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POINT & CLICK ON BOLD LINKS



Equipment *way to go*



Edited by Peter Symes &

Co-Pro

The CO-Pro is a simple and inexpensive product that can detect the lowest amount of carbon monoxide contamination due to poor filtration maintenance or failure and can mean the difference between life or death. A quick transfer of air from the tank valve into the test balloon, and in seconds you have the results. Additionally, CO-Pro can be used multiple times over a period of months. **Co-Pro.com**



Nomad Fall 2012

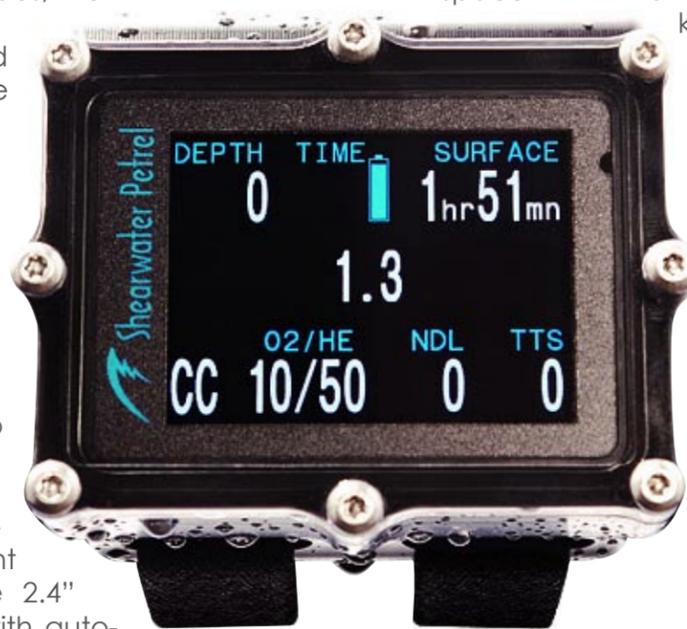
The Nomad XT Fall 2012 model is built with streamlining in mind. A properly balanced sidemount rig should not require additional weight on the shoulders. Divers who wear heavy tanks or those just getting started with sidemount will often opt for this older solution to resolve trim issues. Seeing this makeshift solution in the field, Dive Rite redesigned their off-road sidemount rig with a new, wing design. Narrow at the neck and angled at the sides, the new Nomad XT wing is designed to give lift where its most needed—at the hips.

Diverite.com



Petrel

The Petrel is a technical dive computer for both open and closed circuit. Each mode allows for up to five gases, and conservatism is user-adjustable. There is a choice of decompression algorithms including Bühlmann ZHL-16C with Gradient Factors or an optional VPM-B. The 2.4" full-colour HD display is equipped with automatic screen brightness. The user interface is designed to be simple to use yet give easy access to advanced settings. Runs off a single AA battery. **Shearwaterresearch.com**



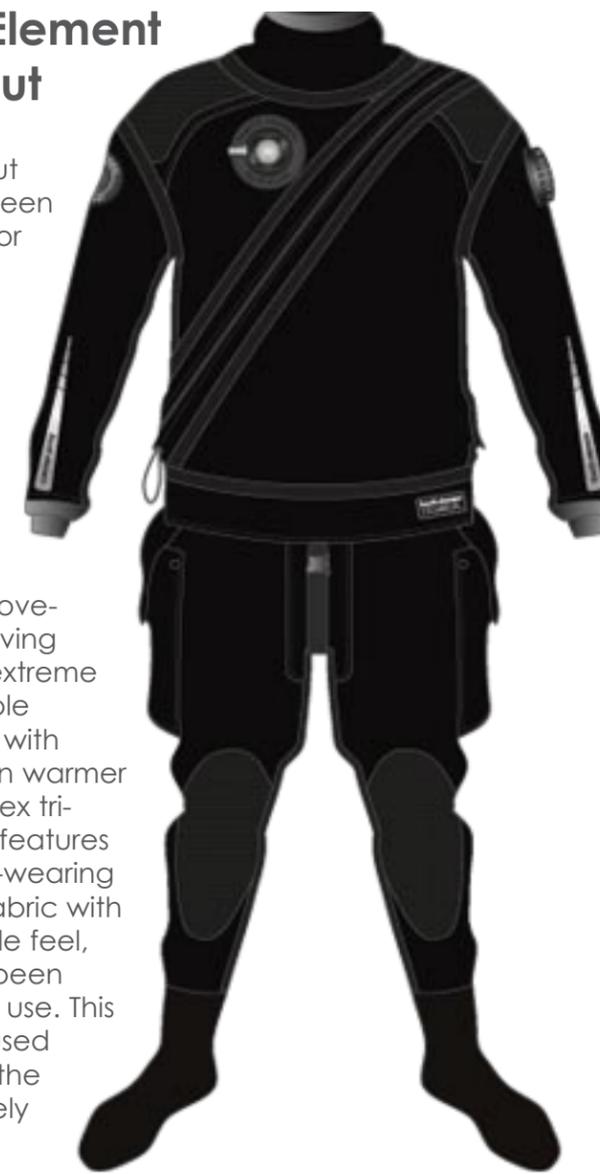
BMC for APD's CCRs

Ambient Pressure Diving has just launched their Back Mounted Counterlungs (BMC) for their popular Inspiration and Evolution range of Closed Circuit Rebreathers. The BMCs are available as an upgrade kit for existing APD rebreathers or as an option specified with any new unit. The benefits of the Back Mounted Counterlungs include a clutter-free chest area, stream-lined diver profile with reduced drag and more space available to clip on kit. The manual inflators that now come over the shoulders are easier to locate. The integral shoulder strap and harness design ensures the counterlung is fixed in the optimum position for best breathing performance. **apdivingdirect.com**



Fourth Element Argonaut

The Argonaut drysuit has been developed for the harshest diving conditions on the planet. Ergonomic design along with a telescopic torso allows maximum comfort and range of movement whether diving in conditions of extreme cold, using multiple thermal layers, or with lighter undersuits in warmer waters. Cordura Flex trilaminate material features an extremely hard-wearing outer Cordura™ fabric with a softer more flexible feel, which has already been specified for military use. This durable material is used throughout, making the Argonaut an extremely rugged suit. **Fourthelement.com**





Subwing

Subwing is a set of two connected wings that can be rotated independently of each other, enabling a person towed by a boat to maneuver like a plane.

It is controlled by tilting the wings in different angles. The rope is attached on the wings in a manner that balances the pull and drag and therefore requires little strength to operate the wings. The Subwing is made from carbon with a hollow design filled with foam so it floats easily. It is designed so it can be easily disassembled. Only other equipment needed is a mask. **Subwing.com**



Liquivision Lynx

The Lynx is an air integrated dive computer. The computer allows up to three gases (air and nitrox 21-100%). It can be dived in recreation mode (air only), tech mode (up to three gases) or gauge mode. It has a dive planner, a dive simulator, a lifetime dive log and uses visual indicators for air time remaining. In addition to monitoring your own air supply, the computer can monitor the air supply and the direction of up to nine other divers! This is possible because the transmitter does not use radio frequency, which is what other wireless transmitters use. Instead, it uses ultrasonic technology. This means that the range is at least 100m. Also, it does not only give you the tank pressure of the other divers, it also triangulates the location of those divers and gives you a directional arrow. This is incredibly useful e.g. for monitoring your buddy's air supply on top of your own. Liquivision expects the Lynx to be available to the general public early 2013.

Liquivision.com



Fusion One

White's Fusion One skin is designed with 1mm neoprene for added abrasion resistance in high wear areas and heavy duty Lycra panels in high stretch areas. This optimal combination creates the perfect marriage of mobility and durability. The first layer "DryCORE" is a loose fit shell dry suit incorporating latex seals, dry zipper, air intake and exhaust valves to create the waterproof barrier. The ONE Skin attaches and removes easily from the DryCore via Velcro fasteners at the wrists, ankles and zipper to form a snug-fitting and streamlined second layer or "over suit".

Whitesdiving.com



Retro

The famous Aquadive watch brand, which was founded in 1962 is now being re-launched. This genuine NOS (New Old Stock) Aquadive has a Swiss hand made case equipped with a bidirectional rotating bezel and a classic aluminum insert. The modern update of the Aquadive dive watches are designed in the United States by a team of divers and engineers and handmade in Switzerland of German and Swiss materials. This watch has a depth rating of 660ft and is equipped with a new Aquadive dial with applied super-luminova markers. It is operated by a new Swiss made 25-jewel movement replacing the original movement in order to guarantee performance for years to come. **Aquadive.com**



Haztech

Haztech is a new lightweight, commercial grade dry suit from Viking for contaminated water diving. The new technology is based on lightweight and robust TPU (thermoplastic) materials, which offer lighter weight suits particularly suited for use in warmer water or warmer climate diving conditions where heat exhaustion can be a major problem. **Ansell.com**

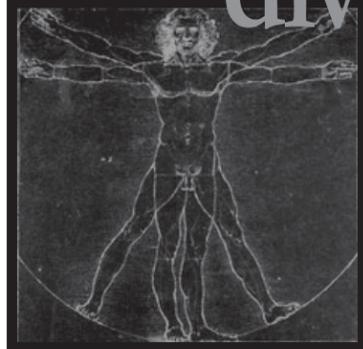


Flex

Oceanic's Flex BC is aptly named. Made from a stretchy fabric—a patented "BioFlex material", the jacket can stretch and conform to the body while remaining airtight. It has also permitted Oceanic to make a smaller creating less bulk and drag underwater while achieving high volume of lift when required. The Padded Soft Pad over compact backpack streamlines the BCD when you need to pack it for your next dive trip and keeps you comfortable when you are diving. **Oceanicworldwide.com**



air cell, bulk and drag underwater while achieving high volume of lift when required. The Padded Soft Pad over compact backpack streamlines the BCD when you need to pack it for your next dive trip and keeps you comfortable when you are diving. **Oceanicworldwide.com**



ED.— ALWAYS CONSULT A PHYSICIAN FIRST BEFORE BEGINNING ANY EXERCISE OR FITNESS PROGRAM.

Get a load of the triceps on this guy! It's the King Neptune statue by sculptor Paul DiPasquale, Neptune Park, Virginia Beach Boardwalk, U.S. State of Virginia

Neptune's Triceps

Text and photos courtesy of Gretchen M. Ashton, CFT, SFT, SFN, NBFEE. Founder of ScubaFit®

Neptune, King of the Deep, is ripped! This Ancient Roman god of the sea has superhuman strength and endurance to invoke earthquakes, tidal waves, floods and storms. He is often depicted with massive arms brandishing a three-pronged spear called a trident. Neptune's ability to wield his weapon is made possible (in part) by the triceps brachii, the large muscle on the back of the upper arm. Like the trident, the triceps is comprised of three parts.

The long, lateral and medial heads of the triceps brachii perform extension of the elbow joint. The second role of the triceps is to act as a powerful antagonist, stabilizing and resisting the biceps brachii

and brachialis in flexing the elbow. Third, the triceps plays a minor role in moving the shoulder joint.

A prominent feature of the triceps is the horseshoe-shaped pattern of the muscle as it wraps around the pronounced common tendon. The muscle is well suited to intense training from almost every angle or position of the body. Changing the position of the shoulder joint and intensity slightly emphasizes different areas of the triceps, but the entire muscle utilizes all three heads during all movement. Rotation of the arm itself has little effect when training the triceps. The anconeus, a small muscle on the back of the lower arm located just below the elbow joint, assists the triceps. The triceps makes up two thirds of the upper arm, but because of its location, its size is often incorrectly attributed to the biceps.

Triceps and scuba diving

As divers age, this area of the arm may lose muscle tone and strength even with continued resistance training. Women, in particular,

covet a sleek toned upper arm. More importantly, women divers benefit greatly with increased upper body strength developed when training the triceps.

All divers rely heavily on the triceps for overall upper body

strength, all pressing movements with the upper body, and swimming. Specific examples of triceps involvement include donning and doffing gear, clearing a mask, reaching for valves, rescue activities and changing direction particularly on the surface.

The workout

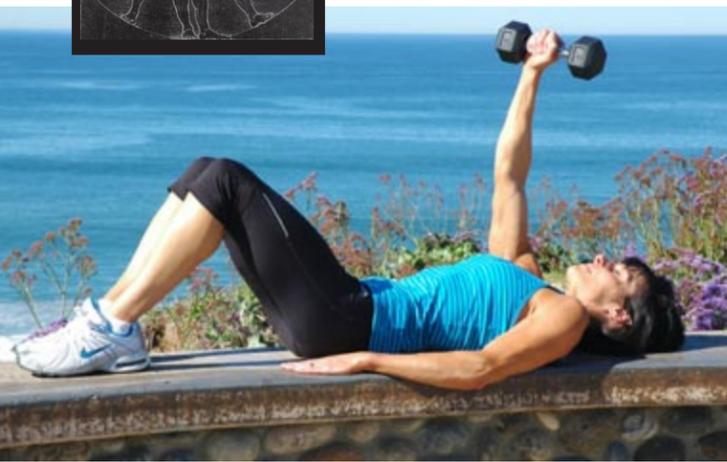
There are more than 150 exercises for the triceps using free weights. Hundreds more variations of elbow extension may be performed with cables, machines and body

All divers rely heavily on the triceps for overall upper body strength, all pressing movements with the upper body, and swimming. Specific examples of triceps involvement include donning and doffing gear, clearing a mask, reaching for valves, rescue activities and changing direction particularly on the surface.





Triceps Dumbbell Extension extended position (below) and flexed position (bottom)



triceps fail suddenly. Be on guard not to drop the weight on the face or head. With single arm exercises use the opposite arm for assistance and protection.

Triceps Dumbbell Extension

Lie on a flat bench or wall. Contract the abdominals, tuck the shoulder blades down and toward the center of the back and make sure the head is well supported. Extend one arm above the shoulder holding a dumbbell perpendicular to the arm as shown. Inhale and bend the elbow joint to approximately a 90 degree angle lowering the weight to alongside the head. The triceps resist, stabilize and help control the speed and direction of the weight during flexion. Exhale while engaging the triceps to extend the elbow joint

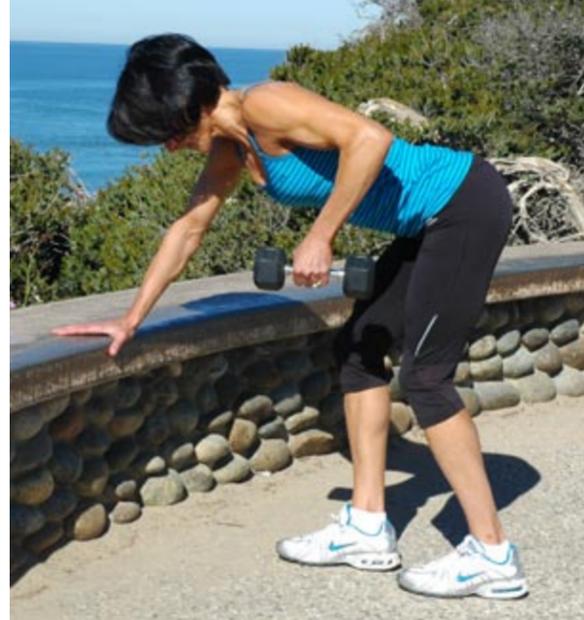
and lift the weight to the starting position. Repeat the exercise with the other arm.

Form and Precautions: When feet are on the bench, bend the knees to support the lower back. Otherwise, make sure feet are firmly planted on the floor with a natural arch in the lower back. Keep the wrist straight as part of the lever arm (forearm).

Variations: The weight may be lowered to the same side or varied diagonally across the body toward the opposite shoulder. Decide on one direction and maintain it through completion of all repetitions.

Triceps Dumbbell Kickback

Stand in a split stance, bent-over posi-



Triceps Dumbbell Kickback flexed position (left) extended position (below)



tion supported by one arm on a bench or wall as shown. A flat back is essential with the shoulder blades pulled down and toward the center of the back. Contract the abdominals and align the opposite arm alongside the body with the elbow bent and near the side of the waist. Inhale to begin. Exhale while engaging the triceps to extend the elbow joint and straighten the arm. Press back firmly and feel the triceps contracting. Inhale while bending the elbow to the starting position and repeat.

Form and Precautions: More support may be added for the lower back by kneeling on a bench with one knee. This exercise may also be performed sitting down and leaning forward with a pillow or rolled towel under the torso for added support.

Triceps Dip

Begin by sitting on a bench or wall. Place the arms and hands alongside the body as shown. Slide the body off the bench by walking the feet out a few inches. Make sure to keep the knees slightly bent. Inhale while lowering the body by flexing the elbow joints to approximately a right angle of the elbows. The triceps will resist, control and stabilize this movement. Keep the torso close to the bench and avoid flaring the elbows away from the center of the body. With the hands pressed firmly against the surface of the bench, exhale while engaging the

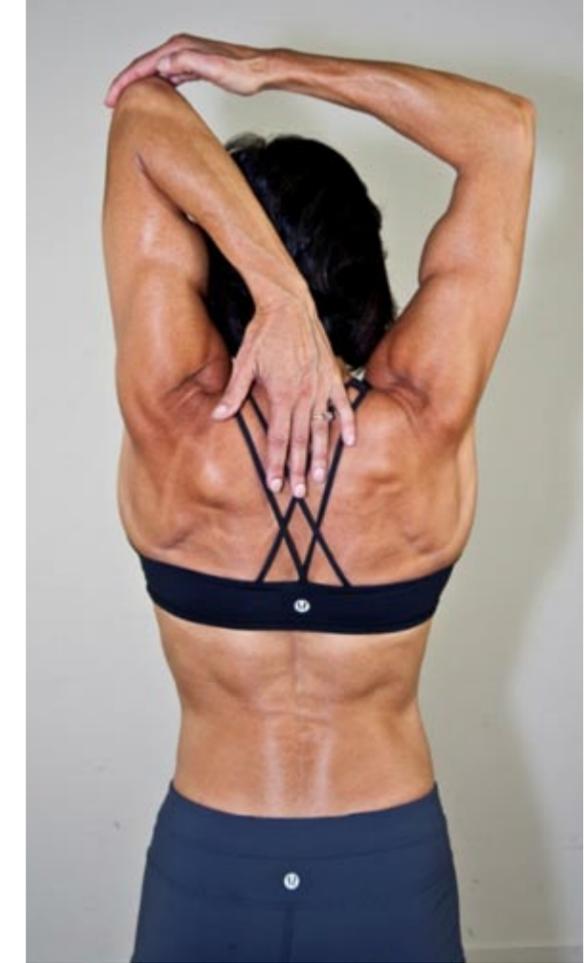
triceps to extend the elbow joint and return to the straight arm position. This exercise works the pectoral muscles of the chest and the front of the shoulder along with the triceps.

Form and Precautions: Lowering the body far below a right angle of the elbow joint may result in excessive shoulder

work and possible strain and injury.

Variations: Beginners may place an aerobic step, block of wood, stack of books, or Bosu under the body as a safety stop. To add challenge to the exercise, the feet may be placed a variety of higher positions using a second platform or bench. Additional resistance may be added by resting weights on top of the thighs. ■

Gretchen M. Ashton is registered with the National Board of Fitness Examiners. An advanced diver, International Sports



Do the Easy Triceps Stretch at the end of the workout to relieve fatigued muscles



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

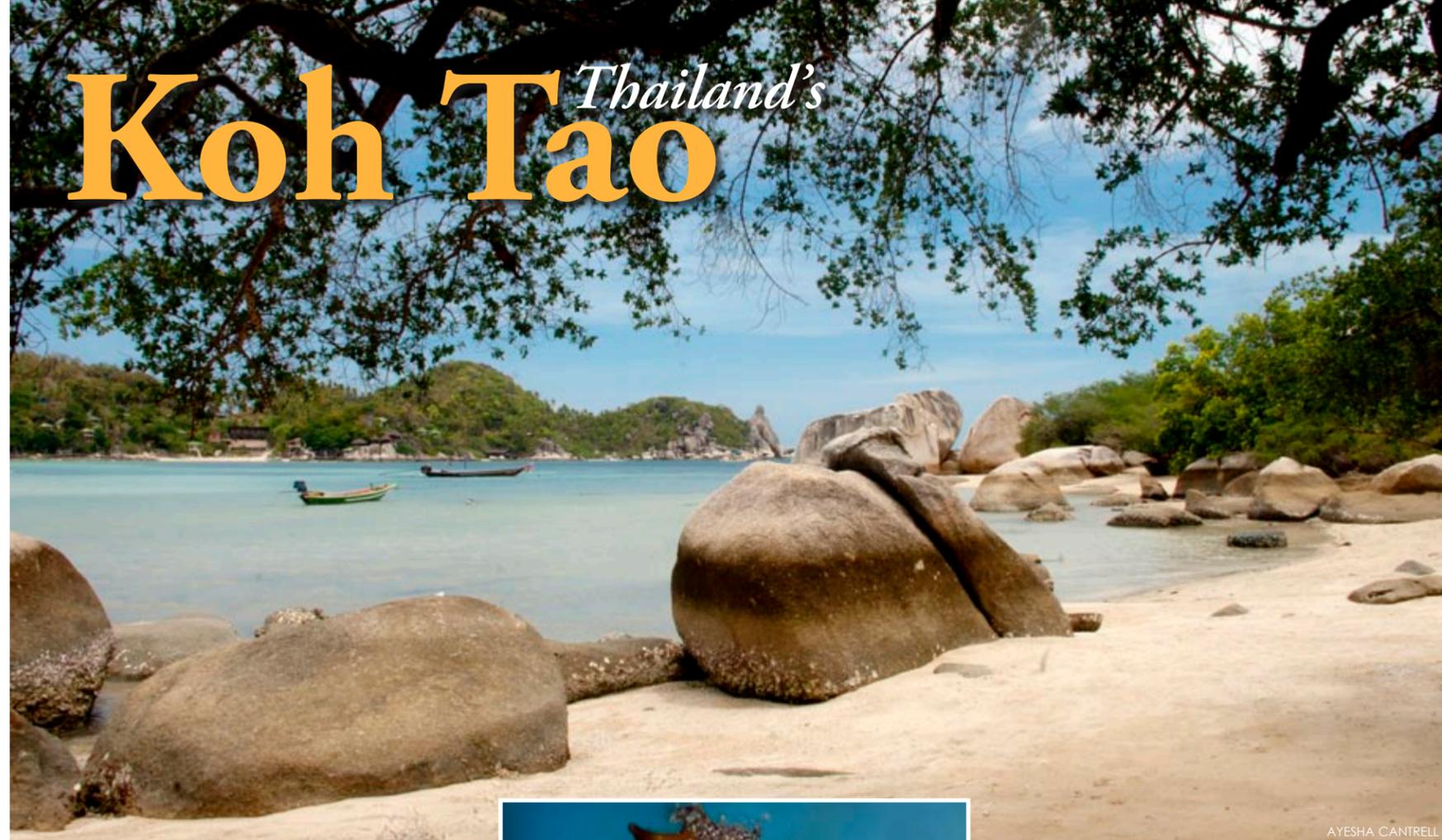
Triceps Dip extended position (left) and flexed position (above)



AYESHA CANTRELL

Barrel sponge covered with segmented worms underneath the mooring line at Chumphon Pinnacle

Koh Tao *Thailand's*



AYESHA CANTRELL

Text by Ayesha Cantrell. Photos by Ayesha Cantrell, Wilco Both and Nick Shallcross

If anyone was to mention diving in Thailand to you, then you would most likely think of one of the west coast destinations. Hardly a thought would be given to the small island of Koh Tao, which lies off the east coast in the Gulf of Thailand. I live and dive here, so I find this lack of attention a little unfair. Yet, it's hardly surprising, as it's largely overlooked by dive travel specialists, and for the most part, dismissed as nothing more than a diver training centre. This apparent lack of appreciation is even more surprising when one



WILCO BOTH

Common seahorse, *Hippocampus kuda*, in the sand off Pottery Pinnacles

considers that the two coasts of Thailand are seasonally almost opposite. When the Similans and Surins are closed and weather plays havoc with conditions at other west coast locations, the east coast is bathed in brilliant sunshine, reflecting off seas the color of that well known blue-bottled gin brand.

Looking out at the ocean at Chalock Ban Khao on the south of Koh Tao

So, which is best? This is an explosive debate for those who haunt the Internet forums. Living here, I'm probably not objective enough to answer it. What I will say is that they are simply different.

University of diving

So, let's get this on the table straight away. The island is home to around 40 dive centers and is a diving hot spot for those looking to learn anything dive related. It's probably one of the few places in the world where you can go to take training in any language with any of the major agencies to any level. It's all here, within walking distance, which makes it similar to a university town for divers only. Surely, this should not preclude Koh Tao from being a dive desti-





NICK SHALLCROSS



WILCO BOTH

CLOCKWISE FROM LEFT: Polka dot nudibranch *Jorunna funebris* found in most numbers at Shark Island; Bluespotted ribbontail ray at White Rock; Bubble coral at White Rock; *Pseudobiceros bedfordi* courting at Twins

nation, too?
I arrived here many years ago to join the scuba fraternity, and I love the diving today as much as I did then. I saw my first whale shark here gliding around

Southwest Pinnacle—a truly awesome experience. I've enjoyed many such encounters here since. The individuals that pass by are usually around four to five meters in length and hardly ever more than two at a time. Koh Tao is not the *seeing-spots-before-the-eyes-splash-fest* for which other dive locations are famed, but it is one of the few places in the world where you might see these leviathans soar past you underwater.

Between a rock and a hard place

Southwest and Chumphon Pinnacle are the deepest sites here and are home to the frenetic reef life activity that you would expect of any open ocean site. Huge malabar groupers rest

languidly at cleaning stations and seem as reluctant to vacate as any armchair aficionado. Schools of pick handle, chevron and yellow-tailed barracuda twist past, fusiliers whirl in a yellow pulsing mass, and jack fish and mackerel stalk the unwary. Batfish shimmer in the current and anemones and their pink inhabitants carpet the pinnacle. What's not to like?

The two sites differ in their topography. Chumphon Pinnacle reminds me of Table Mountain in Cape Town, South Africa, whereas Southwest Pinnacle is a more typical pointy mountain shape. Like the majority of underwater formations here, they consist of boulders of varying shapes and sizes. The island's coastline is made from the same rugged material, which juts, overhangs and leans, making for interesting formations. Underwater, it is more so, creating swim-throughs, majestic pinnacles and plenty of hiding spots for their inhabitants.

The coral reef has grown up and around the boulders, creating pinnacles full of life with coral beds spanning in between. Coral is mainly of the hard type, and

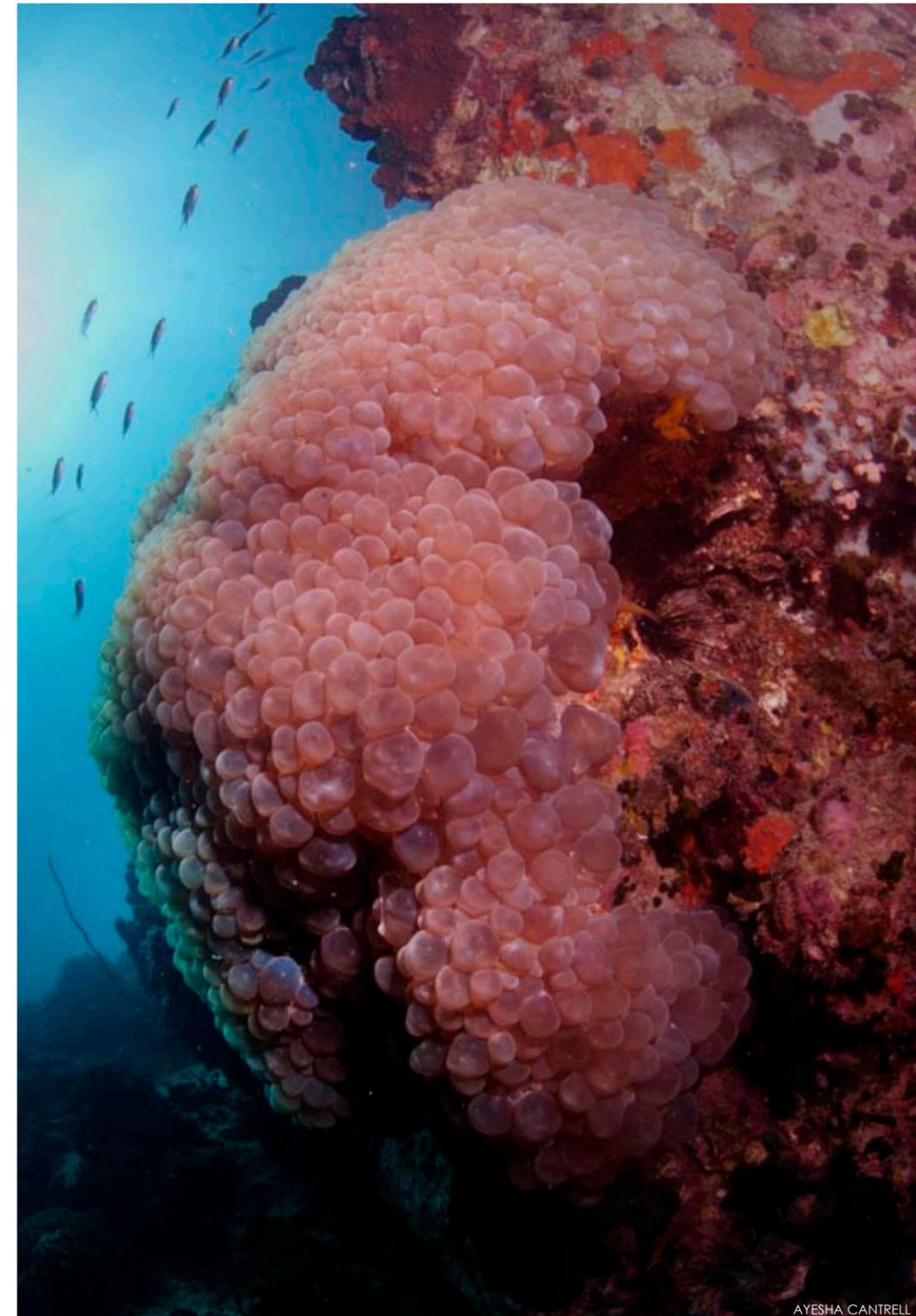
I think that this is one thing that makes Koh Tao different. There are a myriad of different varieties here and some amazing hard coral gardens. Fantastic specimens of staghorn, brain, table, lettuce, knobby, porities, mushroom and slipper coral can all be seen in some great formations making an interesting and varied backdrop.

No matter how breathtaking the coral texture and formations are, it is all the same colour. Is this another reason that Koh Tao could seem lackluster when compared with saturated images of colorful soft coral in other locations? However, splashes of color are added by barrel sponges, with their segmented worms feeding on that which the sponge filters out, and Christmas tree worms adorn coral everywhere in glorious blues, yellows, reds, pinks, greens and variegated, adding a rainbow to the reef. I never tire of watching them hide and slowly emerge. In addition, butterflyfish, parrotfish, angelfish and luminescent moon wrasse are conspicuous against the muted color of the hard coral reef.

What's in a name?

Koh Tao actually means 'turtle island'. It was named for its appearance; from a certain approach, it does indeed look like a turtle. It's simply coincidence

that both the shiny polished green turtle and its somewhat unkempt looking cousin, the hawk-bill, choose to hang out here. Similarly, Shark Island—a small island and dive site that lies to the



AYESHA CANTRELL



NICK SHALLCROSS



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CLOCKWISE: Divers passing overhead at Chumphon Pinnacle; Titan trigger fish, *Balistiodes viridescens*, in attack mode at Green Rock; Comensal shrimp living in an anemone at Junkyard Reef



AYESHA CANTRELL

Koh Tao

underwater world over for its defensive tactics. While titans can be seen or avoided at most sites here, Green Rock is the best place to see their slightly smaller and more passive yellow margin cousin. The sands around the rock are dotted with pits, but do take care, as there are titans around, too.

Green Rock itself is great fun for those who love a good swim-through. It's like a like a block of Swiss cheese, riddled with passages and crooked overhangs—a great place to spot wart slugs and banded sea crates as well.

After dark

White Rock is certainly worth several dive trips and definitely one at night. Its randomly heaped boulders and expansive coral gardens teem with life. Turtles frequent the site, and the eagle-eyed will have fun spotting scorpion fish and nudibranch.

At night, the dive site comes alive



AYESHA CANTRELL

south—was named for its fin-like shape rather than its inhabitants. This is a great place to find polka-dot nudibranch and one of the only places you will see Weibels butterflyfish schooling.

Koh Tao legend has it that one of the first divers to explore the sites around the island was Italian, which is why we have sites called Red Rock, White Rock and Green Rock. Whether there's truth to this anecdote, I don't know, but it makes for a nice story.

Red Rock and White Rock sit just off the coast of Koh Nangyuan, which is actually a couple of small islands joined by a sandbar off the northwest coast of Koh Tao.

drop-off point for the gentle dive along the coast into Japanese Gardens. This coastline is home to the pink-tailed triggerfish -- a much shyer specimen than its much larger cousin, the infamous titan triggerfish.

The titan trigger is the largest in the triggerfish family and is famed the

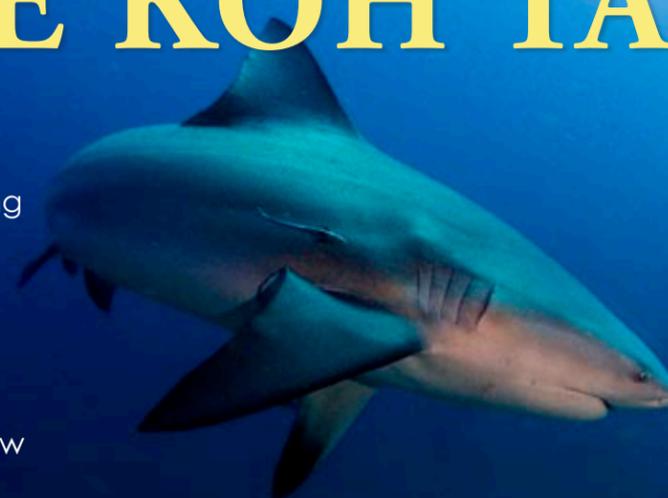
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Longfin bannerfish, *heniochus acuminatus*, can be seen all over Koh Tao

CLOCKWISE FROM ABOVE: Huge barrel sponge at Shark Island; Amazing hard coral formations at Mango Bay; Orsaki Flatworm, *Maiaozoon orsaki*, at Twins; Malabar grouper, *Epinephelus malabaricus*, being cleaned on the west side of Chumphon Pinnacle; Durban dancing shrimp at the pinnacles of Hin Ngam



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with chevron barracuda hunting by your torchlight, bluespotted ribbontail rays marauding in the sand and multicolored feather stars unfurling and strolling around the reef. For many divers, the opportunity to peer at a sleeping titan triggerfish is a must, and White Rock is where you'll find them tucked up for the night.

Twins is a fun site in the daytime and has been expanded with artificial reef structures designed to give new divers somewhere to practice their buoyancy. At night, it's a cool critter corner. While you are not so likely to see barracuda hunting, you and your buddy will probably be the only divers there. You are likely to see a turtle turn-

ing in for the night as well as a myriad of shrimp, black and white sole, numerous varieties of crabs and a range of camouflaged critters.

Fighting words

Diving has taken me all over the world, yet nowhere else have I encountered fish with the punch

that they pack in Koh Tao. This is not just limited to the triggers, which, to my mind, seem abnormally large versus the specimens I have seen elsewhere.

The farmer damselfish quite often give you nasty nips, as you approach their algae garden

and are as feisty and territorial as a dog with a bone. Watch them driven to distraction when a huge school of juvenile parrotfish scours the reef for food. The cleaner fish and moon wrasse seem to be unable to distinguish divers from



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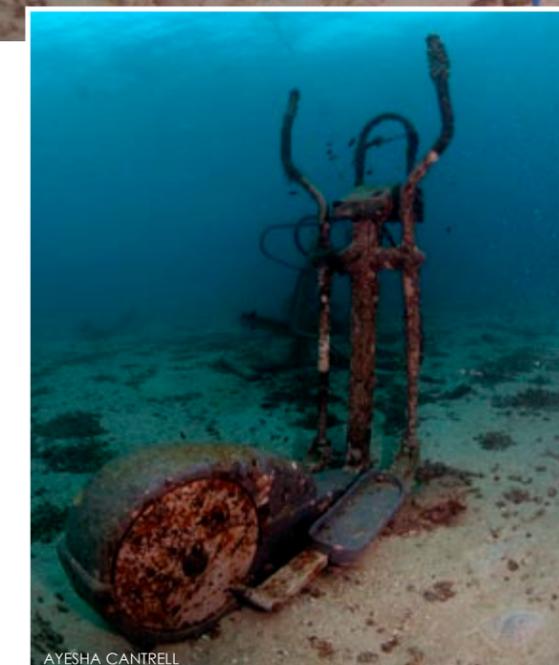
CLOCKWISE FROM LEFT: Coral nursery structure in Aow Leuk Bay; Saddleback anemonefish and eggs on a discarded bottle off Pottery; Nudibranch *Chromodoris aureopurpurea* on sand close to Pottery Pinnacle; Batfish statue in a buoyancy training area near Koh Nangyuan; Hermit crab at Hin Ngam; Gym equipment, one of the structures at Junkyard Reef



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or scrapes. The saddleback anemonefish will quite literally rear up and headbutt you, and given half a chance, give you a decent nip, too.

While the anemones that cover the reefs are home to the charming pink anemonefish, you have to head out into the sand to find "Nemo". The best place to do this is to depart from Pottery Pinnacle, around the outskirts of Junkyard Reef or North Sairee. You need a guide who knows where he or she is going, but the specimens are fabulous -- you won't be disappointed. Not only will you be blessed with numerous examples, they often have eggs, as well. You can actually see the eyes in these tiny bubbles, and watching the adults nurture them is

fish; woe betides you if you jump in with any cuts

mesmerizing.

Around and about, you are quite likely to be treated with some newsworthy nudibranch and flatworms. Pottering around in the sand is usually very rewarding and often turns up filefish, pufferfish, pipefish, mantis shrimp, crabs and even seahorses.

Wrecked

There are many wrecks littering the Gulf of Thailand, but the greater number are in the 50-70m depth range. Koh Tao is the jump-off point for a liveaboard to visit these wrecks, and if you are trained to this depth, then it's a remarkable trip. The WWII USS Lagarto lies in little over 70m of water. She's fully intact and sits upright in warm clear water. There are other wrecks of the same vintage, P.O.W carriers, munitions ships, drill platforms and many more, and the best bit is that they are virtually un-dived.

Don't worry though—Koh Tao has a couple of wrecks in recreational depths. The MV Trident, which is credited for finding many of the above wrecks, was laid to rest to begin a new life as a wreck herself. She was scuttled in September 2010 and is already encrusted with life. She lies in just over 35m of water just to the south of the island. Barracuda and grouper already haunt the vessel, and the small fry that use the wreck for protection are prolific. She can be a more challenging dive. Due to her location, she is prone to current, so make sure you choose a centre that dives her according to local tide tables.



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The most recent metal addition went down in June 2011. The HTMS Sattakut served her time as a landing craft for infantry. Launched in 1944, as part of the U.S. Navy, she saw action in the Pacific Theatre of War before being transferred to Thailand in 1947 for use by the Royal Thai

Navy. She was donated to Koh Tao with the purpose of creating a new dive site and artificial reef. Unfortunately, bad weather hit on the day she was to be sunk. The result was that, not only did she sink in the wrong place, but she was



AYESHA CANTRELL

CLOCKWISE FROM LEFT: The bow of the HTMS Sattakut; Diver and green sea turtle at Hin Pee Wee; Hin Wong Bay on the east coast of Koh Tao; Deck gun (below) on the HTMS Sattakut thankfully undamaged while being encouraged to rest upright

also lying on her side in silt. This wasn't exactly the plan!

In late July, efforts were made to move her to her planned destination where she sat upright for less than 24 hours. Clearly, her belligerence was not to be tamed. Thanks to careful engineering, she now sits proudly upright. She is 48m long, has guns both fore and aft, and

lies at a depth of 30m. Fish life moved in quickly, and a large green turtle splits its time between the wreck and the neighboring dive site Hin Pee Wee.

She is perfect for penetration with large clear passage ways and roomy corridors. Most divers tour the wreck then head off from the bow and complete the shallower portion of their dive at Hin Pee Wee. Banded sea snakes

are a common sight here, along with the myriad of usual reefs suspects, and it's a more pleasant way to end your dive versus hanging in the blue.

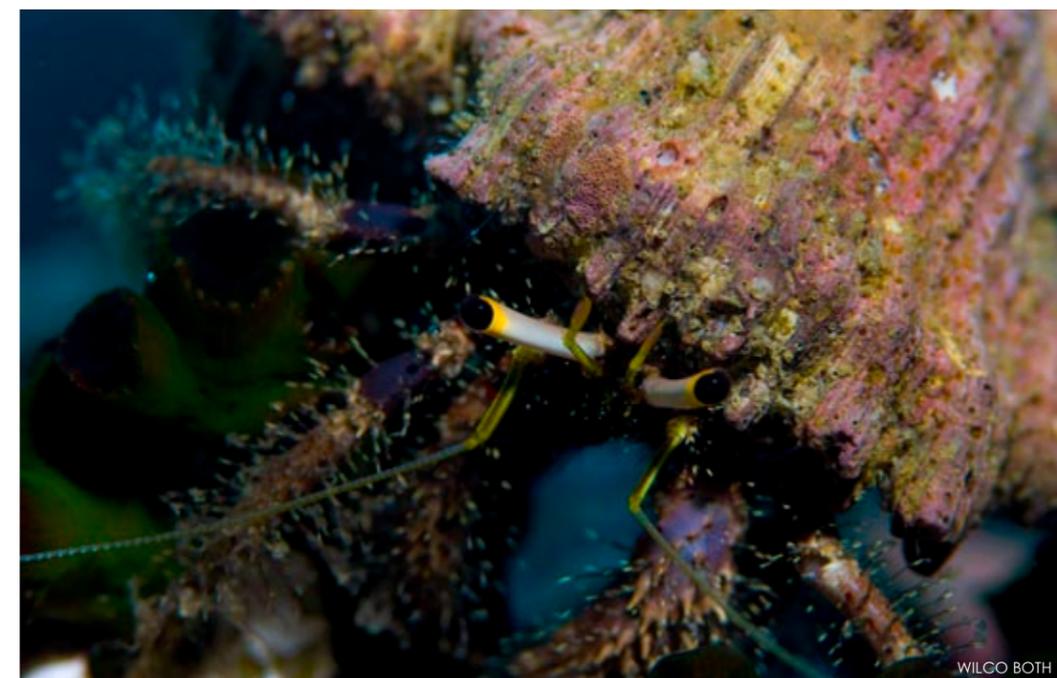
Topside activities

Dive sites are accessed by boat, and the

furthest site is little over 40 minutes away. This means you can make two dives and



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WILCO BOTH

Hermit crab trying to hide



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Barrel sponge surrounded fairy basslets *pseudanthias* at Chumphon Pinnacle

be on the beach by lunchtime—perfect for those who travel with families or non-divers. There's lots to entertain them, too, so they may hardly notice that you are gone.

Non-diving daredevils will enjoy the flying trapeze school, the island to island zip line, rock climbing and cliff jumping. Beachcombers will enjoy exploring the many bays on Koh Tao, taking a kayak out for a spin to explore the boulder-forged, rugged coastline and plunging in to snorkel and enjoy the ocean sites from the surface. Cooking and massage courses are available as well, spas are

a-plenty, and there's even ten-pin bowling and mini golf. Of course, land-loving travelling companions may just want to relax, soak up the sun and rip through those holiday novels. But there are also opportunities for families to learn about the local environment and how to protect the fragile ecosystems.

Environmental

The bleaching incident that damaged many reefs all over the region a few years ago did impact the reefs on Koh Tao, but not to the extent seen elsewhere. By and large, the reef stood up



SOURCE: MASTER DIVERS

Map of Koh Tao dive sites



AYESHA CANTRELL

This could be you at the flying trapeze school in Sairee

well and recovered, leaving the area in comparatively much better condition. A journalist recently asked me about the effect of divers on the environment and in a

concentrated area like Koh Tao, this was probably a valid question. My answer was that the impact was positive. There are many environmentalists on this small rock who tirelessly educate on the issues facing the ocean. Divers cannot fail to

come away with some new understanding of the challenges facing the ocean and what they can do to help.

Over the years, many different environmental projects have been undertaken, from the safeguarding, rearing and releasing of juvenile turtles, to sponsored swims for shark charities. You will find reef and wild life monitoring programs in place, as well as artificial nurseries and artificial reefs, too. These sites have been successful in offering new habitats, growing and transplanting of coral as well as relieving pressure on other sites. If you want to learn and know more about the environment, then the knowledge and experience is here. If not, make sure you visit one of these sites; they're a great place



AYESHA CANTRELL

Giant hairy hermit crab at Twins





AYESHA CANTRELL

to spot both the unusual and juvenile specimens.

Bubbles or fish?

With the number of dive centres on Koh Tao, it would be easy to imagine that every dive here is as crowded as the SS Thistlegorm wreck in the Red Sea. While this can happen, visiting outside of the peak months of January, February, July and August will ensure a more peaceful experience. The month of June would be my overall recommendation of when to come. The hottest time of the year March-May has passed and visitor numbers are low. Seas are calm, and the visibility is usually good. As with any dive holiday, choosing the right company to dive with can make or break your holiday, and in this instance, can have a bearing on the number of divers one sees. Look for centres with small boats that guarantee small groups and make an effort to avoid the crowds.

Simple fun

While Koh Tao doesn't enjoy the fame given to locations drenched in colour, it certainly has its merits. It's a great location if you want to take in some of the culture Thailand has to offer such as...

and also spend some time diving. If you trawl destinations looking for somewhere to go that divers and non-divers will enjoy, then Koh Tao should be on your shortlist.

The diving schedule is ideal, and there's plenty to occupy the non-divers as well. If you just like easy diving or want relaxed conditions to practice your



WILCO BOTH



Diver and photographer Ayesha Cantrell

photography, or if you want to learn anything at all, it's perfect. Junior divers and those new to diving will gain some valuable experience without too much challenge, yet still be awed. It's a wonderful location for children to learn to dive, and it won't break the bank either. So, if you fit into any of these groups, be a devil and put this overlooked isle on your shortlist. ■

Ayesha Cantrell is a PADI and SSI Instructor and part owner of Master Divers on Koh Tao, Thailand. She is a passionate photographer, loves writing and amongst other things managed the marketing and blog for her dive centre but given half a chance is underwater with her camera shooting fish.



AYESHA CANTRELL

Pink anemonefish (above) at White Rock; Black blotched porcupine fish (top left) at Pottery; Sea hare *Aplysia dactylomela* at Junkyard Reef (left)

fact file



Thailand



SOURCES: U.S. CIA WORLD FACT BOOK

History In the mid-14th century, a unified Thai kingdom was established. It was known as Siam until 1939. Out of all the Southeast Asian countries, Thailand is the only one that has never been taken over by a European nation. In 1932, a peaceful revolution led to the establishment of a constitutional monarchy. Thailand was allied with Japan during World War II. But in 1954, it became a U.S. treaty ally. Thailand sent troops to Korea and fought alongside Americans in Vietnam. In 2006, a military coup resulted in the overthrow of Prime Minister Thaksin Chinnawat. Since then, turmoil in the government between pro- and anti-Thaksin parties has wreaked havoc in the governing of the country, which was further tested by historic flooding in 2011. In addition, thousands of people were killed and wounded in separatist uprisings in the southern ethnic Malay-Muslim provinces in

2004. These challenges have hampered the plans of constitutional reform of the current government led by the Puea Thai party. Government: constitutional monarchy. Capital: Bangkok

Geography Thailand is located in Southeastern Asia. It borders the Andaman Sea and the Gulf of Thailand, southeast of Myanmar. Thailand is in control of the only land route from Asia to Malaysia and Singapore. Terrain consists of a central plain, the Khorat Plateau in the east and mountainous areas. Coastline: 3,219km. Lowest point: Gulf of Thailand at 0m. Highest point: Doi Inthanon at 2,576m.

Climate Thailand is tropical with a warm, rainy, cloudy southwest monsoon from mid-May to September and a dry, cool northeast monsoon from November to mid-March. The southern

isthmus is always hot and humid.

Water temperature is 28-30°C.

Natural hazards include droughts and subsidence of land in the Bangkok area due to

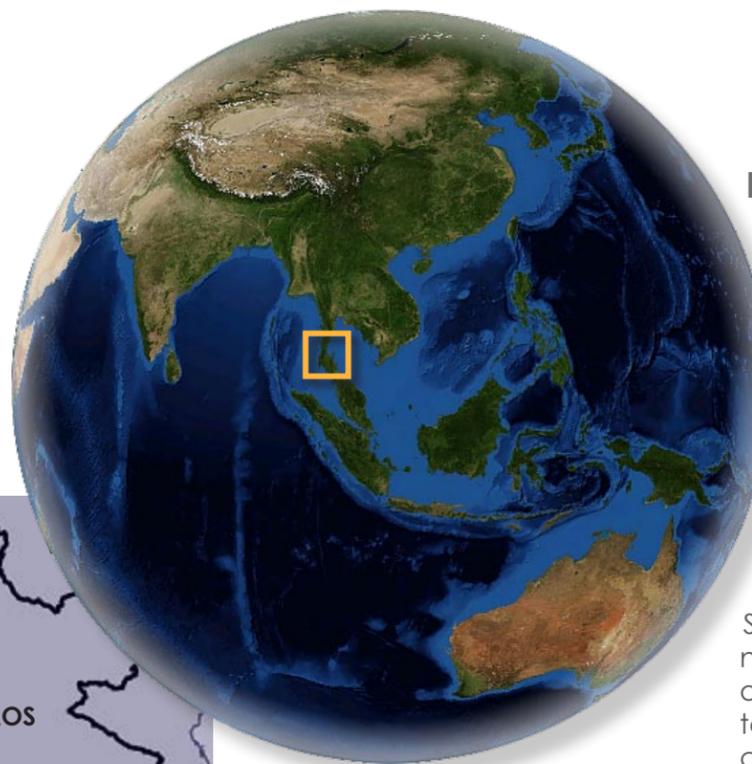
depletion of the water table.

Environment Thailand suffers from air pollution due to vehicle emissions, water pollution due to organic and factory wastes, deforestation and soil erosion, as well as illegal hunting, which is threatening wildlife populations. Thailand is party to the following agreements: Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Hazardous Wastes, Marine Life Conservation, Ozone Layer Protection, Tropical Timber 83, Tropical Timber 94, Wetlands

Economy Thailand has a well-developed infrastructure and an economy of free-enterprise, with pro-investment policies and strong export industries. It has enjoyed solid growth since 2000 after recovering from the Asian financial crisis of 1997-98. Thai exports, which consist primarily

RIGHT: Global map with location of Koh Tao Island

BELOW: Location of Koh Tao Island on Thailand map



of machinery and electronic components, agricultural commodities and jewelry, make up half the GDP. However, the country felt the effects of the global financial crisis of 2008-09, which severely cut Thailand's exports. Since then, the economy has contracted and expanded, until the historic flooding of Bangkok in 2011 crippled the industrial and manufacturing sector. However, recovery is expected with modest growth in 2012.

Population 67,091,089 (July 2012 est.) Ethnic groups: Thai 75%, Chinese 14%, other groups 11%. Religions: Buddhist (official) 94.6%, Muslim 4.6%, Christian 0.7%, other religions 0.1% (2000 census). Living with HIV/AIDS: 530,000 (2009 est.) Internet users: 17.483 million (2009)

Currency Thai Baht (THB). Credit cards are widely accepted in hotels and dive centres but incur a 3% charge. Exchange rates: 1EUR=40.20THB; 1USD=30.83THB; 1GBP=50.11THB; 1AUD=32.21THB; 1SGD=25.17THB

Language Thai, English (secondary language for upper class), ethnic and regional dialects

Getting There Depending on the departure point, consider flying into Bangkok, Singapore or Kuala Lumpur and then connect to Koh Samui, where one can catch a ferry to Koh Tao. If landing after midday, overnight in Koh Samui and catch a ferry the next day. For those on a budget, overland travel from Bangkok to Chumphon by rail or bus is cheaper. From Chumphon, catch a ferry to Koh Tao.

Visa Passports must be valid for at least six months upon entry. A 30-day visa exemption will be issued upon arrival for holders of Australian, U.S., European and New Zealand passports.

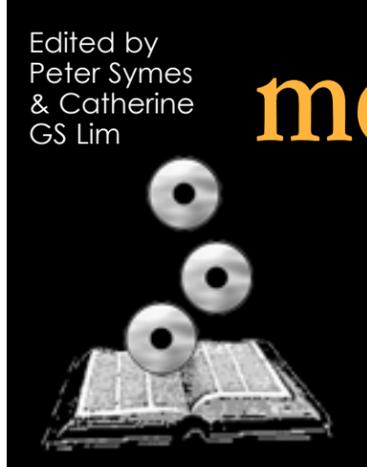
Health There is a high degree of risk for food or waterborne diseases such as bacterial diarrhea; vectorborne diseases such as dengue fever, Japanese encephalitis, and malaria; animal contact disease such as rabies; water contact disease such as leptospirosis. H5N1 avian influenza has occurred in this country but poses a small risk to tourists, those who have close contact with birds (2009)

Decompression Chambers The closest decompression chamber is on the neighboring island of Koh Samui: SSS NETWORK / Samui Hyperbaric Services of Thailand 34/8 Moo 4 Bophut, Koh Samui, Surat Thani, Thailand 84320 Phone: +66 (0)77 427 427 Emergency: +66 (0)81 081 9555 www.sssnetwork.com



Sand lizardfish at Japanese Gardens

WILCO BOTH



Beneath the Garden State

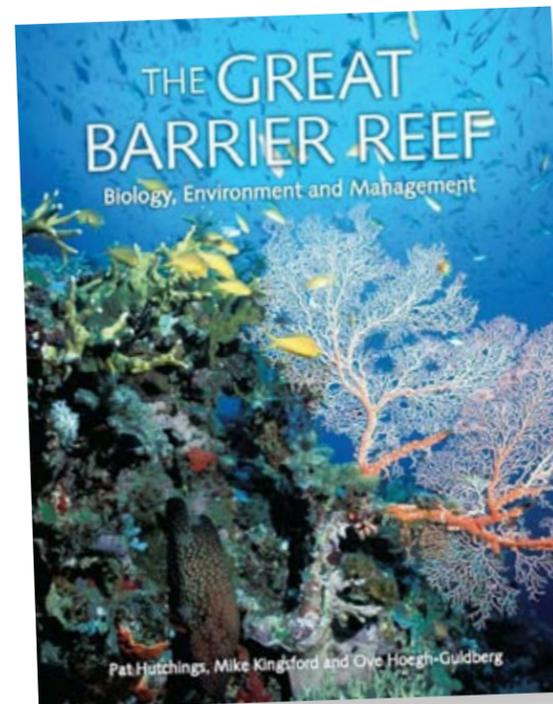
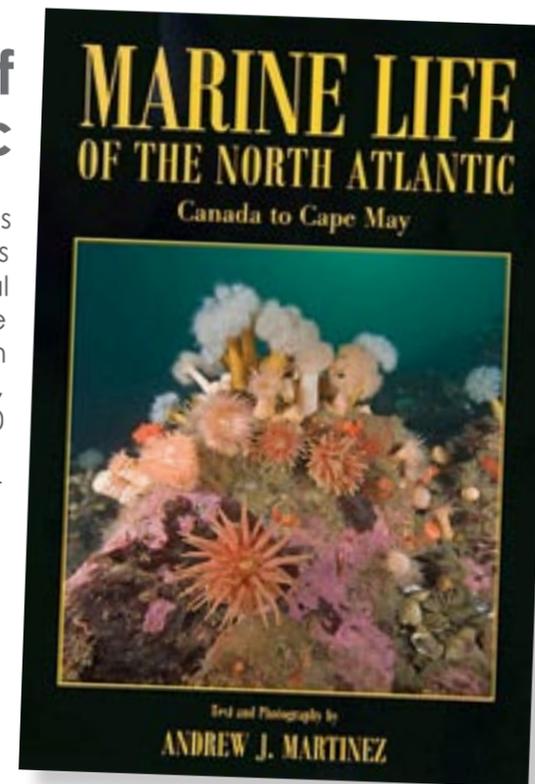
This hardcover 166-page book takes landbound explorers beneath the dark New Jersey waters, introducing them to the rich marine life that resides within. Witness life in the form of the 1.5" long naked sea butterfly, the ever-vigilant monkfish, or a sea star growing new arms. Of course, New Jersey's artificial reefs of cars, army tanks armoured personnel carriers, tugboats and ships are not forgotten. Photographer Herb Segar's affection for the creatures near his hometown shines through every photo. According to him, "The majority of people who live in New Jersey just have no clue what's beneath the water." Well, with this book, now they do.

Hardcover: 144 pages
Publisher: Schiffer Publishing, Ltd.
Publication date: 28 April 2012
ISBN-10: 076434109X
ISBN-13: 978-0764341090

Marine Life of the North Atlantic

This revised edition contains write-ups of 278 species of fish, invertebrates and marine plants found in the coastal northeast Atlantic, from Canada all the way to Cape May, New Jersey. Each write-up covers the species' habitat, range, natural history, etc. The 390 photos aid in the identification, and helps to make this title a must-have for anyone diving in the area.

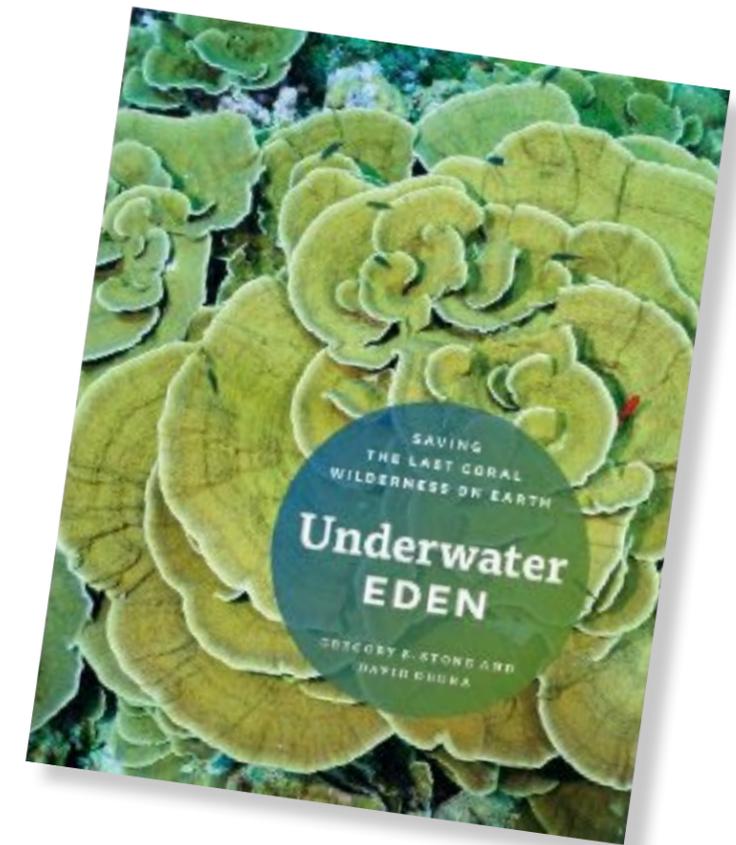
Paperback: 304 pages
Publisher: Aqua Quest Publications
Publication date: 16 February 2011
ISBN-10: 1881652351
ISBN-13: 978-1881652359



The Great Barrier Reef

The Great Barrier Reef is one of the world's greatest natural wonders. Maintaining it in its pristine condition has become more challenging through the years. This book examines the reef's geology and processes, as well as the organisms and ecosystems within it. The contemporary issues of climate change, coral bleaching and disease, and the challenges faced by coral reef fisheries are also discussed in this book. There is also a field guide that helps in the identification of common animals and plants of the reef.

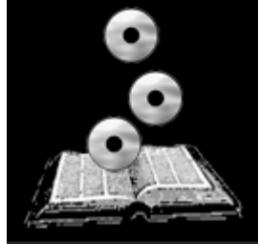
Paperback: 392 pages
Publisher: Springer; 2009 edition
Publication date: 30 November 2012
ISBN-10: 9048180341
ISBN-13: 978-9048180349



Underwater Eden

At an area covering 408,250 square kilometres, the Phoenix Islands Protected Area (PIPA) is the largest marine protected area in the Pacific Ocean. When conservation scientist George S Stone went diving in the waters of the Phoenix Islands, he said, "it was the first time I'd seen what the ocean may have looked like thousands of years ago." Indeed, the corals were healthy, the marine life was abundant... so much so that he and his dive companion David Obura were determined to keep it that way. This book tells the story of how they succeeded in this quest, finding common ground amongst conservationists, businesses and governments, to establish the PIPA, now the largest marine UNESCO World Heritage Site.

Hardcover: 184 pages
Publisher: University Of Chicago Press
Publication date: 21 November 2012
ISBN-10: 0226775607
ISBN-13: 978-0226775609

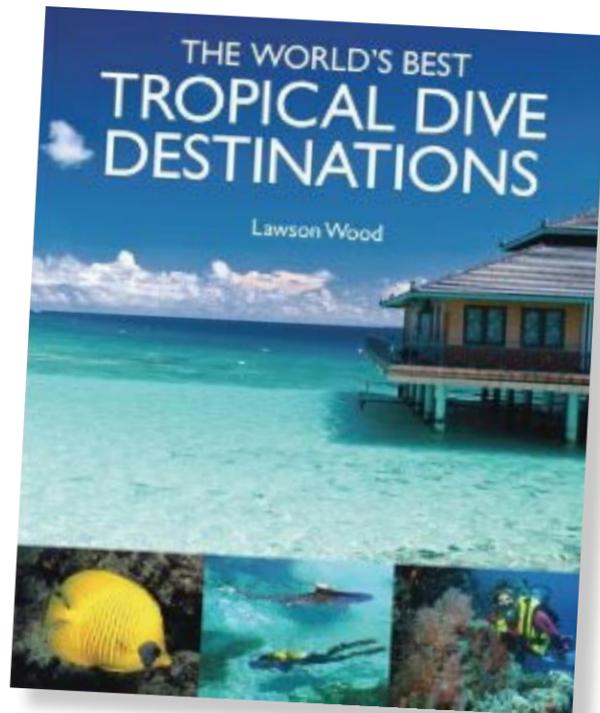


The World's Best Tropical Dives

If you find yourself looking longingly at the cover photo, it's probably time to start planning your next dive vacation.

This book covers more than 275 exotic destinations worldwide, from the Caribbean Sea, Bermuda, the Red Sea, the Indian Ocean, the Indo-Pacific and the Pacific Ocean. Whether you are on the lookout for large humpback whales, swimming alongside large schools of fish, cave dives, muck dives, wrecks, or even liveaboards, this book can point you in the right direction. The descriptions of the dive sites include a regional site map, travel advisory, as well as the type of dive to be experienced and what you can expect to see.

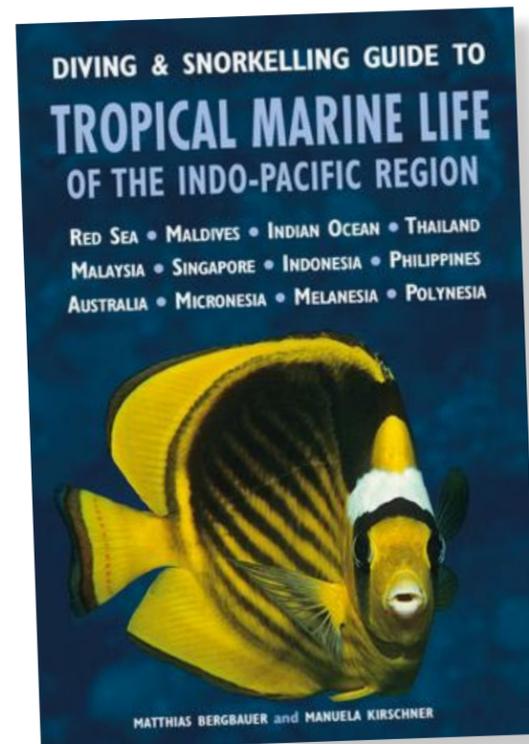
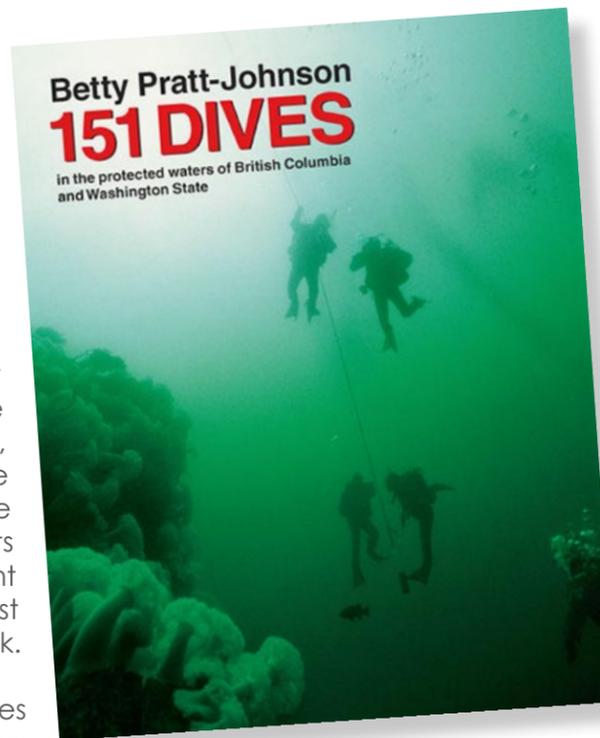
Hardcover: 208 pages
 Publisher: John Beaufoy Publishing Ltd
 Publication date: 4 October 2012
 ISBN-10: 1906780234
 ISBN-13: 978-1906780234



151 Dives

This 460-page book is packed with useful information for divers at all levels. Writer Betty Pratt-Johnson had personally dived at all the dive sites featured, which are found along the coasts of British Columbia and Washington State, ranging from gentle drifts and shallow reefs to plunging drop-offs and current-swept passages. Comprehensive information about the diving conditions is given, including the water salinity, temperatures, visibility, currents, riptides, boats and log booms, marine life and dive flag regulations, etc. For each dive site featured, essential information like its uniqueness, GPS locations, tide and current tables, hazards, facilities, dive shops and tourist information can also be found in the book.

Paperback: 460 pages
 Publisher: Adventure Publishing
 Publication date: 2007
 ISBN: 0-921009-40-2
www.sandhillbooks.com



Tropical Marine Life

Diving in the Indo-Pacific region can be a tad overwhelming, with the vast range of fish, reptiles, amphibians and invertebrates swimming within. This handy book outlines more than 270 marine species that you may encounter during your dives, listing their characteristics, size and distribution, together with a colour mug shot of the creature. So the next time you are planning a dive in the Red Sea, Southeast Asia, the Great Barrier Reef, Micronesia or Polynesia, be sure to check out this handy guide.

Paperback: 224
 Publisher: John Beaufoy Publishing
 Publication date: 1 November 2012
 ISBN-13: 9781906780555

Britain's Sea Mammals

Arm yourself with this book, a pair of binoculars and a healthy sense of adventure, and you're all set to go on the hunt for Britain's sea mammals. Be it whales, dolphins, porpoises or seals, you'll find the essential details pertaining to the 34 species of sea mammals found in the United Kingdom. The details on animal behaviour, biology, habitat, characteristics and distribution, are tempered with more than 100 photos and about 40 beautiful illustrations. For those new at creature-spotting, there are even introductory chapters on how, when and where to look for these sea mammals.

Paperback: 120 pages
 Publisher: Princeton University Press
 Publication date: 9 December 2012
 ISBN-13: 9780691156606

