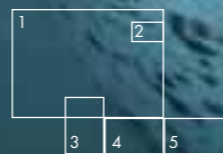


FRONTIER DIVING

> NOT TOO LONG AGO, DIVING WAS THE NEW FRONTIER – THE STUFF OF LEGENDS AND DREAMS. AS FAR BACK AS ALEXANDER THE GREAT (WHO WAS RUMOURED TO HAVE SPENT TIME AT THE BOTTOM OF THE MEDITERRANEAN IN A VERY EARLY PRECURSOR TO THE DIVING BELL), HUMANS HAVE BEEN FASCINATED BY THE UNDERWATER WORLD. IN THE 1600s, DENIS PAPIN AND EDMUND HALLEY WERE THE CAPTAIN COOK'S OF THE DEEP, EXPLORING THE SEABED VIA SPECIALLY DESIGNED DIVING BELLS. FOR TWO CENTURIES, THIS REMAINED THE ONLY RELIABLE WAY TO BREATHE BELOW THE WAVES, UNTIL JOHN AND CHARLES DEANE PATENTED THE DIVE HELMET IN 1823.

: © REBECCA BYFIELD



- 1 Image courtesy of Waterproof Expeditions
- 2 Image courtesy of Aquamarine Santo
- 3 Image courtesy of Richard Harris
- 4 Image courtesy of Dive Adventures
- 5 Image courtesy of Soichiro Suzuki

Diving, as we know it today, didn't evolve until Jacques Yves Cousteau invented the aqualung, which still forms the basis of modern scuba equipment. We owe a lot to these early pioneers. Without their trials and tribulations, we'd probably still be living vicariously through the imagination of Jules Verne and Herman Melville. Recreational diving would exist only in the realms of science fiction. Thanks to their forages into new frontiers, diving is now accessible to the masses.

You might think that underwater exploration is a thing of the past. But there are still opportunities for exploring new frontiers. Whether you imagine yourself a tamer of volcanoes, a watery Indiana Jones or want to follow in the footsteps (or is that fin strokes?) of Captain Scott to Antarctica, there's an adrenaline-pumping adventure waiting for you.

Volcanic: Since the beginning of time, when volcanoes first spewed their cataclysmic payload into the atmosphere, man has revered them. Volcanoes are the ultimate example of destructive power having the ability to create. Molten, fiery magma forms the basis of thousands of mountain chains and islands worldwide. Below water, there's even more going on. Volcanic ash feeds coral polyps, which in turn hardens and becomes the very reefs that draw divers in the millions. Lava cools to generate rocky arches, sheer dropoffs and sub-sea caves. Thermally warmed waters become prolific breeding grounds,

attracting a staggering biodiversity of marine species that might not have otherwise been present. This is especially true in volcanic regions in colder climates, where the bountiful food source transforms an otherwise bland vista into a colourful quasi-tropical wonderland.

While divers have long been drawn to the cornucopia of extinct sites, active volcano diving is still a relatively new pursuit – not at all for the faint hearted. On August 27 1883, Indonesia's Krakatau exploded into the history books and is the undefeated champion of modern day eruptions. Torrents of hot lava and flaming rock shot 26 kilometres into the air. The shock waves were felt as far away as London and the tsunami it created wrought destruction for hundreds of miles. Yet, despite the destruction above the water, the warm, thermoclines and coral gardens underneath have created an underwater paradise. Technically, Krakatau no longer exists; that one eruption sank and destroyed the original mound. But Anak Krakatau (Son of Krakatau in Indonesian) is incredibly active, bubbling away like a fire breathing dragon. When this region is open to divers (it's often closed due to the inherent risks it poses), it promises to be a thrilling and heart-stopping experience.

Hawaii is a whole archipelago of volcanic activity – from long-extinct shells to active, flowing tubes spewing boiling magma into the sea. It is the ultimate destination for volcano enthusiasts yet is still a good introduction for novice divers with an



interest in vulcanology. Divers can watch angelic mantas glide by on the currents, search for lobsters and Spanish dancers in the 30-metre lava tubes or swim with hammerhead sharks at one of the breathtaking dropoffs.

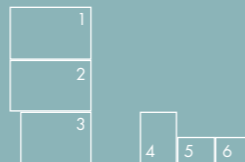
At the outer rim of the Pacific Ring of Fire is Japan's Hachijo Island. Geographically located just below Tokyo, this is arguably the best dive site the Japanese have on offer. The water is cold but the thermal currents warm the sea, bringing hordes of sea turtles and pelagic fish to the area. One of the biggest draws to Hachijo Island is the extremely rare wrought iron butterflyfish. Underwater eruptions have formed enormous lava bridges and created coral reefs well outside the tropical zone.

Further north on the Eastern peninsula of Russia is Kamchatka – Russia's own land of Fire and Ice. The 29 active volcanoes of Kamchatka are widely considered the most volatile in the world. Diving in Kamchatka is the ultimate test of endurance. Avacha Bay brings you up close and personal with adrenaline pumping currents and volcanic eruptions steaming below the icy sea. If you're lucky, you can frolic with seals, otters, sealions, orcas, grey whales and dolphins or watch wild salmon heading upstream to spawn. For the ultimate diving adventure, take a helicopter to the top of a volcano and dive in the waters of the crater.

Archaeological: With a vast array of purpose-sunk wrecks around, most divers have tried some form of wreck diving. The



“...THE ULTIMATE DIVING ADVENTURE...”



1 Image courtesy of Dive World Wide
 2 Image courtesy of Dive Adventures
 3 Image courtesy of Dive World Wide
 4 Image courtesy of Richard Harris
 5 Image courtesy of Alexandria Dive
 6 Image courtesy of World Expeditions

sign of a true archaeological dive lies in the age and uniqueness of the site.

When the Chinese government decided to build a hydroelectric project in 1959 in Zhejiang, the villages along the site were evacuated. Abandoned to the surging water, this area became known as Quiandaohu Lake, or Thousand Islands Lake. For many years, Quiandaohu Lake was a popular holiday destination yet few visitors spared a thought for the villages languishing in their watery grave. In 2001, an enterprising group of divers rediscovered Lion City – one of the original villages. Surprisingly, the site was virtually intact, an underwater museum. The architecture and history of Lion City dates back to the Ming Dynasty, over half a century ago. The enormous carved gates still stand sentinel, and the houses and buildings lining the streets are exquisitely detailed. If there's a downside to Lion City, it's the murky conditions and frigid water, which limit this site to experienced divers only.

Egypt's port city of Alexandria was once the cultural and educational capital of the world. It housed a bevy of archaeological masterpieces such as the Alexandrian Biblioteque – the largest library of its time; Cleopatra's Palace – known for its opulence and grandeur; and the jewel in its crown – Pharos' Lighthouse, an original member of the Seven Wonders of the Ancient World and, as the tallest building of its time, an engineering triumph. It was also home to some of the world's greatest

leaders including Alexander the Great (whom the city was named after), Ptolemy and Cleopatra. In 300AD, a massive earthquake hit the Mediterranean coastline, destroying large parts of the once-proud city. For a millennium, these treasures were believed lost, but in 1997 French archaeologists rediscovered the remains of Cleopatra's Palace, Heraklion City and Pharos' Lighthouse in Qait Bay. Paved roads, carved columns, intact sphinx and ancient amphorae were resting peacefully in the shallows. You know you're onto an archaeological winner when a Napoleonic shipwreck sunk in 1798 seems positively modern.

The South Pacific witnessed intense fighting during WWII between Japanese and Allied soldiers. As a result, the Pacific offers a rich assortment of wreck dives. Vanuatu's *SS President Coolidge* is one of the largest and most accessible wrecks in the world, and probably the most popular. At almost 200 metres long, and over 21,000 tonnes, it's a behemoth that would take years to fully explore. Check out the medical supplies in the doctor's office, swan around the first class lounge and bar, see how the chef prepared food in the fully stocked galley, or fin along the promenade deck before taking time out in the captain's bathroom. You can even swim laps in the fully tiled pool if you desire.

Papua New Guinea's WWII wrecks will have even the most jaded military buff salivating in their regulator. Port Moresby has a virtual armada of boats, submarines and plane wrecks easily accessible from the capital, including the rusting hulk of the *Macdhui* only three minutes from the yacht club. Further afield are the wrecks of a P38 Lightning (off Milne Bay), the only Japanese mini sub found in the South Pacific (Kavieng) and the infamous B17 Bomber '*Blackjack*' (accessible from Tufi), to name a few. There are thousands more wrecks dotted all over the country.



DIVE OPERATORS

Volcanoes:

- Krakatau - www.krakatau-tour.com
- Hachijo Island - www.hachijo-diving.com
- Hawaii - www.jacksdivinglocker.com
- Kamchatka - www.kamchatka.org.ru/diving.html or www.sirena-kamtour.com/index.php

Archaeological:

- Lion City - www.sinoscuba.com
- Alexandria - www.alexandria-dive.com
- Papua New Guinea - www.diveadventures.com.au or www.pngdive.com
- SS President Coolidge - www.aquamarinesanto.com

Ice Diving:

- Arctic & Antarctic - waterproof-expeditions.com, www.auroraexpeditions.com.au/diving, www.worldexpeditions.com/au, or www.oceanwide-expeditions.com
- Hokkaido Island - www.dive-directory.com/dive/japan/hokkaido, or www.dive-world.com.au

Ice: When winter hits, many 'fair-weather' divers mothball their gear and store it until warmer weather returns. A seemingly new craze for some – but an old tradition for others – is attracting divers to the frigid waters of the polar zones. In these climates, divers don't let a little thing like plummeting temperatures put a damper on their fun. It's cold, sure – and a drysuit is essential to guard against the very real threat of hypothermia and frostbite. But with some brief instruction and an experienced guide, you could be enjoying a sub-zero world you thought was beyond your reach.

Perhaps the easiest accessible ice dive for Australians is Hokkaido Island in Japan. The locals cut a hole in the ice, tie a rope



FRONTIER DIVING



1 Image courtesy of Dive Adventures

to their BCDs and descend through the frosty waters into a wintry Garden of Eden. This might sound like a torturous punishment, or ice fishing gone mad, but is actually the only way to witness the sublime kaleidoscope of colour made even more startling by the icy conditions. Hokkaido is one of the few places left where you can see the rare and beautiful sea angels or the many different species of jellyfish that flourish in the glacial waters.

From February to April, while the Southern hemisphere basks under a summer sun, the White Coast of Russia is suspended beneath two metres of solid ice. The Russians have braved the frigid waters for centuries – often after drunken sessions in the banyas – but in the last few years, this craze has become accessible to everyone. Beware! This is extreme diving sure to get your blood pumping. And the oxygen rich environment of these magical waters means everything is big. Divers enter the water through a rectangular hole in the two metre ice to explore palatial crystal-like caves and gigantic kelp forests in water so clear, visibility is 50 metres plus. In addition to the vibrant soft corals and colourful starfish, crabs and shrimps, you

may even frolic with harp seals or spot the elusive beluga and minke whales. Cap off a fantastic dive with a shot of vodka, a steamy banya and kick back to watch the mystical Northern Lights.

At the other end of the world is the vast Antarctic wilderness, characterised by spectacular cerulean-tinged icebergs and snow-drenched landscapes. The Antarctic Ocean has the best visibility in the world – up to 300 metres – so you'll be able to witness the unearthly splendour of sea butterflies, starfish, crabs and jellyfish, or see a powerful predator take down its prey. This is the playground of seals and walrus, the dance studio of emperor penguins and the hunting grounds of whales including the orca, the majestic Southern right whale, the mighty blue and the enormous humpback whale. There are no roads or airports, no hotels, resorts, malls or housing developments. Nothing but thousands of kilometres of exquisite natural beauty. This is a once in a lifetime trip, the chance to see nature as you've never seen her before. Dive expeditions to Antarctica don't come cheap but it promises to be a trip of *National Geographic* proportions.



Silent Killers



HOLLY LOHUIS

The Northwestern Hawaiian Islands is one of the most remote places on Earth and largely uninhabited. Here, thousands of miles from any continent, an incredible array of all the deadly tokens of human manufacturing capabilities was discovered and recorded in 2003.

Due to an ocean gyre that sweeps across the Pacific along a path that leads to these islands, millions of toothbrushes, children's toys, cigarette lighters, glass bottles, golf balls, rubber items, and even whole computer monitors wash ashore. Many of these items, such as plastic that becomes encrusted with fish eggs, are swallowed by albatross adults seeking food for their fledglings. This deadly combination is then regurgitated into the hungry mouths of their young. The young birds simply cannot digest plastic materials and the accumulation over the first six months of their lives is deadly.

Jean-Michel Cousteau's report and some astounding images are on www.oceanfutures.org



Add your voice. Membership to Ocean Futures is free. www.oceanfutures.org