

UNDERWATER *Journal*

A Diving Adventure Magazine

Hollis DG05 Computer
Zeagle's Wicked Lite BCD
Advanced Diving - Nitrox
DAN Dive Safety Essential
Marine Life: Diving the Desert
Diving the Antarctica Peninsula
Getting Creative Black & White
Getting Bent a Long Way from Home

South Florida's Steel Reefs
- Wreck Diving in Pompano Beach -

This publication is
underwritten in part by:



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CONTENTS

- Pg 5 South Florida's Steel Reefs**
- Pg 19 Diving the Antarctica Peninsula**
- Pg 30 First Look: Hollis DG05 Computer**
- Pg 34 Sea Trial: Zeagle's Wicked Lite BCD**
- Pg 39 Marine Life: Diving the Desert**
- Pg 46 Advanced Diving: Nitrox**
- Pg 50 Getting Bent a Long Way from Home**
- Pg 56 DAN: Dive Safety Essential**
- Pg 59 Photography: Getting Creative with Black & White**
- Pg 62 Parting Shot**

Cover: CCR Diver examining the large windless on the deck of the Jim Atria wreck off Broward County, FL. Photo shot with Nikon D300, Tokina 10-17mm fisheye zoom lens in a Subal ND30 housing with twin Sea & Sea YS-250 strobes set on manual/half power. Exposure 60 sec. at f5.6, 200 iso. Photo: Walt Stearns © 2009



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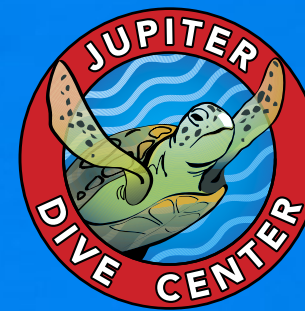
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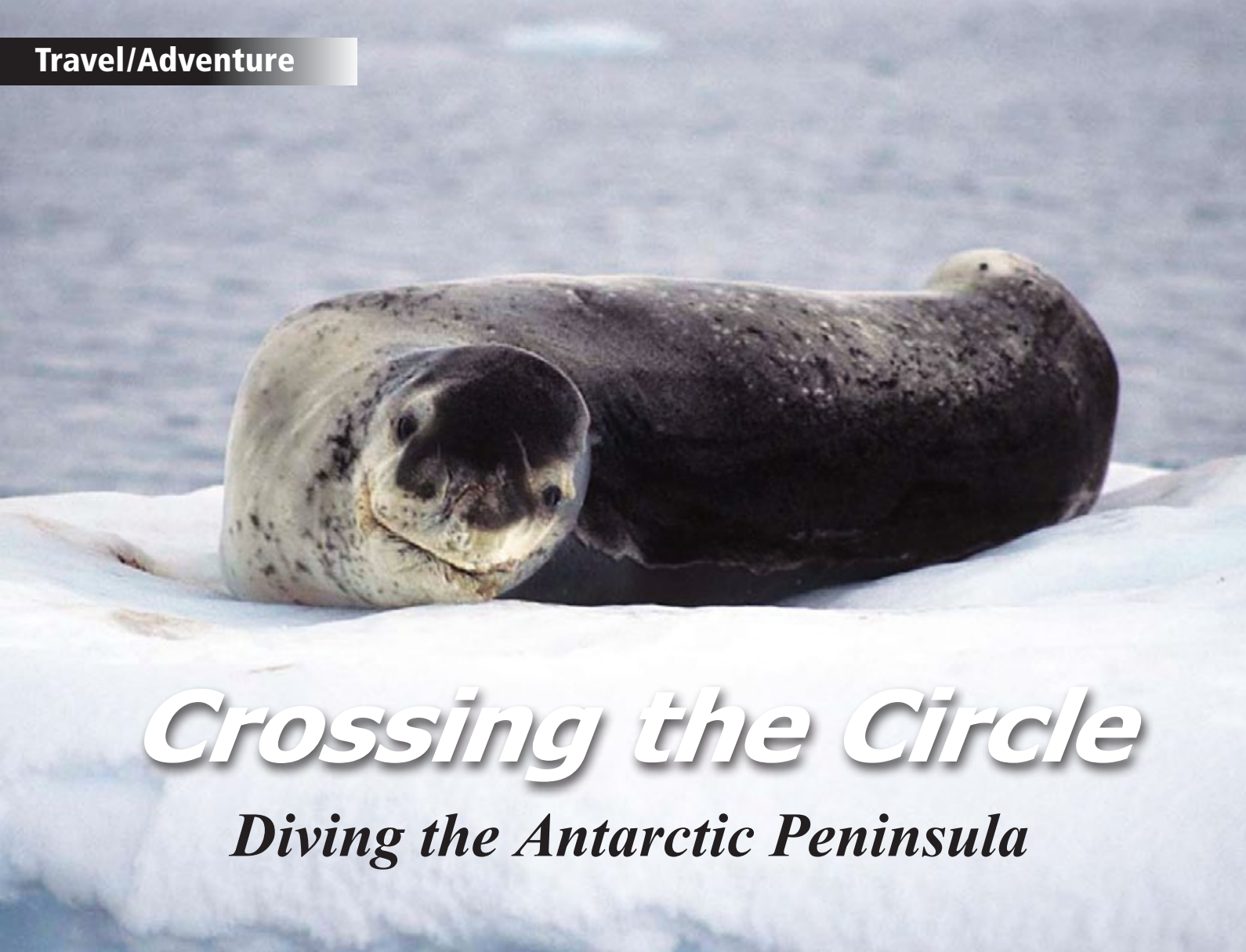


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Crossing the Circle

Diving the Antarctic Peninsula

**Story & Photos by
Michael Salvarezza &
Christopher P. Weaver**

We stood like sentinels on the bow as we had been doing throughout the voyage, gazing at the magnificent beauty that draped over this cold and isolated land. Today was like many other days with light snow falling from a low gray overcast sky and a stiff breeze blowing over the brash ice that surrounded the ship. We turned to see Roger, the ship's naturalist and expedition team member, approach us wearing an outlandish dragon's hat.

Suddenly, he grabbed our heads and imprinted a circle of ink on our foreheads.

"You've been 'Circle-sized!'", he exclaimed and with that we joined the exclusive club of travelers who have journeyed to Antarctica and actually crossed over and south of the Antarctic Circle.

It was a moment of both achievement and hilarity as we all celebrated by drinking a champagne toast, listening to speeches, laughing at the crazy initiation celebration and, after a few moments, rushing back inside to get warm.

“Crossing the Circle” was but one of our many remarkable experiences as we explored the western flanks of the Antarctic Peninsula aboard *Polar Pioneer*, a Russian ice-strengthened expedition vessel chartered by Aurora Expeditions based in Australia. Indeed, we had come here to experience the most remote of the Earth’s continents, witness its amazing array of unique wildlife and to dive in its icy polar waters - and we were not disappointed.

Shortly after reaching this latitude point, we encountered dense pack ice on our way south to Crystal Sound. The ice-strengthened hull of the ship was clearly up to the task as we bashed, crashed and crunched our way through the icy mix.

Soon we reached our southernmost point at 66.42.065 South, 66.55.026 West and turned back North to head for our next dive site.



The *Polar Pioneer* pushes through the pack ice to reach a dive site.

“Much of the diving in Antarctica is truly exploratory – often, dive sites are locations that have never been dived before. Each dive is a new adventure!”



itive Antarctic Fur Seal. As we were scrambling back into the Zodiac, our fingers frozen from our 30 minute immersion in 28-degree (-2°C) water, we spotted a young, male Fur Seal who was darting back and forth in the clear waters and coming closer and closer to the rubber craft.

Despite our best attempts against anthropomorphism, we couldn't help thinking he was inviting us to come in and play! Quickly, we grabbed our masks, fins and cameras and quietly slipped back into the biting cold

water and began a playful game of "Simon Says" with our new friend. He would approach, give us an inviting look, dart away and return seconds later.

Since we couldn't match his speed and follow him, Chris had a different idea. He began spinning in the water and we watched in awe as the seal began imitating him! This unexpected, but amazing, encounter lasted for 20 minutes until it was time for us to reluctantly return to the boat, having made a new friend in Antarctica.

Barcroft Islands

After suiting up in a wet snowfall, we loaded our gear into one of the ship's sturdy Zodiacs and headed for the Barcroft Islands, a set of small, isolated islands that looked promising as potential dive sites. Much of the diving in Antarctic is truly exploratory – often, dive sites are locations that have never been dived before. Each dive is a new adventure!

With temperatures below freezing we slipped into the clear water and quickly made our way down the sloping, rocky bottom and descended to 60 feet. The underwater terrain consisted of

large rocks and small boulders tumbling down into untold depths. Unlike some areas of the Antarctic Peninsula where marine life grows in great profusion, this was clearly a site frequently scoured by passing icebergs. In these areas, marine life has difficulty getting a foothold and we spent our time photographing small invertebrates, such as the colorful Red Antarctic Seastars and the delicate limpets that could be found crawling over many of the rocks.

The highlight of the dive, however, was an unexpected "play session" with an extremely inquis-

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Prospect Point, Fish Islands

Diving alongside and under icebergs is both beautiful and dangerous. Because of their inherent instability and constant motion, icebergs can self-destruct and break apart at a moment's notice. They can also roll over without warning, crushing and trapping an unsuspecting diver between tons of ice and the ocean floor. Still, diving around, under and in these structures is a breath-taking experience.

So, under a brilliant blaze of sunshine, we suited up for

our next dive alongside a large iceberg. Soon everyone was set and ready to once again take the icy plunge. One by one, we carefully slipped into a narrow opening of clear water between ice flows. With all divers finally beneath the waves, the zodiac driver began to slowly move about on the surface trying to keep the dense pack ice from closing in around our entry and exit area.

As we descended along the glassy smooth walls of the iceberg, our hands caressing the

ice and our eyes marveling at the ethereal beauty of the enormous floating block of frozen water, we couldn't help but notice that at times the water column seemed wavy and distorted as if we were diving through a thermo-cline. We were told this phenomenon was caused by the fresh water melting from the submerged walls of the iceberg while mixing with the surrounding saltwater.

As we looked up from the depths, we could see the muted glow of the sun as it flickered between floating pack ice. Below us was dark, black water of undetermined depth. Before us was a completely alien world. We carefully explored the iceberg first by circumnavigat-

ing it and then by penetrating into some of its small, craggy ice caves. This particular berg most likely broke off from some distant glacier and consisted of decades-old or even centuries-old ice, which had every shade of color between bright white to deep indigo blue. This was truly a captivating experience.

After surfacing through the slurpie-like slush of the brash and pack ice, we spotted a pair of Crabeater Seals resting comfortably on a nearby ice flow. With a disinterested eye, they seemed to be saying to themselves "Why would these crazy people go diving in that cold water? It's so nice and warm up here in the sun!"



Vernadsky Station & Port Lockroy

The waters alongside Vernadsky, the Ukrainian research station is teeming with colorful invertebrate sea life. Originally a British station named Faraday, the base was renamed Vernadsky and was transferred to Ukraine on February 6, 1996.

"It was intriguing to learn that the detection of the Ozone Hole in the atmosphere was first discovered at this very spot."

Galindez Island where the station is located is a small island in the Argentine Islands Archipelago and is considered the oldest operational station in the Antarctic Peninsula region. Scientific studies here include collecting meteorological and geomagnetic data as well as performing ionospheric and magneto-spheric research.

Here, as we swam along a wall of kelp-covered rock at 50 feet (15m), we photographed large, colorful Anemones, Giant Antarctic Isopods and we even found the creepy looking Antarctic Sea Spiders.



Crocodile Dragon Fish

After our dive, we were invited to tour the facility by base personnel. It was intriguing to learn that the detection of the Ozone Hole in the atmosphere was first discovered at this very spot. Suddenly, the brilliant sunshine didn't feel so comfortable and we quickly reached for our sunscreen!

Port Lockroy is a British station established on February 16, 1944 as part of Operation Tabarin, the UK military operation to establish meteorological

and reconnaissance stations in Antarctica. The station was the first permanent British Antarctic station in Antarctica at the time. It was here that we made another fabulous dive along a jumbled rocky wall covered with kelp and marine invertebrates. Here, we encountered the bizarre looking multi-legged Antarctic Sea Star.

These starfish resemble nothing like we've ever seen, are as big as a manhole cover and have somewhere around

48 legs in total. Similarly weird animals at Port Lockroy were marching bands of brittle stars, the tips of their legs pointed upwards as they moved quickly along the bottom, the Crocodile Dragon Fish and a giant jellyfish with tentacles that extended at least 15 feet into the murky waters. We also observed vividly colored Red Sea Urchins and large sea anemones clinging to the surrounding rocks in the mild current.



After entering the water from the shore, we quickly descended to 50 feet (15m) and observed a variety of colorful marine organisms, including several purple-colored sea stars and the frightening Giant Antarctic Isopod.

Before long, our fingers told us it was time to end the dive and we surfaced to a blinding snowstorm, driven by a blast of 50 MPH winds screaming over the snow covered island. In seconds, we were immersed in a total whiteout and could barely keep sight of the Zodiac just yards away in the water. Thankfully, this squall ended as quickly as it started and in short order we are on our way back to the warmth and safety of the Polar Pioneer.

Cuverville & Deception Island

At Cuverville Island, the bottom slopes downward from the shore in rocky kelp covered jumble. It is also home to one of the largest Gentoo Penguin colonies on the Antarctic Peninsula. Breeding Kelp Gulls, Antarctic Terns, Snowy Sheathbills, and Skuas can also be observed.

After donning our dive gear in a snowstorm aboard the Polar Pioneer, we motored out and searched among the ice-choked shoreline for a suitable dive site and a place to anchor the Zodiac.

Along the way, we encountered a pair of sleeping Humpback Whales, their hulks just bobbing in the gentle swell and the sound of their exhalations resounding across the pack ice.



The dormant volcano known as Deception Island is located in the Bransfield Strait, about 15 miles (25km) south of Livingston Island in the South Shetland Islands. From the air, the island looks roughly circular and its horseshoe shape encloses a large flooded bay called Port Foster. Access into the bay is gained via a narrow passage called Neptune's Bellows.

Ruins from old whaling stations as well as deserted observation and scientific outposts for various countries can be seen on shore. This place was ravaged by several fierce eruptions in the late 1960s which ultimately led to the evacuation of these active stations. The most recent eruptions took place in 1991-92. The present volcanic activity thermally heats the waters of Pendulum Cove where brave travelers can attempt to bathe in this natural heated spa.

Deception Island is home to a plethora of remarkable wildlife, not the least of which is the largest rookery of Chinstrap Penguins in the world. Here, in the volcanic rocks and hills, over 100,000 of these endearing birds make their home. Of course, with this many birds yields lots of noise...and lots of smell!

In addition to Chinstraps, we photographed more Fur



Seals, witnessed Antarctic Skuas preying on sick or weak penguin chicks, and encountered several large but sleepy Elephant Seals reposing on the black sand beach. We even dove in the caldera of the volcano and

photographed tiny Amphipods and Nematode Worms, the only prevalent species in this otherwise barren underwater landscape. It was a unique experience, however, and as one diver commented just before entering

the water, *"We have to agree on a new underwater hand signal... for a exploding volcano!"*

As if handling one particularly rough landing on Deception Island wasn't enough?



The Drake Tax

Despite its remoteness and sense of isolation, the Antarctic Peninsula is the most accessible part of this vast, frozen wilderness. For Scuba Divers, the opportunity to explore these remote reaches and open new dive sites with virtually every dive is unparalleled in today's world. For those interested in wildlife, photography, geology, and exploration, the possibilities in Antarctica are limitless.

But there is a small price to pay. All travel to this region for tourists is done via ship from South America. Departing from Ushuaia, sometimes referred to as the "*City at the End of the World*", are a small cadre of boats, ranging from cruise ships to smaller Russian ice strengthened expedition vessels. While cruise ships may afford a bit more comfort, they are ill-equipped to navigate

Side Trip: Ushuaia

Most travelers to Antarctica depart from the port city of Ushuaia. We decided to arrive a day or two early in Ushuaia and arrange to Scuba Dive in the Beagle Channel.

Our expectations were low...we had never heard of diving opportunities in this part of the world and we figured there was a reason for that. We were pleasantly surprised.

On our dives here we found dense forests of Kelp, large and colorful King Crabs wandering the rocky ocean floor, and many varied invertebrates which created lots of photographic opportunities, With water temperatures in the low 40s and visibility around 20 feet, this was not unlike diving in the Pacific Northwest.

Divers on their way to Antarctica may want to consider this option as a way to extend their experience in this entire region.

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Ushuaia (c.p. 9410)

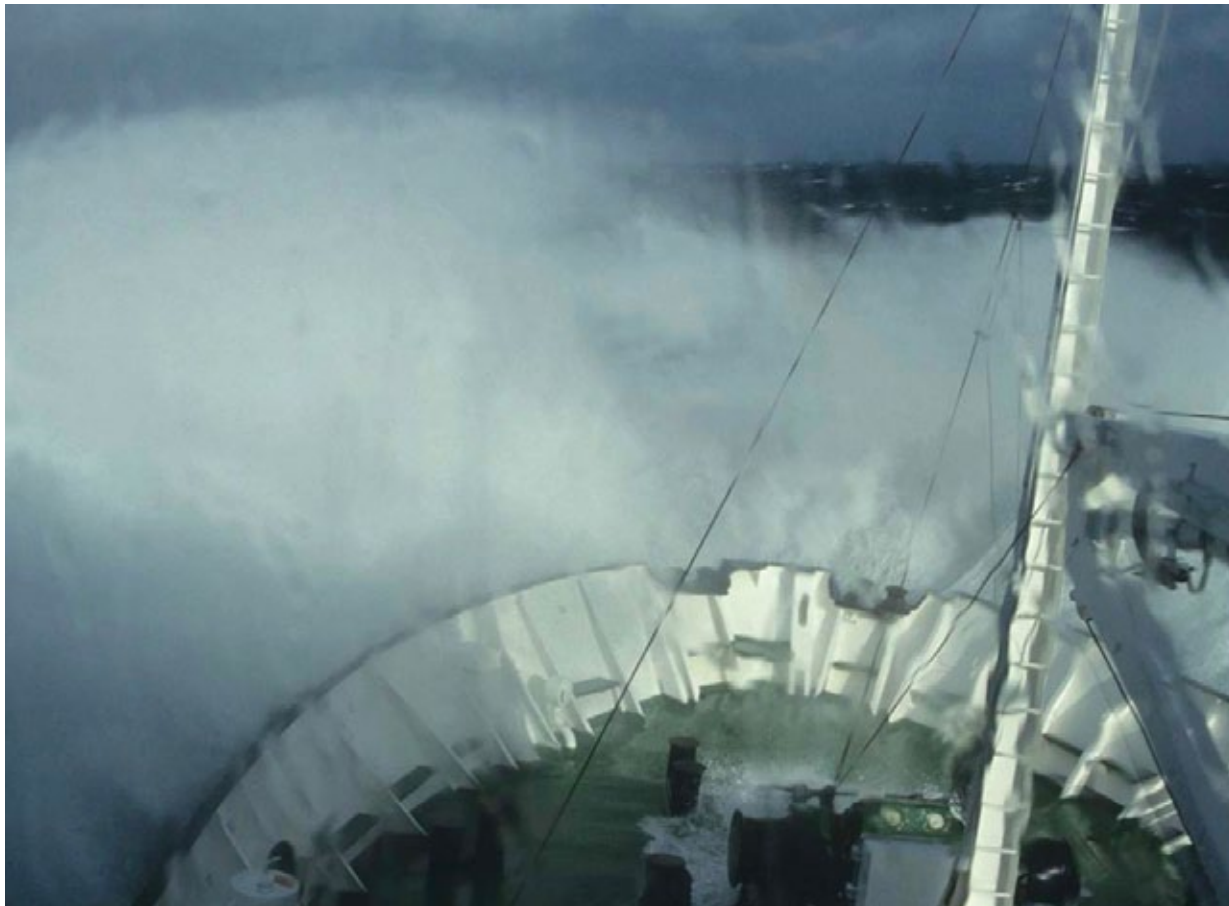
Tierra del Fuego, Argentina

dense pack ice, are less maneuverable and most generally do not provide the opportunities to explore the continent by getting off the ship. The smaller ice strengthened expedition vessels are key for this type of adventure. But all ships traveling to these regions must traverse the Drake Passage and pay what is referred to as "The Drake Tax".

Known as the roughest water in the world, this lonely stretch of water, home to giant Wandering Albatrosses and other magnificent sea birds, is raked frequently by storms.

As these storms circle around the continent through these unprotected waters produce massive swells. Together with the high winds, which can test the mettle of any vessel crossing through.

On our way home we encountered such a storm with 90-knot winds accompanied by 30-foot seas (Beaufort Force 12). Anyone for Tandoori Chicken for dinner?



Bearings

Getting There: All travel to the Antarctic Peninsula is via boat. Cruise ships and expedition vessels depart from Ushuaia, Tierra del Fuego, Argentina. Air service to Ushuaia is provided by Aerolineas Argentinas, with international flights arriving in Buenos Aires.

Entry Requirements: All visitors to Argentina must have a passport with 90-day validity. U.S., Canadian and British citizens do not need a visa for visits up to 90 days. Passports are collected on the boat by ship personnel and are used when visiting research stations in Antarctica.

Climate: In the Antarctic summer, the temperatures can range between 32-40°F (0-4°C). The daylight hours extend from around 4 a.m. to 10 p.m., with even longer days in the peak summer months of December and early January. Sudden snow squalls, windy conditions and temperature drops are common. The air is very dry in Antarctic so be prepared to drink lots of water and use skin and lip moisturizer. The sun is very strong. Sun block is essential and make sure to bring sunglasses!

Best Time to Dive: The only time to visit Antarctica is the Austral summer. The season runs from November through March. Winter travel is not possible. Diving conditions vary, but the best visibility occurs early in the season before the plankton blooms occur in late summer.

Health & Safety: The most significant danger in Antarctica is the remoteness and isolation. Medical emergencies, including diving accidents, often require an air evacuation back to South America, either to Chile or Argentina. The stormy ocean conditions of the Drake Passage can test the best seasickness medicines. Shipboard doctors can provide assistance.

Language: English is widely spoken on the ships exploring Antarctica.

In the wake of Shackleton

Our expedition to Antarctica was a resounding success. Magnificent vistas of snow and ice, dramatic mountains tumbling into crystalline waters and prolific and varied wildlife ensured never-ending photographic opportunities above the water. Whether we were watching Minke Whales alongside the boat, breaching Humpbacks in the distance, or Leopard and Crabeater Seals resting comfortably on passing

ice flows, we were in constant amazement of the variety of beauty of the denizens of this land. Chinstrap, Gentoo and Adelie Penguins dominate this land and seem to be very much at home in the frozen wilderness and we can only marvel at their ability to survive in this harsh and unforgiving environment.

Underwater, Antarctica is an alien place. Fish with anti-freeze in their blood, starfish with 48 legs and strange looking inver-

tebrates like the Giant Antarctic Isopods and the Sea Spiders all serve to capture our imagination and interest.

Divers are fortunate to be able to explore both dimensions of this wonderful place. When Shackleton and his team of explorers and scientists ventured south to these lands, they could only wonder what was below the surface of the freezing waters. Today, we can explore in relative comfort and the images of these beautiful underwater encounters are forever burned into our minds... imploring us to return and to continue our discoveries.

- MS & CW



Michael Salvatorezza & Christopher P. Weaver

Michael and Christopher head the New York based organization, Eco-Photo Explorers. Its mission includes promoting interest in protecting our ocean environment by creating awareness through the use of underwater photography.

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