cobalt Coast on Grand Cayman provided diving and accommodations while Danny Kupkowski of Off The Wall Divers provided a daily training boat. Underwater video services were provided by Amphibico Inc of Montreal, Canada. Professional wetsuits furnished by Oceaner Sporting Goods and Yamamoto Corporation. ■

Daily journals with photos and streaming videos are available at www.performancefreediving.com. More information regarding next year's free diving records please contact divetech@candw.ky or visit www.divetech.com.

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An athlete attempts free immersion where a freediver pulls to and back from depth without fins

Can the Cayman Blue Iguana be saved?

Only 25 of them left on Grand Cayman



The blue iguana is found only on Grand Cayman, and DNA evidence suggests it has been around for the past three million years. However, greedy humans and their pets have now so seriously threatened their survival that they are on the brink of extinction. The iguanas do not instinctively recognise dogs and cats, for example, as lethal predators and their first chance to learn is often the last.

In an attempt to save these iguana, a captive breeding programme has been set up in cooperation with the Cayman Islands Department of the Environment. Blue iguanas are hatched and reared for two years, so

avoiding the severe mortality that would usually decimate a year's hatch. The blue iguanas are then released back into the wild and radio-tracked as they mature and start breeding. The programme seems to be working, and it seems that it is possible to bring the iguanas back to the numbers required to sustain a viable population. If enough habitat can be protected and maintained free of unnatural predators, including humans, then there is reason to hope the blue iguana will survive.

The blue iguanas are so named because their skin slowly turns from grey to blue throughout the day as the sun shines. ■



Blue Iguana Stamps will be issued by the Cayman Islands National Trust's Iguana Recovery Programme on 18 November. Images taken by Fred Burton show the most endangered iguana in the world, the Grand Cayman Blue Iguana (*Cyclura lewisi*) in its natural habitat. Donations can be made now and stamps can be ordered soon at www.blueiguana.ky

Wrecks

The Cayman Islands are home to some spectacular wrecks like this one shot by UK underwater photographer, Julian Calverley. It's the 110 m (330 ft) Russian Frigate #356, which was sunk in 1996 to create an artificial reef and renamed the *MV Capt. Keith Tibbets*. The bow of the ship rests in 110 feet, with its radar tower protruding to within 5 m (15 ft) of the surface.

We will see more of Calverley's work in future issues of X-RAY MAG. But if you want to get a sneak preview of some of his photography now, visit his website at: www.juliancalverley.com



The Russian Frigate lies on its side on the ocean floor off of Cayman Brac

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InnerSpace

Text by Peter Symes
Photos courtesy of DiveTech



Technology and Closed Circuit Research introduced the

DiveTech and Cobalt Coast Resort is hosted the annual event, *Inner Space*, a closed circuit rebreather diving program for certified CCR divers who want to get certified at the recreational, normoxic or advanced trimix level.

The week-long event offers divers exploration of the deep walls of Cayman, seminars with leaders in the field, new equipment testing and daily live video and photography to take home.

This year's speaker line-up included several top leaders in the field. Tom Mount of IANTD presented comparisons of all CCR's on the market, an intimate look at CCR accidents and how to avoid them as well as cave diving and deeper diving on CCR. Mike

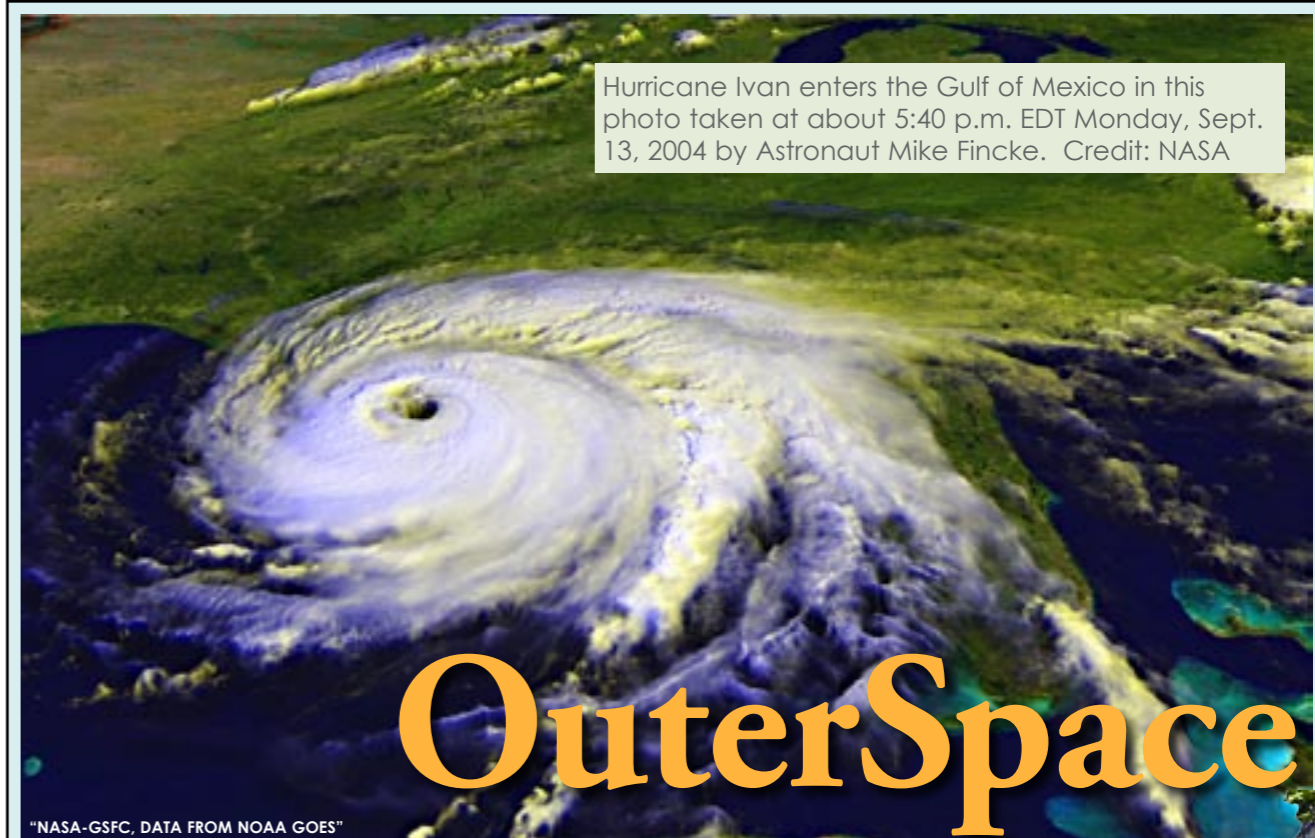
Fowler of Silent Diving Systems presented the new Vision Electronics while diving the *Inspiration* and newly released *Evolution* models of CCRs. Lamar Hires of DiveRite introduced features and benefits of the new *O₂ptima* CCR which has just been released. While Leon Scamahorn of InnerSpace Systems Corp. introduced the new *Mini-meg* and demonstrated the use and benefits of the *Meglodon* CCR.

Kevin Gurr of Delta P.

Orobourus CCR and the Rebreather Evolution. Ron Micjan of TMIShop.com introduced a CCR conversion kit for *Dolphin* SCR divers. Gordon and Kim Smith of

Jetsam Technologies, Ltd., presented the new *Sport KISS* CCR which is a light-weight recreational rebreather developed over the last 2 ½ years. Tomar Gross and Dr Randy Klein of Bubble Seekers LLC presented the new *Nemesis*, which was introduced to recreational divers for the first time at Inner Space.

Doug McKenna of Micropore introduced the Extend Air CO₂ absorbent system. It utilizes easy to use disposable cartridges for various CCRs. Rany Polany of H₂O Audio demonstrated the new underwater MP-3 players as well as download access from a computer for loading favorite music onto the unit. ■



Hurricane Ivan enters the Gulf of Mexico in this photo taken at about 5:40 p.m. EDT Monday, Sept. 13, 2004 by Astronaut Mike Fincke. Credit: NASA

OuterSpace

"NASA-GSFC, DATA FROM NOAA GOES"

Back to business after Hurricane Ivan

Last Autumn the Cayman Islands were battered pretty badly by Hurricane Ivan, but now the facilities are being rebuilt. Nancy Easterbrook of Divetech writes:

- 40% of accommodations are back on-line and totally refurbished—more coming on-line every month
 - 90% of all restaurants open again
 - 100% of car rental agencies are open with rental inventory
 - Attractions are open or are going to open. Reopenings happen daily
 - The reefs are undamaged.
- They are even better than ever after Mother Nature did her not so gentle cleaning process. There is truly vibrant marine life—corals and all are intact, even in the shallows. We have whips, seafans, soft corals and the like. Reports from divers coming since we officially re-opened Nov. 20th have all been wonderful. Cayman is practically brand new

for everything that is open, and cleanup has been done everywhere. As of the end of May, there were still some facilities under construction, roofs being repaired, but then again, when is there ever not any construction going on?

The vegetation is coming back, the bougainvillea is blooming, but we are missing larger trees, etc. There are some empty lots with foliage down in them that will be tackled in the not too distant future. Signage, welcome signs, markers, etc., are all being replaced.

Cayman has very strongly recognized the value of tourism and customer services levels are at an all time high. ■

"It's welcome back - we're open for business and want divers"

Coral Spawning in the Caymans



Text and photos
by Alex Mustard, PhD

Mass coral spawning is one of the most spectacular sights in the ocean – a moment when the whole reef explodes into effervescent life. It is also one of the most illusive; the majority of corals only spawn once a year, at night, and the whole show is done and dusted in less than 15 minutes. Waiting for it can feel like torture, but time it right and it can be one of the best experiences of your life.

It was a night dive just like the many others I have enjoyed on the reefs of Grand Cayman's East End. That was the problem. This wasn't supposed to be just another night dive. I glanced down at my dive computer. I had been in the water for 15 minutes. But in truth, this dive

A large Star coral releasing bundles of eggs and sperm





ABOVE: A sequence of images showing Star coral spawning
LEFT: A diver watches a female gorgonian releasing white eggs

had started long before my giant stride off the boat, when I made a leap of faith that led to me buying plane tickets and flying across an ocean to be right here, right now. A bright blue octopus out hunting caught my eye, I ignored it and I stared again at the lump of coral in front of me. "Come on! Come ON!" Nothing. 21 minutes.

23 minutes. I was expecting to see the first signs of spawning ten minutes ago and as each minute passed it became more likely that tonight was not the night. Coral spawning predictions are best guesses based on experience, and despite a US University expedition nobody had ever seen mass spawning in Grand Cayman before. In the hustle of the last hour of loading the boat, kitting up and jumping in, I had forgotten how much the odds were stacked against us, but now those thoughts returned and my stomach felt hollow. I had staked time, effort and money on being here. Maybe we were to late? Maybe the cor-

als had spawned earlier in the evening? Maybe they had spawned yesterday? Maybe they had spawned a month earlier, along with corals from Florida to Puerto Rico? Maybe they just don't spawn in Cayman? I looked at my computer again. Still 23 minutes!

Our target species for this night were Elkhorn and Staghorn corals; species that were once widespread in the Caribbean, but were decimated during the 1980s by white band disease. In many areas both species are now extinct, but on the East End of Grand Cayman you have the chance to dive back in time and see them in their glory. 26 minutes. I was now feeling guilty for dragging my buddy into the water. Steve Broadbelt is the co-owner of Ocean Frontiers dive centre and like me has a keen interest in marine life, something that is clearly reflected in how his dive centre operates. Steve had been trying to see coral spawning for many years, and I had been bullish about our

chances to persuade him to try again. We were optimistic when we left the dock, Steve noting of the conditions "Only rarely does it get so glassy calm out here, it's as if Mother Nature knows that tonight's the night."

I was less confident. Steve was on the other side of the reef spur, which was silhouetted by his light. The moon was yet to rise and we had chosen weak torches so as not to put the corals off. The water was inky black and blood hot. It was claustrophobic and uncomfortable, like wearing a suit that is too thick at a summer wedding. I wasn't relaxed and I tried to concentrate on the coral.

Suddenly the Staghorn coral looked different. Perhaps I had been staring at it for so long that my eyes were inventing new patterns. I screwed up my eyes, blinked, and stared again. As I inched closer I could see the shape of the polyps was subtly, but definitely changing, as beige bundles a few millimetres across were beginning to dome up

from within the polyps. I raced to over to Steve, flapping frantically to get his attention and dragged him back to the coral. I could now see the change from several metres away - even the colour of the colony was different. Staghorn, like most corals, is a hermaphrodite, being both male and female at the same time and these bundles were made up of eggs laced together with sperm. I checked the next colony and the next, now everywhere I looked Staghorn coral was preparing to spawn.

Steve and I exchanged perhaps the most cheerful OK signs ever made and a few less traditional underwater gestures that indicated spawning was definitely on! About 15 minutes later the bundles started to burst free. The buoyant fat filled eggs slowly pulling themselves away from the spiky branches of the Staghorn. Within a couple of minutes there was a



Bundles of eggs and sperm float up from a spawning Brain coral

steady stream of bundles rising from colonies across the reef. It was like diving in a glass of Champagne, the bundles looking just like tiny bubbles. They made an intoxicating sight.

I'm sure that you know what happens if you smile while you are diving? As the corners of your mouth go up, your cheeks rise, your mask no longer fits and water gushes in and

rushes straight up your nose. Well, just at this moment I really did not care. Although I was now coughing water out of my regulator, nothing could dampen my spirits. Steve and I finned around with the joy and disbelief of children running in snow for the first time. All around us coral bundles were heading to the surface, where they would break open so eggs could be fertilized by the sperm from other colonies and start the next generation of Staghorn coral. And with a bit of luck help drag this species back from the brink.

The end of the dive came all too quickly, as I glanced down and saw the needle on my air gauge buried in the red. Excitement has meant that I have gulped through my air, but as I finned slowly back to the boat I knew that I would never look at coral reefs the same way again.

The water column is filled with the small white eggs of gorgonians



ABOVE: A female Giant Star coral releases a cloud of eggs

RIGHT: Bundles of eggs and sperm momentarily float above the surface of this Star coral before drifting away



Coral Spawning



Coral Spawning

LEFT: Steve Broadbelt watches bundles rise from a spawning colony of Elkhorn coral

RIGHT: The frenetic spawning activity across a section of the reef



Since that first encounter I have made six more successful coral spawning dives in Grand Cayman and have never had a no show. While that first experience with the Staghorn will always remain special some of the other species are far more spectacular. So far in Cayman we have seen at least 10 coral species spawning.

Coral spawning makes particularly addictive viewing because most of the different coral species have quite distinct spawning behaviours. Star coral is Cayman's most stellar performer because not only is it the most abundant with some colonies as large as barn doors, but also whole colonies tend to spawning in one go, releasing all their bundles in waves that spread across the surface of the colony like a blush. The intensity of spawning can be shocking, and this blizzard of eggs and sperm can cause the visibility to tumble from about 25m to about 5m in about 2 minutes. On one dive I even lost the dive boat! Just after the Star coral, the Brain coral usually goes, which usually attracts hordes of deep red brittlestars that clamber up on top

of the colony and try to catch the bundles as they are released.

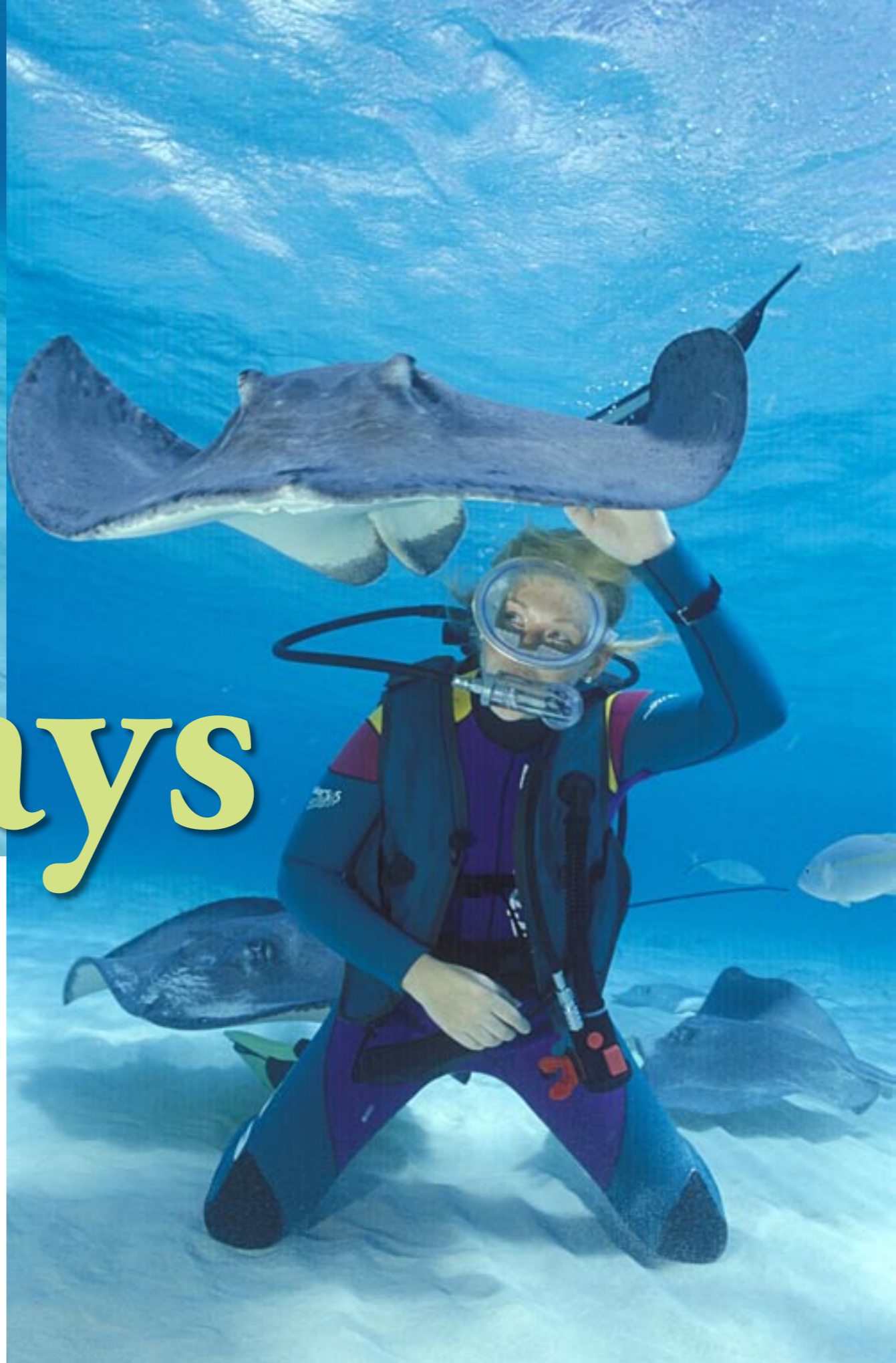
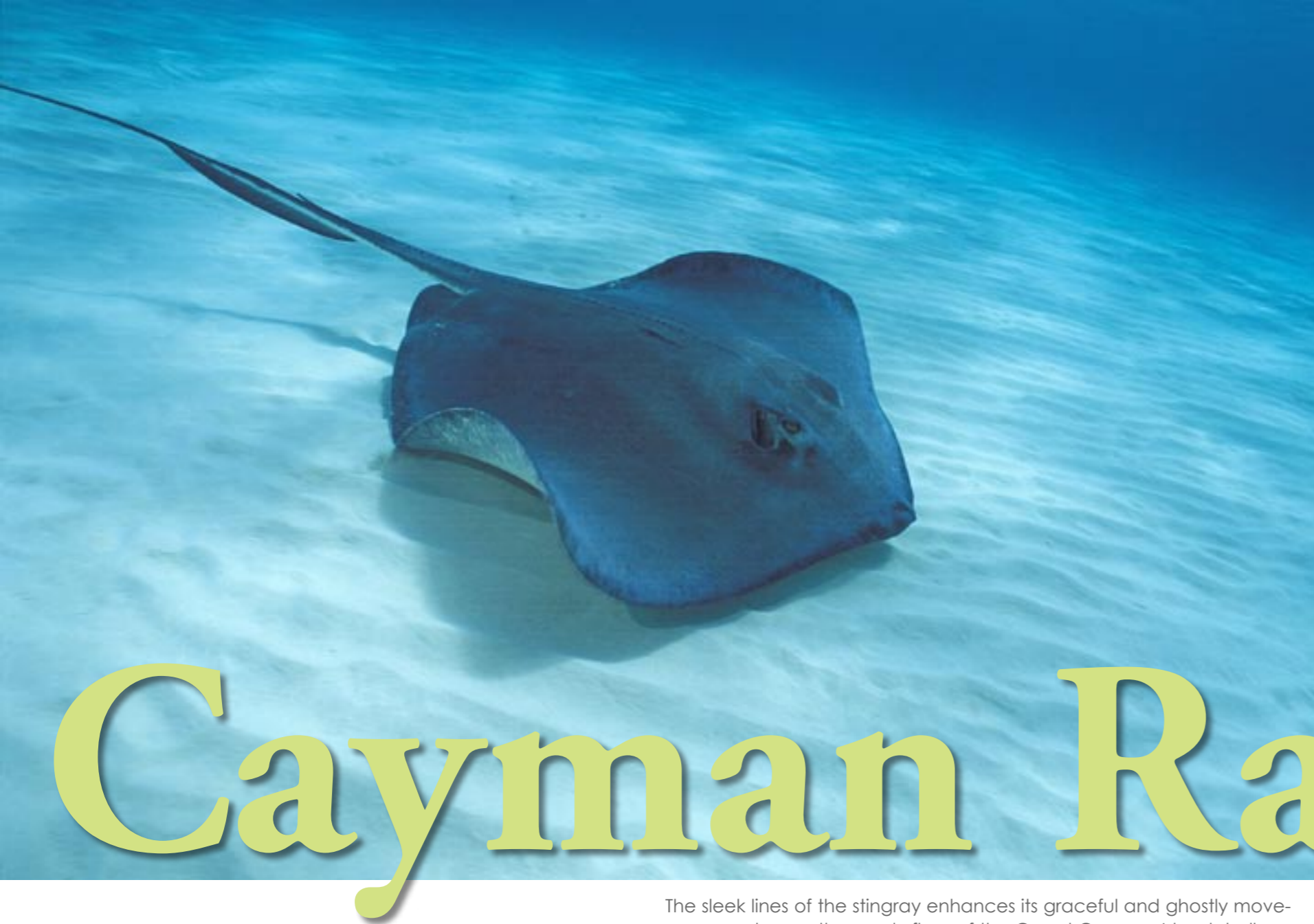
Giant Star coral is quite different. Unlike regular Star coral the colonies of the Giant variety are either male or female. Furthermore they do not release bundles, but instead the male colonies squirt out streams of sperm, while the females explode with a dense cloud of eggs. Gorgonians have separate sexes too and are very plentiful at the East End of Grand Cayman. Although not that much is known about their reproduction we have found out that it coincides with the hard corals and is a much longer event. Female gorgonians release their small white eggs in a steady stream over several hours filling the water column with a million white specks that wash back and forth with the waves. Before they float free the white eggs often get tangled up in the polyps, it's an amusing sight as the gorgonian looks like it is suffering from a nasty case of dandruff!

So many underwater experiences are there ready and waiting for us whenever we choose to dive. Coral

spawning is so different – for once we must dive to nature's rhythm to catch the show. Mass coral spawning is still a recent discovery, the world had watched Spielberg's E.T. before even scientists knew how corals reproduced. And to this day each spawning dive is filled with anticipation and uncertainty. But for me the angst is very much part of the experience. We live in a "now-culture" world where food is fast and we can find just about anything we want in a few clicks of a mouse. Coral spawning is a refreshing reminder that we cannot always have what we want exactly when we want it. I, for one, would not have it any other way. ■

These amazing photos were taken by Dr Alex Mustard who will be featured in our next issue's portfolio section due out in August 2005. To order prints of the photographer's images, visit: www.amustard.com

For more information about the coral spawning excursion by Ocean Frontiers, visit: www.oceanfrontiers.com



Cayman Rays

The sleek lines of the stingray enhances its graceful and ghostly movements over the sandy floor of the Grand Cayman Island shallows

Text and photos by John Collins

Stingray City, the ace in Grand Cayman's hand, is arguably the world's most popular dive site, and the graceful wild animals that live there attract hundreds of divers every day.

This site, and the nearby sand bar, both on the north shore of Grand Cayman, are home to more than 200 southern stingrays. These bottom feeders were first attracted by the local fisherman,

cleaning their catches in sheltered waters before heading ashore to market.

Cayman waters are home to five species of rays, the southern stingray being the most famous. Fully grown specimens measure 1 to 1.5 m across, and they can sting using the strong barbs in their tails. The barbs face backwards yet can sting in any direction.

The rays appear totally unafraid of humans, and will envelope and almost harass divers as soon as they enter the water. They seem to have learned that

as divers tend to carry food, if they distract them they will get a free meal more easily.

This is why it is best not to wear a snorkel, because the cunning stingray knows that if it knocks it, the divers mask will flood and the food will be discarded by the diver while the mask is being cleared! Stingrays one, divers nil.

Similarly, the rays have learned that divers without suits make easy targets. The rays do not have teeth, but a series of rasping plates that they use to crush the shellfish on which they nor-

A diver shares a playful moment with a friendly local at Stingray City



Cayman Rays



At 45 cm, the shy yellow stingray is the smallest of the Cayman rays

mally feed. With their powerful sucking action they can give exposed skin a nasty *hicky* that can bleed and be sore. This is all part of the game of interacting with these resourceful animals. The diver on the receiving end of such a kiss quickly surrenders the food - stingrays 2, divers nil !

An array of rays

Southern stingrays are the most commonly seen rays in the wild throughout the Caymans. They're generally spotted swimming gracefully over the coral or foraging for food in the sand. Here, they are almost always seen with a barjack. He waits for the ray to dig up the sand for food and darts in, getting an easy meal before the ray gets

LEFT: A diver pets one of the large female stingrays at Stingray City off Grand Cayman Island

RIGHT: Southern stingray with a buddy barjack, an opportunist who waits nearby to snatch food the ray digs up

everything.

Of the other rays in Cayman waters, the Manta ray is more likely to be seen off Bloody Bay Wall in Little Cayman. A few years ago, a friendly female was a regular nightly visitor to a dive site called the meadows. Here, Molly, as she has become known, would

perform barrel rolls as she fed on the plankton and krill attracted to the divers' torches.

The spotted eagle ray is also regularly seen on Bloody Bay Wall. This large elusive ray has the same graceful flight as the manta and may initially be mistaken for one. Eagle rays have snouts, not unlike a pigs, which they use to dig and forage in the sand for their diet of crustaceans and mollusks. However, they tend to be wary of divers and will swim away showing the spotted

pattern on their back.

The electric or torpedo ray is much smaller and a rare sight for divers. This ray has a rounded body and electric organs that it uses to stun its prey. These can generate up to 220 volts, more than many a Red Sea live-a-board!

Finally, the yellow stingray is the baby of the Cayman rays. At a maximum of only 45 cm, this circular Ray will often be seen resting under coral outcrops when it is not feeding. It has a venomous spines at the end of its strong tail, and so, probably packs the punch of a heavyweight despite its small size.

While the rays of Stingray City get plenty of free meals from divers and snorkelers, there are potential dangers in the interaction. The stingray is dangerous only if trodden on or caught when it can thrash out and sting, causing serious lacerations. The danger for the stingray may be more serious as divers wearing gloves can remove the protective mucus from the fish's skin, allowing infections to develop, which can be fatal. Close encounters with these large, inquisitive and fearless animals is an interaction replete with excitement and fun for divers and snorkelers, and a great opportunity to learn about their world. ■





fact file

Cayman Islands



Map of the Cayman Islands

History During the 18th and 19th centuries, the Cayman Islands were colonized by the British from Jamaica. Since 1863, the islands have been administered by Jamaica. When Jamaica became independent in 1962, the islands remained a British dependency. They lie at an important location between Central America and Cuba. Government: British crown colony as overseas territory of the UK

Geography An island group in the Caribbean Sea, almost one-half of the distance from Cuba to Honduras; Area: 262 sq km; Coastline: 160 km; Terrain: low-lying limestone base surrounded by coral reefs; Elevation: lowest point: Caribbean Sea 0 m, highest point: The Bluff 43 m; Natural resources: fish, climate and beaches that entice tourism; Natural hazards: hurricanes (July to November)

Capital George Town

Climate Tropical marine; warm, rainy summers (May to October) and cool, relatively dry winters (November to April)

Population 44,270 (July 2005 est.); Ethnic groups: mixed 40%, white 20%, black 20%, expatriates of various ethnic groups 20%; Religions: United Church (Presbyterian and Congregational), Anglican, Baptist, Church of God, other Protestant, Roman Catholic

Economy The islands are a thriving off-shore financial center since there is no direct taxation. As of 1998, more than 40,000 companies were registered in the Cayman Islands including nearly 600 banks and trust companies; banking assets exceed \$500 billion. In 1997, a stock exchange was opened. Tourism is also a primary source of income, making up about 70% of GDP and 75% of foreign currency earnings. The tourist industry targets the luxury market and mainly serves visitors from North America. In 1997, total tourist arrivals were over 1.2 million, with 600,000 from the US. About 90% of the islands' food and consumer goods are imported. The Caymanians enjoy one of the highest standards of living in the world and one of the highest outputs per capital. Agriculture: vegetables, fruit; livestock, turtle farming; Industries: tourism, banking, insurance and finance, construction, construction materials, furniture

Currency Caymanian dollar (KYD); Exchange rate: 1 KYD = 1.21250 USD / 0.946672 EUR
Language English

Web sites

- Cayman Islands Tourism www.caymanislands.ky
- Sister Islands Tourism Association www.sisterislands.com
- Cayman Brac www.caymanbrac.com
- Cayman Web World cayman.com.ky
- Dive Cayman www.divecayman.ky
- Atlantis Adventures Grand Cayman www.atlantisadventures.com

Dive Operators

- DiveTech www.divetech.com
- Ocean Frontiers www.oceanfrontiers.com
- Little Cayman Diver www.littlecaymandiver.com
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