

Mike Fletcher, with underwater camera gear, came from modest beginnings to become a commercial diver making shipwreck discoveries that led to success in television productions including the series, *Dive Detectives*

Text by Robert Osborne
Photos courtesy of Mike Fletcher

Mike Fletcher is a scary guy. Not because he's violent or aggressive. Quite the contrary, when I meet him in person he turns out to be quite modest and charming. But when you listen to Mike talk about some of his dives, it's a terrifying experience.

I'm sitting in a coffee shop in Port Dover, Ontario, Canada, having lunch with someone I consider to be one of the pre-eminent figures in diving today. He's telling me about a salvage job he'd been recently hired to do in Collingwood, Ontario. In a voice that could be describing something as matter a fact as how to catch a bus to his house, he's talking about crawling in near zero visibility through the bowels of a ship that's settled on the bottom and filled with sediment. The maze of steel is filled with jagged shards of metal, anyone of which could tear his suit or his air hose and leave him dead within minutes.

I'm no commercial diver, but I know enough to understand that his margin of error in this situation is pretty low. I also know a little bit about what it's like to try and wriggle through restrictions, and what he's describing is an extreme challenge by any stretch of the imagination. Either he does it right, or he's in a world of hurt. But for Fletcher, it's just another day at the office. It's an "office" that Fletcher never dreamed of occupying when he

grew up in Nanticoke, near Port Dover, Ontario.

Fletcher's roots do not scream world famous diver. In fact, his beginnings are very modest. He was born on a dairy farm on the shores of Lake Erie in 1955.

His family had been in the area since 1796 when they left Philadelphia as United Empire Loyalists.

Mike was the youngest of three children; he had an older brother and sister. The family was not what you would call

wealthy by any stretch of the imagination. In fact, Fletcher describes his upbringing as "poor".

Fletcher's parents worked the farm and drove school buses just to make ends meet. The family had little spare money,

and as result, the confines of his world were fairly narrow, according to Fletcher. He said, "My parents used to try and protect us from wishing for things. They didn't want us to be disappointed. My father used to always say 'hard work is for us.'"

Mike Fletcher

—The Dive Detective in Depth



profile



Bitten by the dive bug

Education didn't look like a way out for Fletcher. He said he wasn't a particularly good student, though he likes to say that as he got older, he got a little better. Nevertheless, Fletcher's world took a turn for the better when he was 13 years old in 1968. That was the year his father finally sold the family farm.

That simple action completely changed their lives. For a start they had some money. His father went out and brought 36 acres—an old Boy Scout camp—on the shores of Lake Erie. Suddenly, a life restricted to dairy farming wasn't the only option open to Fletcher.

Around the same time, Fletcher began watching a show on his grandmother's television called *Diver Dan*—a character who worked as a hard hat diver. Lloyd Bridges soon entered the picture with his TV series, *Sea Hunt*. And shortly after that, Jacques Cousteau began making under-

water films for *National Geographic*.

Mike developed a bug for all things diving. He was worried that he didn't have the grades to be a marine biologist. But at night, he used to lay awake listening to the sounds of the oil and gas rigs just off the coast and imagine the work the divers working on those rigs would have to do.

In the evenings and on weekends he would ride his bike down to the local docks and watch the hard hat divers working. The whole experience opened up a new series of possibilities for Fletcher. Suddenly, he knew one could make a living in this undersea world. Never one to wait around for an opportunity, Fletcher decided to take his diving career into his own hands.

He'd managed to save up \$360 picking cucumbers as a summer job. He told his father he was going to buy diving equipment with the money. Using a mail

order catalogue, he ordered a tank, a regulator and a back plate (he already had a mask and fins).

The gear finally arrived in October. Undeterred by the lateness of the season or the fact that he didn't have a clue how to use the equipment (other than having read a book or two), he went down to the local duck pond, geared up and jumped in. He sank to the bottom and stayed there until he'd breathed the tank dry, while his father paced anxiously back and forth on the shore. And just like that, Mike Fletcher was a diver.

Commercial diving

Fletcher's transition to commercial diving was equally unorthodox. In 1975, Fletcher decided to quit high school and go to work full time in construction. He was hired as part of a crew building an oil refinery. It was an invaluable opportunity because he learned a number of critical construction skills such as welding and working with concrete. It also opened up an opportunity to get into the whole world of commercial diving.

It all began one day when the foreman was asking around about whether anyone knew a local diver who could help pump concrete—specifically to sandbag the concrete form underwater. Once again, Fletcher took the proverbial bull by the horns. He told the foreman he knew how to do that and just like that he

Fletcher preps for a dive on the HMS Repulse and the HMS Prince of Wales

was hired as a commercial diver. That earned him an extra \$5 per day, and from then on, he was the company diver.

What were his credentials? He had none. In fact, Fletcher had yet to take even the most rudimentary of diving courses. But he likes to say that he had the best credentials of all. "If you want to find a good commercial diver, look for a smart farm boy," he said. From that point on, he started to promote himself as a commercial diver.

It didn't take long to get his next break in the world of diving. In 1977, his foreman, Len Byman, went to a diving operation that was working the gas drilling on Lake Erie and told them about Fletcher—told them they'd be crazy not to hire him. Byman must have been pretty persuasive because Place Gas and Oil hired him immediately. Fletcher was 22 years old when he started working for them full time as a commercial diver.

Now the work wasn't what you might think. Fletcher wasn't spending hours on the bottom hundreds of feet down. The deepest well was in 45 feet of water. Nonetheless, Fletcher decided it was time to polish his credentials. That same year, he went and took an introduction to scuba course. He'd already been working as a commercial diver for a year.

As the years passed, his commercial career became more complex—deeper and longer dives. Fletcher responded by obtaining more training and more certifications so that he could do the work safely. It wasn't an easy life, but the money was unbelievably good. In the 1990s, he could make up to \$500 a day. He worked throughout the 80's and 90's as a commercial diver.

The whole time he was working underwater, he was still out on the water on his days off exploring the wrecks of Lake



Mike Fletcher prepares to dive near Punta Arenas, Chile

profile

Mike Fletcher with son, Warren, are the hosts and cameramen in the television series, *Dive Detectives*



The Fletchers investigate the seafloor



Erie. With all that bottom time, he started finding wrecks. Nobody paid very much attention to what he was doing until 1983 when he found the wreck of the *Atlantic*. That discovery changed everything.

The *Atlantic*

The steamer *Atlantic* sank in Lake Erie after a collision with the propeller steamer *Ogdensburg* off of Long Point in August 1852. The ship sank with a cargo of \$36,000 in gold in the safe. Over 150 to 250 people drowned in the disaster.

Almost immediately after the sinking, American Express, the company that owned the gold, had a diver named Johnny Green go down and look at the wreck. He did not find the gold. So in 1854, Green went back again, and yet again, did not get the gold. He did, however, get the bends. That put him out of the diving business for a couple of years.

In the meantime, in 1855, a diver named Elliot Harrington went to the wreck, and he did find the gold. Story complete? Not quite. All kinds of rumors abounded about what might be on the wreck. One story had it that there was a submarine sitting on the deck. Allegedly,

a man named Laudner Philipo brought a submarine to the wreck in 1853 to recover the gold, and the sub sank.

But shortly after the gold was recovered, the location of the *Atlantic* was forgotten, and the ship disappeared into history for more than a hundred years, until one day, in 1983, when Mike Fletcher found it.

There were a number of reasons the *Atlantic* was a valuable property, even without the gold. It was a rare type of ship called a Palace Steamer. It was also still loaded with all the original affects of those on board the ship and all of the cargo and incidentals such a ship would carry. And what's more, they were all in relative pristine condition. So, the ship was of great interest to several groups.

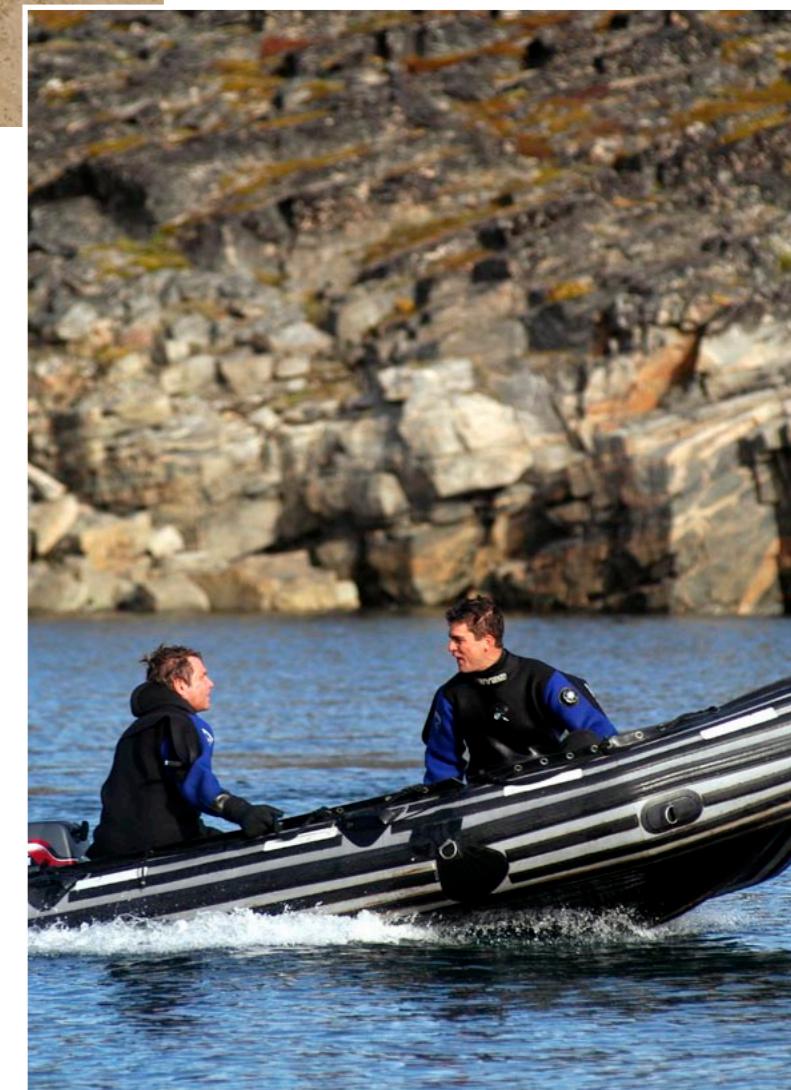
Fletcher wanted it preserved with some of the artifacts brought up for a museum. But an American treasure hunter named Steve Morgan of Mar Dive in California had other ideas. He used a mooring that Fletcher had attached to the wreck to access the *Atlantic* and then tried to lay claim to it. He did it via a kind of legal slight of hand whereby he tried to resurrect the company that used to own the ship and then talked a California judge

into granting him sole ownership—all this even though the ship was only a few miles from the Canadian coast and well within Canadian territorial water.

Fighting for *Atlantic*

Fletcher fought back. He took Mar Dive to court in Canada. Oddly, initially the Ontario government took a position against Fletcher in the fight. Rather than protest that Morgan was violating Canadian sovereignty and attempting to pillage the wreck, they charged Fletcher for being illegally on the wreck.

It took a few years for them to



Mike and Warren Fletcher head to the dive site of the 1854 steam yacht *Fox*, which sank off the coast of Greenland in 1912

profile

Fletcher

decide that Fletcher was actually trying to defend Canada's interests. Ultimately, they did side with Mike, and so did the courts.

They told Morgan the wreck wasn't his and that no judge in California had any jurisdiction to say differently in Canada. The *Atlantic* was left alone, and Fletcher turned over the artifacts he had already gathered to the Ontario government.

The controversy over the *Atlantic* garnered Fletcher national media attention. And there was one positive side benefit from all that publicity. It brought him to



Mike Fletcher



Mike and Warren Fletcher in the dive tank on set

projects. All told, Fletcher estimates he's worked on nearly 100 episodes of underwater television.

And yet, despite the fame and fortune of working in television, Fletcher still likes to keep his hand in as a commercial diver. He said, "It keeps me sharp. Whether you're in a sewer or salvaging a ship, it's all training to make good TV."

Other than that, Fletcher spends time on his farm on the shores of Lake Erie. These days, he and his wife, Lorraine, are raising thoroughbred horses.

The joy of diving

Through it all, though he's lost count of the thousands of dives he has under his

the attention of John Davis, a producer at Eco Nova Productions in Halifax.

Making television

Davis approached Fletcher along with Clive Cussler in 2000 and asked him if he was interested in working on a show called, *The Sea Hunters*—not initially as a host, but as the expedition leader.

Fletcher accepted the job and was paid to make sure that all the diving would be handled in a safe manner. But ultimately, as the production got underway, Fletcher showed that he had much more value on the creative side of the show. He had story ideas—ideas about the writing and the directing of the show.

Ultimately, the producers decided that Mike and his son, Warren, were better used as hosts and camera-

men for the show.

The show was sold to the History Channel and National Geographic and lasted for five seasons. It was broadcast around the world, arguably one of the most successful dive series on television. It finally ended in 2005, but Fletcher's TV career was just beginning.

A second show was offered to him in 2008. History Television came to him again and asked him whether he was interested in doing *The Dive Detectives* produced by Yap Films in Toronto.

This was a more upscale dive show. It only ran for one season, but what a season it was. The Fletchers and their crew travelled around the world looking for lost Buddha's in the Mekong River, exploring Ghost Ships on the island of Saba and were even allowed to explore the famous 19th century ships, *Hamilton* and *Scourge*, on the bottom of Lake Ontario.

Fletcher also kept busy working on a multitude of other shows including a show called *Dream Wrecks* in which he was both a host and underwater cameraman. The series ran for 26 half hour episodes.

He's also worked on a number of single

belt, he still loves to spend time underwater. He said that's still what it's all about. "More people need to embrace the joy of diving," said Fletcher. "I never stop being excited about doing things underwater."

And he still loves to make television. He's currently working on a project with a preliminary title, *The Wild Goose Files*. In this project, he is teamed up with the world famous treasure hunters, the Fisher family in Florida. It's a series about hunting for gold and making people's dreams come true—appropriate for a farm boy from Ontario who, against all the odds, managed to make his own underwater dreams come true. ■

Features editor Robert Osborne is an internationally published dive writer, television producer and reporter based in Toronto, Canada.



Mike and Warren Fletcher in action underwater

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POINT & CLICK
ON BOLD LINKS



Edited by
Rosemary 'Roz' E. Lunn

Equipment

Orange

Alpina is not well known in the diving world, however, they do have a history of manufacturing diving watches. The Extreme Diver 300 Orange is Alpina's latest creation (and sixth diving watch) and it comes in two versions. An automatic model powered by an AL-525 movement and a quartz-driven model with a AL-240 movement. Both watches are water resistant to 300 metres (984 feet). Features include a screw-in crown, a screw-down case back, a choice of a metal or rubber bracelet and a unidirectional rotating bezel. The bezel markers are luminous and both models feature an anti-reflective treated sapphire crystal.



Giotto

Unveiled at the 2012 DEMA Show, the Cressi Giotto wrist mounted air/nitrox computer has now come to market. This visually attractive, feature-rich, computer runs a new 'reduced gradient bubble model' RGBM algorithm, specifically designed by Cressi and Dr Bruce Wienke, for repetitive multi-day dives. The large screen displays data that is divided into easy-to-understand sections. A screen prompt tells you which mode you are in, as you navigate through the system, using the three buttons. The programme in two gas mixes up to 99% EANx. Other features include audible and visual alarms, user changeable battery, a deep stop option and gauge mode. The Cressi Giotto is rated to 150 metres (492 feet).



Finger spool

'Highly Optimized Gear' or HOG manufacture a small, low-profile finger spool in ABS plastic. It is ideal for stashing in a pocket or clipping off on a D-ring. The holes along the side can be used to lock a marine grade 316 stainless steel double ended bolt snap to the spool. Alternatively, the diver can make a small loop, sometimes known as a 'Jasper' loop, at the end of the line. This is then threaded through one of the holes and the bolt snap attached to the loop, to stop the spool unwinding. The 30-metre (100-foot) bright orange #24 line makes it easier for the eye to follow when diving in low visibility conditions.

The line most commonly used for finger spools is #24 braided line, some people call this 'cave line', as opposed to 'wreck line'/#26.



Shot

FX Aqua Lung states that their Shot FX fins are an innovative design that helps provide a powerful, yet comfortable kick. The foot pocket has a customised inner sole designed to anchor the foot, preventing power from the boot moving laterally during the power stroke, resulting in maximum energy transmission.

The blade is shorter and softer, too, making it easier to kick, and performance has been enhanced by adding an elastic blade insert. Apparently, this creates a "spoon effect" that pushes more water with each down stroke. Aqua Lung has realised just how popular technical spring straps are proving, with fitted metal spring straps and a soft heel lug. This visually attractive fin is popular with both sexes, and is available in Twilight and Arctic White.



Xjoy 2

Suex, has recently launched a recreational diver propulsion vehicle—the XJOY 2. Coming from a stable with a good pedigree for exploration equipment, this should be a good entry-level scooter. It has a useful 80m (260ft) rating and is lightweight (15kg), compact (63cm tall), and is powered by a NiMh battery. The XJOY 2 comes weighted/trimmed for neutral buoyancy 'out of the box' and has a burn time of around 60 minutes. Suex states the cruising speed is approximately 50 metres per minute when towing a single tank diver. In summary, the XJOY 2 is a nimble, maneuverable, lightweight, tough and economically priced DPV. And it looks like a lot of fun!



Heavy Metal

— The Hardhat Diving Experience



Diver in Mark V helmet and diver in background in Mark XII helmet

The Northeast Diving Equipment Group based in the U.S. state of New Jersey is an organization that allows the average sport diver to try hardhat diving. They have been around since 1993 but really started in 1987. Dave Sutton, an experienced commercial diver, was manager of Lakeland Divers, a dive shop in New Jersey. He purchased a Mark V hardhat rig and started offering a series of recreational hardhat courses. These courses were to familiarize divers with the gear. There was no formal certification.

Text by Larry Cohen
Photos by Olga Torrey

A number of Sutton's students, including Fred Barthes, John Melnick and Jim Boyd, purchased the surface supply gear and formed the Northeast Diving Equipment Group (NEDEG). Barthes is the remaining co-founder of this very active group.

Every Memorial Day and Labor Day weekend since 1988, NEDEG brings out all the heavy gear. They started doing this at Willow Springs Quarry in Pennsylvania and have continued the tradition at Dutch Springs since 2008. Dutch Springs in Pennsylvania is a Mecca for dive training.

At this event every certified diver has the opportunity to try various hardhat rigs. This is important to the dive community. The group's goal at these events is to show sport divers their roots. As Barthes said, "We must understand where we came from in order to move forward."

Vintage hardhat gear

At this event, one can dive historical and vintage gear, including the famous Mark V helmet. The U.S. Navy used this classic hardhat from 1916 till 1984. The "hat", as



Diver in Chinese TF3 12 bolt helmet drives sunken fire truck

feature



it is called, saw its heyday during World War II. More Mark V rigs were manufactured and in use during that time.

Divers can also dive Russian and Chinese hardhats, along with a Custom "Scarpone" Helmet. All of these are based on the Mark V design. Vince Scarpone ordered a modified Mark V helmet in 2009. It has a commercial secondary exhaust valve and mounting blocks on the bonnet. The faceplates are oversized and made of Lexan.

These helmets are used with a constant volume suit. The rig has a breastplate to which the helmet is attached. The air flows through the helmet and suit. Barthes said, "It is like diving inside your BC."

Gas is supplied from the surface by an umbilical. The gas free-flows into the helmet via a diver-controlled valve and exits through a constant exhaust. This creates a large volume of gas in the suit and means one needs to add an enormous amount of

weight. This makes the suit hard to work in.

Two to three tenders are needed to dress the diver, and it takes up to half an hour to get the person in the water. The diver and suit will weigh around 400 pounds. If the diver falls over, it takes at least four people to help raise him or her up.

Modern hardhat gear

Divers can also try a variety of modern gear including a Kirby Morgan Superlite stainless steel 37, Aquadyne AH2, band masks and the Desco Pot hat. This equipment is still used by commercial divers.

The Desco Pot hat is used for hazmat work. The Pot hat and the Aquadyne AH2 are hardhats, but are much smaller than the older Mark V. Less weight is needed, and a diver could be dressed in five minutes or less with the help of one tender. They still use a free-flow gas supply from the surface and could be used with a constant volume suit with



LEFT TO RIGHT: Diver with Advanced 2000 air helmet; Diver in Miller diving helmet; Diver with Superlite 17 K helmet getting ready to enter the water

Hardhat

feature

Hardhat



Diver in Superlite 77 SS helmet, holds the umbilical

CLOCKWISE FROM ABOVE: Diver in Superlite 17 K helmet from the back showing bailout; U.S. Navy's newer Mark XII helmet on left, which replaced the older Mark V on right; Diver in Chinese TF3 12 bolt helmet relaxing on the bottom; Diver walking on bottom of Dutch Springs in a Desco custom helmet

a breastplate or yoke.

With a yoke system, the helmet is screwed onto the yoke and held in place with a crotch strap. These helmets could also be used with a neck dam. With this system, the helmet seals onto the diver's neck, and the gas flows only in the helmet, not in the suit.

Neck dams are the way Kirby Morgan Superlite helmets are attached. When diving a Superlite, the gas is still surface supplied from an umbilical, but the hat has a demand regulator, just like open circuit scuba.

Instead of a constant free-flow, the regulator only delivers gas when the diver inhales. This uses less gas than a free-flow system and requires less weight.

A band mask looks like the front of a Superlite, but instead of a helmet, the back is neoprene. A redundant gas supply is always recommended. When diving a neck dam rig, a redundant gas supply is necessary.

All systems have redundant air supplies, and line pull signals are discussed in case the communication system goes down.

A unique experience

Diving a hardhat is a very different experience from scuba diving. Donning the heavy gear will make putting on scuba equipment seem like skinny-dipping. Neutral buoyancy is not the goal. With weighted boots you want to walk along on the bottom.

Since many of the helmets are attached to your suit, when you turn your head the helmet does not turn. Instead, you end up looking out a small side window. This feels very strange at first, but after a few minutes you get used to it. The next thing is the communication system.

It is very strange to hear the tender on the surface talking to you. At first, you start to wonder if you are naked and hearing voices. What is even stranger

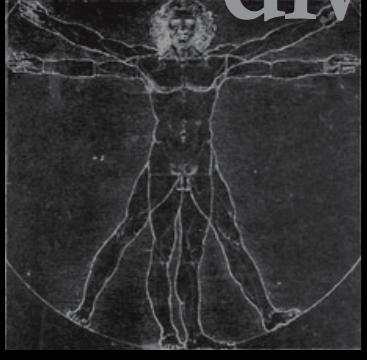
is the fact that you can talk back, and the tender responds. At least you know you are not hearing voices.

Education and awareness

At present, the NEDEG's goal is to educate the public about surface supply diving today and in the past. They do presentations in schools, museums, dive clubs and even to the U.S. Coast Guard. They hold exhibits at the New Jersey Ocean Wreck Divers Flea Market, beach clean-ups and local fairs.

The group is involved with setting up a permanent exhibit at the New Jersey Maritime Museum in Beach Haven, New Jersey. This exciting project will be called the "Evolution of Diving". Vintage and historical dive gear will be on display, along with the newest technology including rebreathers. ■

For more information send an email to fpbarthes@yahoo.com



ED.— ALWAYS
CONSULT A
PHYSICIAN FIRST
BEFORE BEGIN-
NING ANY EXER-
CISE OR FITNESS
PROGRAM.

Text by Gretchen M. Ashton, CFT, SFT,
SFN, NBFE. Founder of ScubaFit®

When shore diving, divers often have to overcome an obstacle course to get to their favorite dive spot. Beach access may be by stairs and always includes walking across grass, concrete, sand or rocks. Entries and exits are in varying surf conditions and divers regularly "kick out" or "turtle" for extended distances on the surface to conserve air before dropping down to dive. Boat diving brings agility challenges requiring divers to maneuver on decks and ladders on constantly rolling seas. Divers do all this under the weight of 50 to 70 pounds of scuba gear while wearing bulky and somewhat restrictive protective clothing. The diverse physical demands of scuba diving, and most notably, an efficient fin-kick, translate into power, strength and endurance.

Sports fitness regimes typically separate power, strength and endurance into off-season, pre-season and in-season programming. Scuba divers, however,



Sea Legs

Power, Strength & Endurance for Diving

can develop their sea legs by combining power, strength and endurance into the same workout.

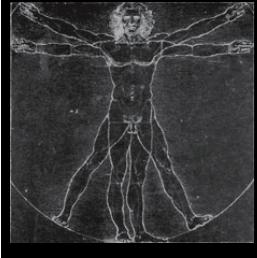
Time, tension and rest

To develop lower body fitness ideal for diving, exercises that combine the major muscles of the legs, hips and buttocks

must be performed with variations of time, tension and rest.

Striking the best balance of time, tension and rest is accomplished with sets,

repetitions, intervals and resistance. By changing the amount of weight lifted and the duration of both the exercise and rest period, different combinations of



muscle fibers are recruited and different training goals are achieved. A set performed with the adequate (balanced) resistance and duration produces an oxygen deficit in the muscle cells causing fatigue or failure within a predetermined number of repetitions. As the resistance (weight lifted) increases, fewer repetitions are usually performed and rests between sets are longer. After a rest of from 30 seconds for foundational fitness to as much as three to five minutes for power athletes, oxygen has been restored and the muscles are able to perform again. The more sets performed, the greater the training demand.

Power

To develop power, perform exercises with as much weight as possible for four to ten repetitions for three to five sets with a rest period of one to three minutes. To elicit an adaptive response the last two repetitions should feel difficult to perform.

Strength

To develop strength, perform exercises with as much weight as possible for 12 to 15 repetitions for one to three sets with a rest period of 30 seconds to one minute. To elicit an adaptive response, the last three repetitions should feel difficult to perform.

Endurance

To develop endurance, perform exercises for 15 repetitions or more including intervals of one to three minutes one to three times with as much weight as possible and no rest period between exercises. To elicit an adaptive response, the last 15 seconds should feel difficult to perform.

The workout

Begin with a 10- to 20-minute warm-up

of aerobic exercise to prevent injury. Divers with more lean muscle mass benefit from a longer warm-up.

Finish the workout with an additional 10 to 20 minutes of aerobic exercise to prevent soreness. For fat loss, continue an additional 10 to 20 minutes.

Combining power, strength and endurance into the same exercise session may initially result in

increased "delayed onset muscle soreness" (DOMS). DOMS, if it occurs, should peak and subside within 24 to 36 hours after the workout.

Work into the routine gradually and at an individual level. Stay well hydrated before, during and after the workout. As with any exercise program, as the workout gets easier continue to safely increase the resistance.

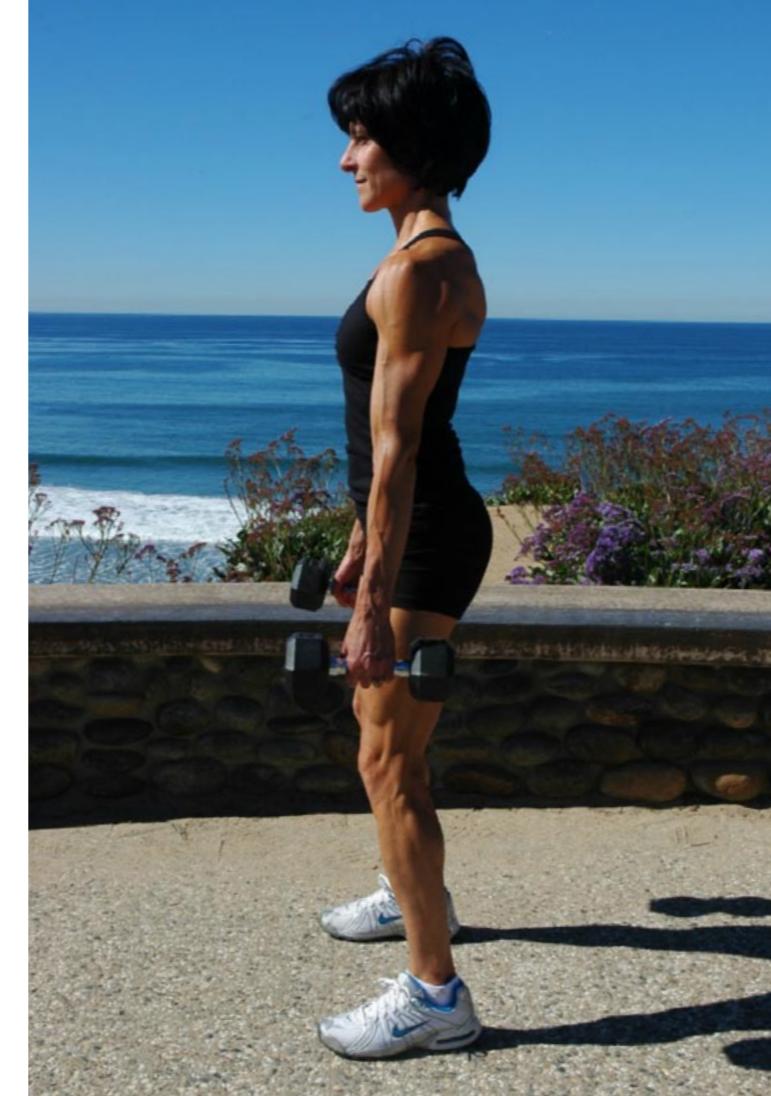
Beginner

To begin, perform each exercise for power one set, for strength one set, and for endurance one set, then repeat one to three times.

Advanced

For an ultimate workout, perform each exercise for the entire power sequence (five sets), then for the entire strength sequence (three sets), then for the entire endurance sequence (three sets) before moving on to the next exercise. Select three to five exercises.

Squat with dumb bells—starting position

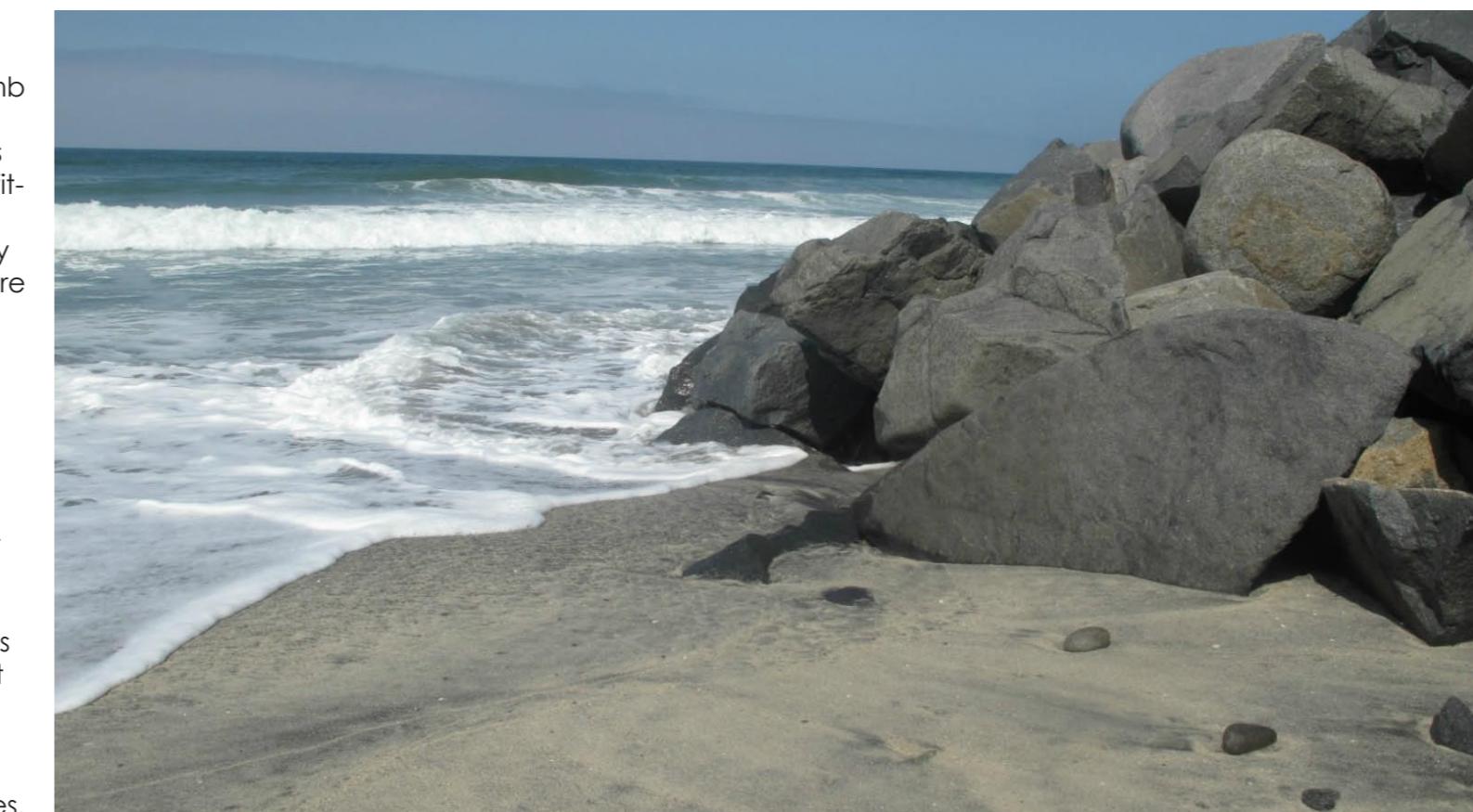


Squat with dumbbells—seated position

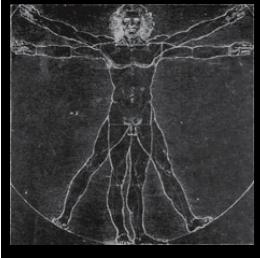
Be creative and safe. Select and perform only those exercises well-tolerated by individual fitness and mobility (i.e. use caution with any knee, back or musculoskeletal conditions).

Squat

To perform the squat, hold dumbbells alongside the body, contract the abdominals, inhale deeply through the nose, and sit down and back as if reaching for a chair that is too far away. Bend the knee and hip joints until right angles are achieved at each joint and at the ankle. Knees should always be just above or behind the toes. The dumb bells may shift forward and the head may look



Divers often have to navigate a beach entry while schlepping 50 to 70 pounds of dive gear on their backs



up slightly to help maintain form.

To reverse the exercise, exhale through the mouth, contract the glutes (buttocks) and extend the knee and hip joints returning to the starting position.

Precaution: Do not lock-out the knees or look down.



Wide stance squat with dumb bell—seated position

Wide Stance Squat with Dumb Bell

Set up a wide stance as shown with one dumb bell in front of the hips and contract the abdominals. Make sure the hip joints are slightly rotated away from center so that the knees and toes are aligned when viewed down the length of each leg. Use the



same form as described for the Squat.

Precaution: Keep knees behind the toes. Do not lock-out the knees or look down.

Lying Leg Curl with Dumb Bell

The lying leg curl with a dumb bell is a challenging way to train the glutes and hamstrings. By squeezing the inner thighs together during the exercise, divers will also purposefully work the adductors (inner) and abductors (outer) thighs.

Stand the dumb bell on end on the floor or bench. Grasp it between the arches of the feet allowing the end of the dumb bell to rest on the bottom of the feet as shown. Contract the

abdominals and glutes to protect the low back during this movement. Keep the head aligned in neutral spine as much as possible. Inhale and extend the knee joints while lowering the weight as close to the floor as possible without dropping the weight or putting pressure on the knees. Exhale while flexing the knee joints and raising the weight toward the buttocks.

Precaution: Do not allow the front of the hips to lift off the bench or floor. If this happens, lower the weight until the exercise can be performed with safe and proper form. ■

Gretchen M. Ashton is registered with the Na-

tional Board of Fitness Examiners. An advanced diver, International Sports Sciences Association Elite Trainer, and world champion athlete, Ashton developed the ScubaFit® program and the comprehensive FitDiver® program, which includes the first mobile app for scuba diver fitness. Ashton is the co-author of the PADI ScubaFit Diver Distinctive Specialty course. For more information, visit: ScubaFit.com

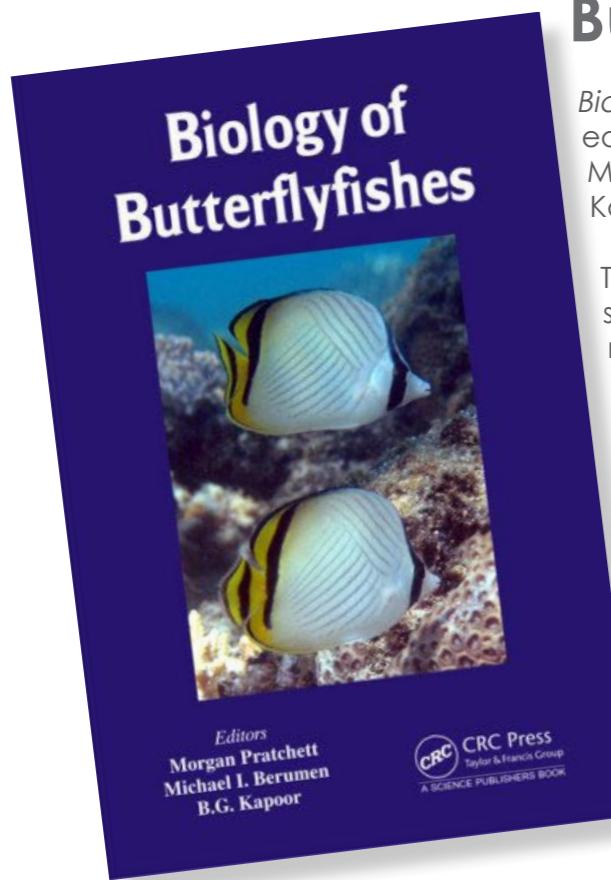


Lying leg curl with dumb bell—starting position



Lying leg curl with dumb bell—extended position

Edited by
Catherine
GS Lim

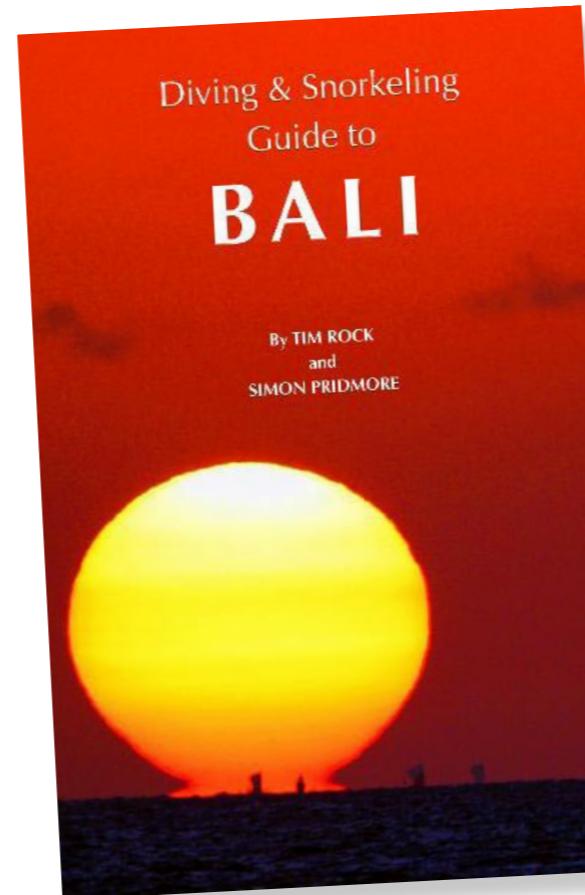


Biology of Butterflyfishes

Biology of Butterflyfishes, edited by Morgan S. Pratchett, Michael L. Berumen and B. G. Kapoor.

The butterflyfish that dart and skirt around the world's coral reefs are more than just a pretty complement to your undersea photos. Find out a little more about them—and then some—with this extensive 320-page book that covers their evolution, diversity, adaptions, behaviour and reproduction. Other topics include their role in the reef system, as well as the threats and challenges related to their conservation.

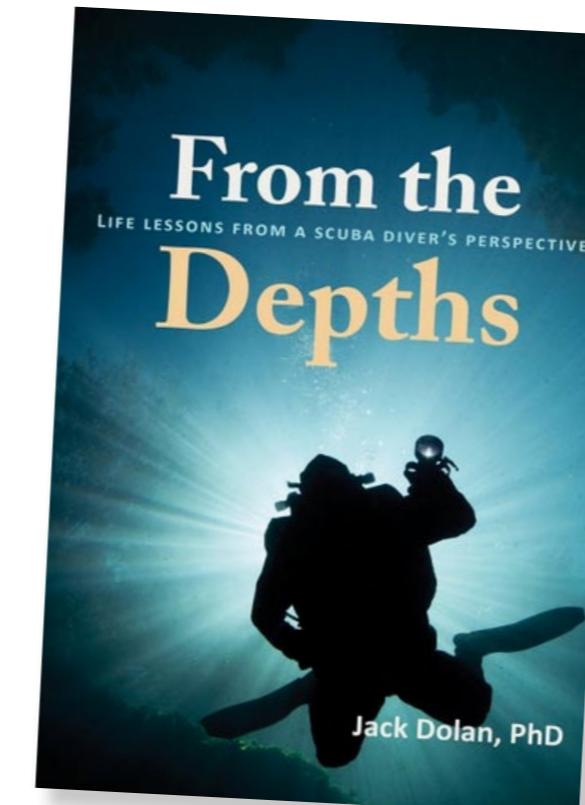
Hardcover: 320 pages
Publisher: CRC Press
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ISBN-10: 1466582898
ISBN-13: 978-1466582897



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Diving Bali

Diving and Snorkeling Guide to Bali: Best Dive Sites Around Bali, by Tim Rock and Simon Pridmore.

Containing all the essential information ala a normal tourist guide, this book focuses primarily on the needs of the travellers bent on getting themselves wet in Bali. So, alongside tips on what to bring and wear, and how to get around, the bulk of the book shares information on 60 dive and snorkelling sites, site maps and dive safety tips for the region. You'll also find out about where and when to dive, as well as the colourful critters you can hope to spot while underwater.

Paperback: 108 pages
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ISBN-10: 1491056894
ISBN-13: 978-1491056899

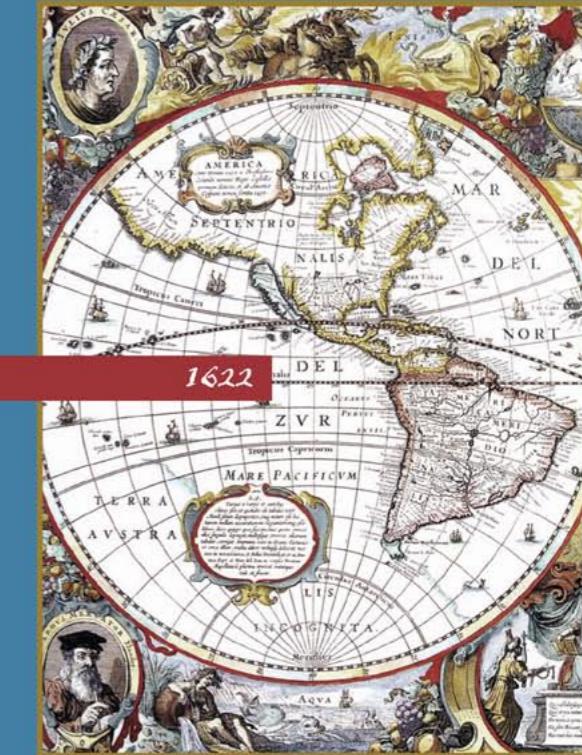
Scuba Life Lessons

From the Depths: Life Lessons from a Scuba Diver's Perspective, by Jack Dolan.

When Jack Dolan took up scuba diving lessons at the age of 56, he saw it as yet another aspiration to be realised. As the lessons progressed, he realised how similar scuba diving was to the adventure of Life. He saw how the sport was filled with anxieties, doubts, questions and challenges, as well as fun, excitement and rewards. The more he learnt about the sport, the more he came to know himself. Written in a straightforward readable style, this book is an account of Dolan's introduction to the world of scuba diving, and the rediscovery of his own life.

Paperback: 186 pages
Publisher: Wheatmark Inc
Publication date: 15 Jun 2013
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ISBN-13: 978-1604949506

Treasure Coins
of the *Nuestra Señora de Atocha*
& the *Santa Margarita*

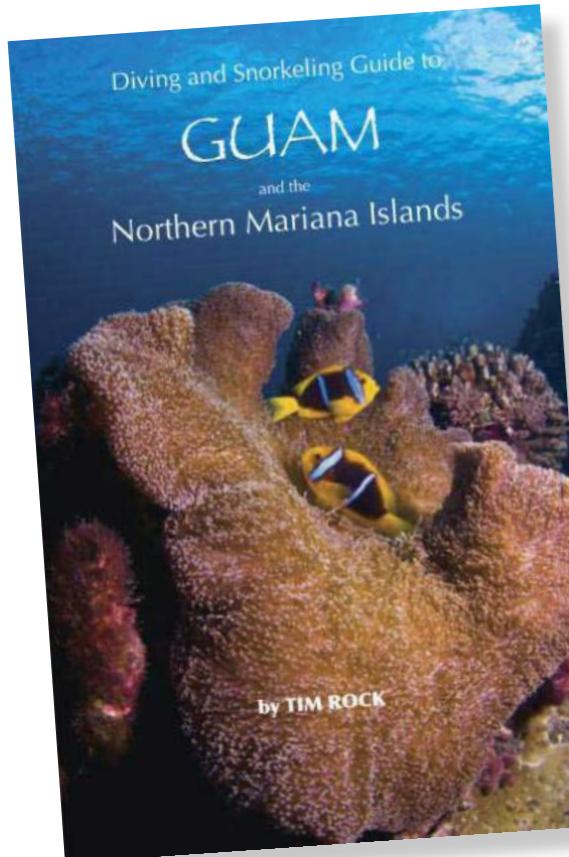
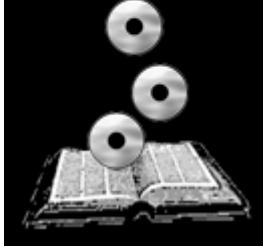


Carol Tedesco

In 40 succinct pages, *Treasure Coins of the Nuestra Señora de Atocha & the Santa Margarita* answers all the most frequently asked questions, including what the coins look like when first discovered, the meaning of the various markings, how they are cleaned, conserved and graded, what they were worth in the 17th century, and the most up-to-date information on the names and periods of office of the men who made them. Of particular interest to 1622 fleet coin enthusiasts is a section devoted to the exceedingly rare Old World minted coins discovered on the Atocha and the Santa Margarita.



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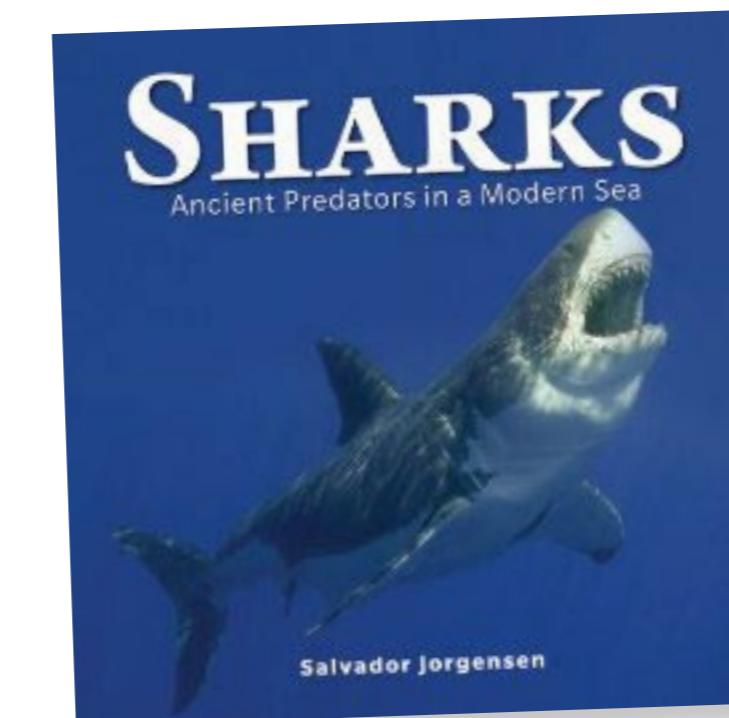
Diving Guam

Diving and Snorkeling Guide to Guam and the Northern Mariana Islands: Best Dive Sites on Guam and CNMI, by Tim Rock.

The island of Guam may sound like an exotic travel destination, but this is a place that divers should also pen into their wish list. This is because Guam and the Northern Mariana Islands are hard

coral kingdoms with around 400 coral species and over 900 fish species—as well as World War remnants—in the surrounding oceans. This book introduces readers to popular dive sites of the region, alongside useful information about the types of dives to be expected, the dominant marine life likely to be encountered and the necessary logistical information. Definitely a handy book to have, whether you are new to the region, or a seasoned diver in these parts.

Paperback: 108 pages
Publisher: CreateSpace
Independent Publishing Platform
Publication date: 24 July 2013
ISBN-10: 1491056479
ISBN-13: 978-1491056479



Sharks & People

Sharks and People: Exploring Our Relationship with the Most Feared Fish in the Sea, by Thomas P. Peschak.

Pick up this book and you're greeted on the cover with the now-famous photo of a great white shark behind a researcher in a yellow kayak. As a dramatic—and admittedly terrifying—introduction to the topic, the photo is just one of the many found in this book, which illustrates our relationships with sharks and describes the natural history of this apex predator (sharks, that is). In this book, award-winning photographer Thomas P. Peschak aims to illustrate the brute strength and unique attraction of sharks that have enthralled and inspired us through the centuries.

Hardcover: 256 pages
Publisher: University Of Chicago Press
Publication date: 7 October 2013
ISBN-10: 022604789X
ISBN-13: 978-0226047898

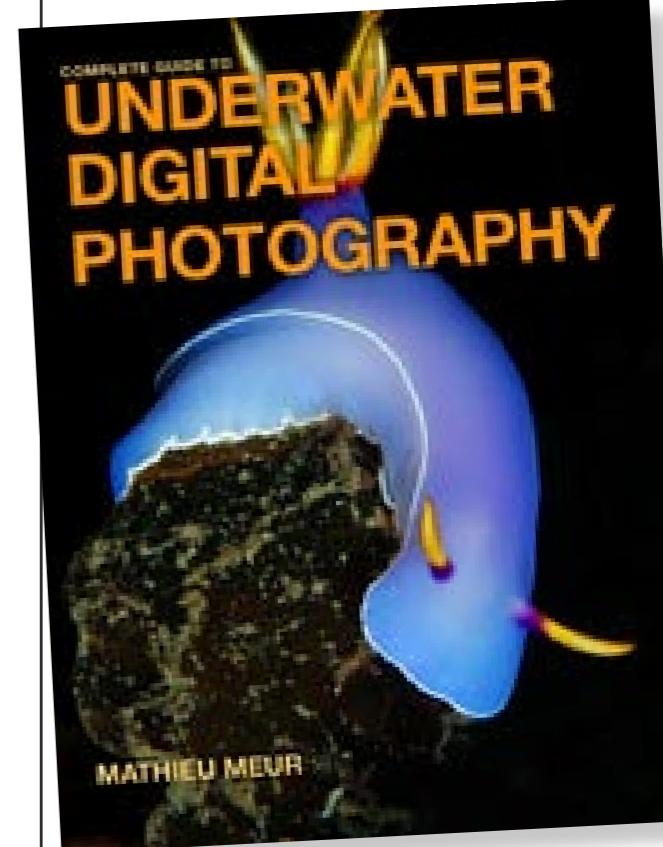
Ancient Predator

Sharks: Ancient Predators in a Modern Sea, by Salvador Jorgensen.

The body and senses of the shark have been honed through the centuries to create an impressive and efficient hunter. This book explores the latest scientific findings, newly observed behaviour and recent developments in our understanding of how they live—and thrive. Readers are also privy to recently discovered creatures from the Ocean Census research as well as photos of shark births and the latest discoveries of new species, making this book a must-have on any shark enthusiasts' bookshelf.

Hardcover: 256 pages
Publisher: Firefly Books
Publication date: 25 July 2013
ISBN-10: 1770852336
ISBN-13: 978-1770852334

New eBook



Underwater Digital Photography

Complete Guide to Underwater Digital Photography by Mathieu Meur.

Described as the first comprehensive, interactive electronic book of its kind on underwater digital photography in the iTunes Store, this ebook runs the gauntlet to cover all aspects of underwater photography. Topics include equipment, techniques, composition, lighting, post-production, and even tips on getting published and winning competitions. Targeted at both beginners and advanced photographers, this book contains over 350 pages and more than 500 images and illustrations.