



*Diving in a Darwinian World*  
**Galapagos**

Text by Bernardo Samba  
Photos by Bernardo Samba  
and Valerie Crousse



LEFT:  
Amarillo coral

FAR LEFT:  
Diver and school  
of Barracuda

BELOW: Blue Foot-  
ed Booby

PREVIOUS PAGE:  
Silhouette of  
Sea turtle

**“Sui Generis” is the most appropriate way I find to describe the Galapagos Islands. A place where the intruder is the human being. A place where many of its inhabitants are animals that exist only in this small piece of the world. A place where evolution seems to have been suspended at some moment in time. A place where we can feel like pioneers in each corner.**

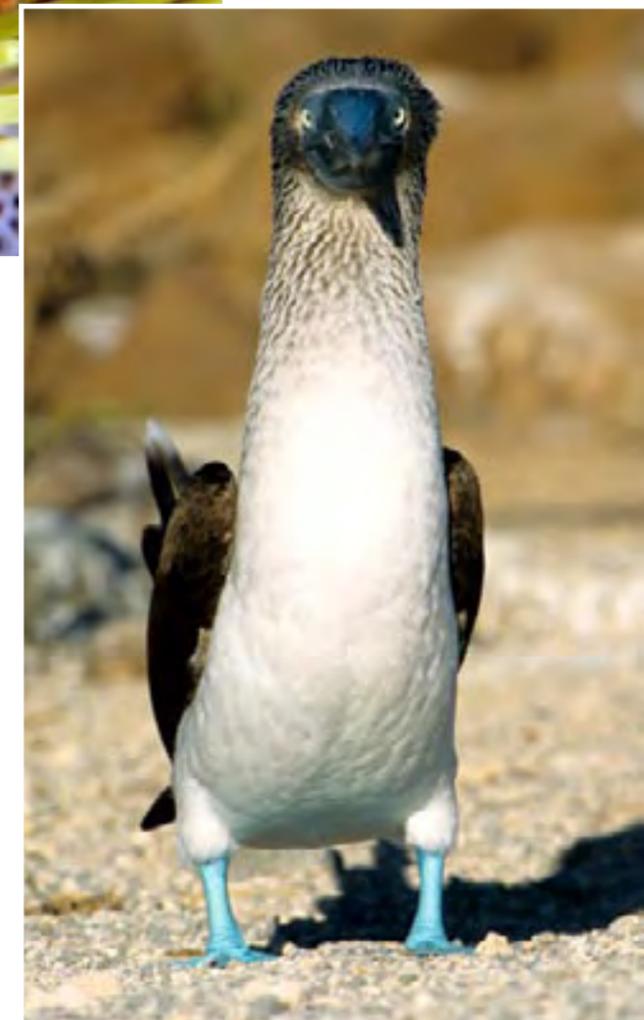
**The Charmed Islands**

The Galapagos Islands can be considered a living museum where life can be seen as it was thousands of years ago, a paradise where man can feel like a complete intruder and inclusively to picture himself diminished before the total indifference of the animals that live in that place.

The archipelago that was baptized as the Enchanted Islands by the first Spanish navigators jumped to fame when Charles Darwin, the famous English naturalist, published the notes of what he observed after five weeks of permanence in these islands (1835) as part of his Theory of the Evolution of the Species.

The Galapagos Islands National Park is conformed by twenty islands and thirty small rocky islands distributed on a surface of 80.000 square kilometers. This group of volcanic islands is isolated in the Pacific Ocean, more than thousand kilometers off the coast of South America. The origin of these islands (geographic, biological and climatic) is until now a mystery. Of all these islands only four them are occupied by man and only some of the rest can be visited by tourists whereas others maintain the access reserved exclusively for scientists.

The combination of a unique climate and the fast currents rich in nutrients that bathe the islands, sustain surround-



ings that are as extraordinary in the sea as in the mainland. There is no doubt that from the first moment man put his eyes on the Galapagos and until nowadays, all that has made a big impres-



CLOCKWISE FROM ABOVE: Amarillo coral; Sea lion; Goby; Underwater photographer and playful sea lion





ABOVE: Sea lion on the hunt

LEFT: Pelican and Sea lion at the surface

FAR LEFT: Stingrays gliding under the surf

sion is the oddity of the abundant animals in the virgin coasts: from the prehistoric giant turtles to small boobies that now take the name of Darwin. The isolation of the islands and time, that has allowed life to evolve and adapt to an environment in which predators never existed, ended in species that, when the first men arrived, were unusual and imperturbable.

The majority of reptiles and birds of Galapagos are endemic. Even within the archipelago there are different species, each one limited to a single island.

### A world of contrasts

Contrary to what would be thought, the climate of the Galapagos Islands is atypical for a tropical oceanic archi-

pelago. The changing cold water presence, brought by the current of Peru (Humboldt) that arrives at the north from the southern ocean, cools and dries the Galapagos during great part of the year. When these currents are debilitated and warmer waters from the north, typically tropical, surround the islands, begins the warm rainy season.

The experience to dive in the Galapagos is like everything what you find here, very particular, and without a doubt requires an advanced level of diving. Strong currents, drastic changes of temperature (thermoclines), cold water and often little visibility, represent a challenge for any experienced diver and mainly for the submarine photographer

who will have to add a good amount of preoccupations to the already large list of things that must consider to obtain photographs in an atmosphere that can be considered hostile.

Nevertheless, the opportunity to dive in waters literally filled with life and to be part of an almost infinite procession of fish, sharks, rays, turtles, dolphins, mantas and others, justifies the greater of the efforts.

### Puerto Ayora

The forced entrance to these islands is Puerto Ayora, a charming town that, with the years, has stopped being calm and quite and became the center of the movement of these islands. This port, located in Santa Cruz Island, is the place



## Galapagos

where starts all the tourist movement that is distributed to the different points of the archipelago. Colorful by day, agitated by nights, Puerto Ayora stays in the memory of the traveler as the closest point to civilization in these islands. In Santa Cruz two obligatory visits have to be done. The first one, are the humid forests in the heights of the island to visit the majestic and gigantic Galápagos turtles and the second, is the creek of the Black Turtle. This creek is a place of manglares in which, thanks to the little depth and the transparency of the waters, sharks and schools of golden head of cow mantas can be observed. A typical excursion in these manglares is on board of a zodiac moved only by oars since in this site bathing, diving or make excess noises is not allowed. It is also restricted to twelve passengers by boat.



Diver with spotted Eagle ray

### Way to the South: San Cristóbal, Española and Floreana

Three islands are normally visited by the divers before the long and spectacular voyage towards the remote north islands. San Cristobal, Espanola and

Floreana stand out due to their particular natural attractive and landscapes. These islands are south and south west of the Santa Cruz Island.

In Leon Dormido I found a wall covered of barnacle shells which sheltered small, aggressive and endemic Galapagos blennies that after making me suffer for several minutes trying to focus with my camera their face in the middle of their frenzy movement allowed me to portray his magnificent color and expression. After the immersion we made an excursion to mainland to visit the modern Center of Interpretation.

Afterwards we went to La Espanola, the southern island of the archipelago, very appreciated by bird's specialists due to the great variety of species you can find on the Island. This island offers mainly two places of interest: Punta Suarez and Garner Bay. In Punta Suarez, it is possible to have the first real approach to Galapagos, by mingling



LEFT: Flamingo fishing for food  
FAR LEFT: Closeup of a reef fish



Sea lion rests on the beach



with tens of blue footed boobies and hundreds of sea iguanas that let to us stay with them without problem. For a photographer this is like "Disneyland"... taking pictures of wild animals will never be so easy! In a place like this, you can observe behaviors as interesting as the ones of the blue footed boobies or the spectacular Albatroz of Waved executing the hallucinating and fascinating ritual of courtship in front of our eyes.

In Garner Bay it is allowed to make immersions with snorkel surrounded by schools of surgeonfish, butterflyfish, angelfish and mainly of sea iguanas.

To arrive to Floreana we sailed just a short time but it would be possible to say that we were transported to the other end of the world. First we walked to a lagoon, hided after hundreds of

trees and vegetation. A still lagoon filled with pink brilliant flamencos that digged the muddy ground of the lagoon in the search of food. Later, we followed a winding footpath that took us to a beach in the other side of the island where rays can frequently be observed feeding themselves in the surf of small waves. It is worth to stay in this place until dusk and enjoy a sundown without precedents.

Floreana offers at least four exceptional places for diving: Corona del Diablo, Champion, Enderby and Gardner. The famous Corona del Diablo is formed by the eroded rest of a symmetrical volcanic cone. Even dough coral has suf-



RIGHT: Iguana  
BELOW: Gray heron



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Goby



Shrimp on sea coral



ferred the effect of El Nino, you can dive between eaglerays, hawkfishes, creole fishes, grunts and endemic garden eels. Moving away from the Corona, in the deep side, Jacks, Turtles and sometimes hammerheads and reef sharks can be found.

Enderby and Champion Rock offer two magnificent dives in walls covered by forests of black coral where magnificent sea horses of the Pacific can be seen.

**Heading North**

Finishing this trip, we went to the famous islands of the north. The voyage would take through the Bartolome Island, to the small island of Round Rock and Punta Vicente Roca in the Isabela Island. All the dives that we made during the following two days, were complemented at the end of the day with walks that allowed us to complete the panorama that is mandatory when visiting these islands. No matter how devoted

to diving you are, it is indispensable to know Galapagos outside and underneath the water to be able to appreciate it in its total dimension.

Punta Vicente Roca was a particularly memorable place. We dived during night and day. Some of the divers that accompanied us had the luck to dive with two Mola Molas (Sunfish) that sometimes visit this place.

**The legendary Darwin and Wolf**

After the last dive near the Isabela Island we started a twelve hour trip to the legendary islands of the

North: Darwin and Wolf.

A single immersion in the islands of the North end, Darwin and Wolf, located 87 miles off the north of the rest of the archipelago, can be overwhelming. Tens of



Galapagos sharks, aggressive silky sharks and hammerhead sharks swimming together without showing the minimum rush or concern due to the diver's presence. Turtles, gigantic schools of creole fish and of course magnificent and gentle whale sharks appear simultaneously, offering a spectacle dif-

LEFT: Sea star  
ABOVE: Frog fish



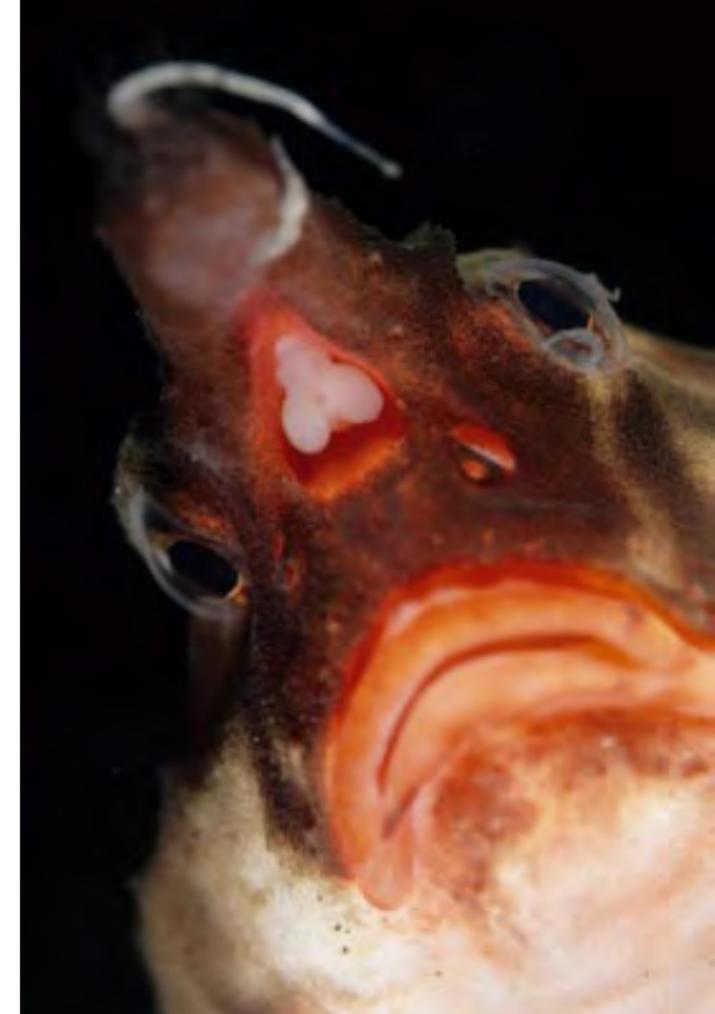
Frog fish



Black turtle cove

# Galapagos

White Cormoran



▲ Red-lipped Batfish

difficult to find in any other part of the planet. During three days we were anchored closely to the mythical Arc of Darwin, reunion place for the whale sharks during the months of September to November. The wait for the encounter with one of these gigantic animals was long. After six divers we managed to face this magnificent animal. Regrettably, there was no current during those days and as Luis Rodriguez, our experienced guide said, with not current, not sharks.

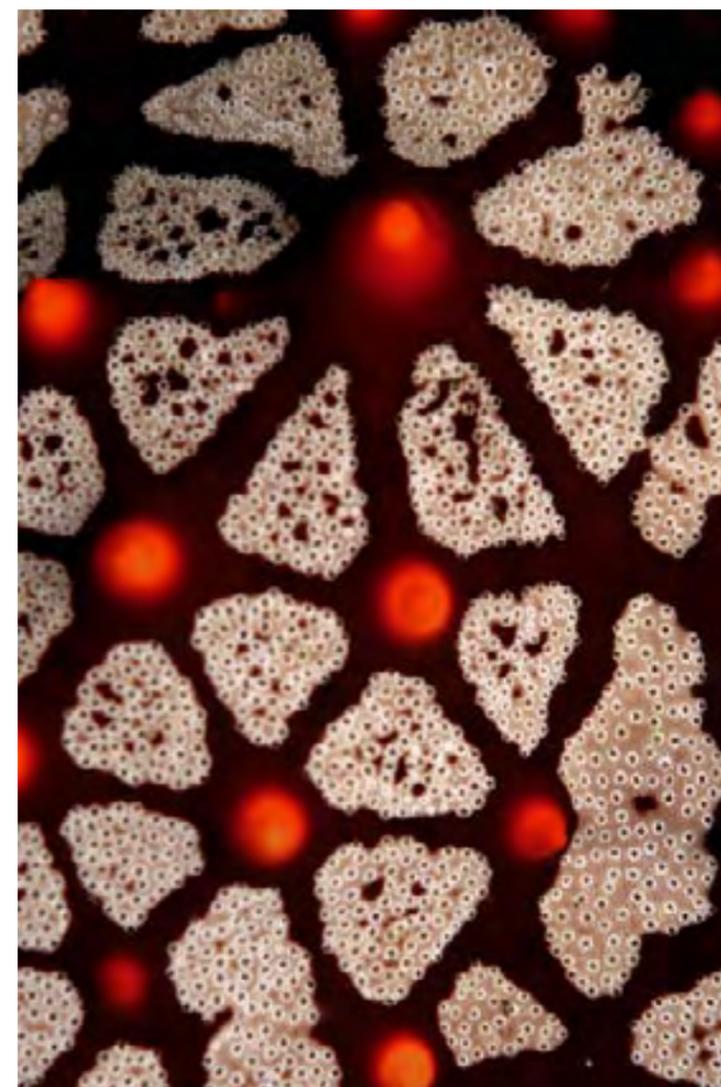
The end of the trip was crowned with a visit to Seymour Island, to spend the afternoon with the magnificent frigate birds. Seymour is the only island where one can find these awesome birds in courtship all year round. Male frigate birds have a bright red gular sac at their throat, which they use to advertise their manhood by inflating it to astronomical size to attract the attention of potential mates.

The great majority of the people who visit Galapagos Islands feel so touched while diving in their pacific nat-



Wave Albatros

ural world that, sincerely, would want anything to grant its future. The tourist operators, whose future depends on the adequate management of this natural paradise, also support the conservation. The tourism increases day to day in these islands also the furtive fishing.



Close up detail of coral

## Galapagos Books

### Recommended guides and books:

*Galapagos: Islands Born of Fire* by Tui De Roy (Hardcover - Jan 2000)

*The Diving Guide: Galapagos Islands* by Steve Rosenberg and Ellen I. Sarbone (April 2004)

*Lonely Planet Ecuador & the Galapagos Islands* by Danny Palmerlee, Carolyn McCarthy, and Michael Grosberg (Paperback - Nov 30, 2006)



School of hammerhead sharks on the hunt

Happily there are many people and efforts dedicated nowadays to preserve and take care of these wonderful islands. Discovering without destroying is what Galapagos need. Visit Galapagos and spread the word about its magnificence and richness but always, always remind people that this is one of the last truly wild places on earth.



Lagarita lizard

### About the author

Bernardo Sambra is a Peruvian underwater and wildlife photographer. His articles and photographs have appeared in a number of international publica-

tions such as Aqua, Asian Geographic, Panorama de las Américas, Golden Dolphin, Rumbos, Conde Nast Traveler, Travesías, Underwater Photography Magazine, Somos and Scuba Diver. His images and work have achieved international recognition in several international

specialist competitions and his work has been presented as part of a number of underwater exhibitions as "Oceans Expo 2005", "Master Image Makers Gallery"

(2005) in Singapore and "Reflejos Submarinos" (2006). In 2005, Bernardo was a speaker and jury at Celebrate The Sea Festival in Singapore.

In the latest years, Bernardo has added to his work as a photographer, the production and edition of books related to the oceans and its inhabitants joining together the work of the world's most talented underwater image makers. His most recent titles are "Oceans Expo" (2005), "Oceans" (2006) and "Oceans in Options" (2006).

Starting in 2006, Bernardo has started leading expeditions to some of the finest diving destinations in the world.

"Protecting through images" is the slogan of The Living Oceans, an orga-

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In its second edition, Oceans Expo will present what is probably one of the most amazing photographic journeys through the oceans.

Oceans Expo 2006 seeks to reflect the grandiosity, beauty and immensity of the oceans and its inhabitants. In order to achieve this ambitious and somewhat utopist objective, fourteen of the most renowned and experienced underwater photographers has been asked to share their spectacular images, the history behind each one and their particular point of view regarding the significance and

importance of discovering the oceans.

The lenses of David Doubilet, Doug Perrine, Brian Skerry, Amos Nachoum, Stephen Frink, Bernardo Sambra, Rod Klein, Stuart and Michele Westmorland, Takako Uno, Mauricio Handler, Bill Curtsinger, Stephen Wong, Mirko Zanni have been conjugated in one amazing exhibition.

More than 150 large format images will act as an open invitation to all of those who are interested in knowing the more wild, spectacular and magical side of our planet.

Discovering without destroying is the challenge for all of those who accept this invitation.

As part of Oceans Expo, a book called Oceans will be released. With a foreword by David Doubilet, this very limited edition coffee table book will be unveiled on the opening date of the exhibition.

Oceans Expo opening will be in November 15<sup>th</sup>, at the ICPNA Gallery in Lima, Peru. The expo will also be presented in Chile and USA in 2007. Dates to be announced.

For more information please visit: [thelivingoceans.com](http://thelivingoceans.com)

nization founded by Bernardo and his wife Valerie, that aims to raise awareness about the oceans and its inhabitants and promote the underwater photography as medium for artistic expressions in Latin

America and the rest of the world. For more information and to order Sambra's work, please visit: [www.bernardosambra.com](http://www.bernardosambra.com), [www.thelivingoceans.com](http://www.thelivingoceans.com) or e-mail [info@bernardosambra.com](mailto:info@bernardosambra.com). ■

# The Most Common Handsigns

PART 17



1. I am on my way to watch penguins, do you by any chance know where South Pole is?



2. I need some ice for my drink, do you by any chance know where North is?



3. Do you want to boldly go where no man has gone before?



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A new website has launched to support the competition at [www.underwatercompetition.com](http://www.underwatercompetition.com).

Photographers will compete in six still image categories plus one video category, to win more than \$35,000 in prizes, including premium dive travel, underwater photography equipment, and more! Dive packages include trips to some of the top photo destinations in the world: South Africa, Socoros Islands, Raja Empat, Komodo, Grand Cayman, the Galapagos Islands, Bora Bora, the Solomon Islands, Manado, Lembeh Strait, Yap, Cocos (Keeling) Island and the Bahamas! Other prizes include camera housings, strobes, lighting systems, and other valuable items. The competition includes a category for images that focus on conservation and the marine environment, and one specifically for entries taken by compact digital cameras.

Celebrity judges Stephen Frink, Dr. Alexander Mustard, and Eric Cheng will select winners after the **Jan 7, 2007 deadline**. Winners will be announced on stage at the [2007 Our World-Underwater](http://www.ourworldunderwater.com) film festival in Chicago, Illinois (February 9-11, 2007), and will be published by our supporting media partners worldwide.

15% of entry proceeds will be donated to marine conservation efforts. For more information, please contact: [contest@wetpixel.com](mailto:contest@wetpixel.com) or [contest@divephoto-guide.com](mailto:contest@divephoto-guide.com).

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# The Evolution of an Iconic Destination

Text and photos by Jason Heller

## **Sensory overload!**

No two words better describe the exhilarating diving in the Galapagos Islands, home to an extraordinary number of marine species in numbers that can at times even exceed your expectations and imagination. From the moment you back roll from the inflatable panga into the chilly equatorial waters, you enter a world unlike any other—a world least impacted by the environmental atrocities of man—an underwater marvel seen only by a relatively small number of privileged individuals with one thing in common...a well traveled c-card and a sense for adventure.

## **A Timeless Gem in the Eastern Pacific**

The Galapagos Archipelago is 960 km west of mainland Ecuador, straddling the equator within a unique corridor in the Pacific Ocean. The volcanic islands are washed by a convergence of seven currents, including three major ocean currents. In fact, it is these very currents that are the fuel for the

abundance and diversity of marine life in the Galapagos. The contrasting warm and cold currents bring a plethora of marine life in explosive numbers. Where else on earth can you dive with mantas and turtles along with penguins and fur seals?

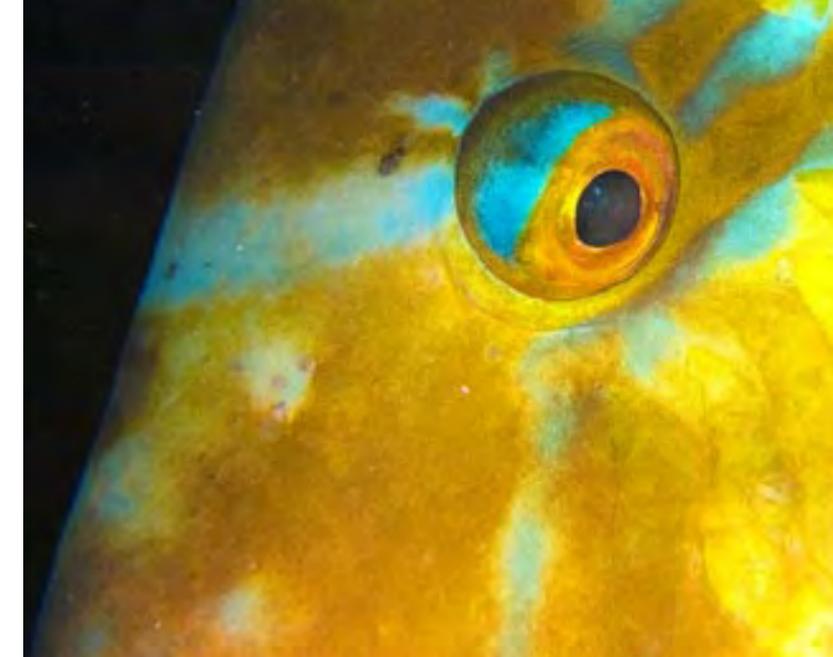
The Humboldt current originates near the Antarctic and is a sub tropical current with very nutrient-rich water. The Humboldt meets the warm tropical Panama current at a point north of the

archipelago, resulting in the northern islands of Wolf and Darwin having warmer water.

The Cromwell current is a bottom flowing current, which brings nitrates and phosphates to the islands. This cold current hits the islands head-on and results in major upwellings of cold water to the west of Isabela and to the southwest of San Cristobal, Floreana, Española as well as the north of Santiago. Best bet is to bring a 7mm wetsuit and prepare for some cold, but amazing dives.

## **Bottom time**

Since this was my first trip to the Galapagos, I chose



January, opting for the season with the best visibility versus whale shark season, which is historically August through October. Apparently the whale sharks have been appearing earlier the last couple of seasons, with sightings beginning as early as June.

Unfortunately, mother nature didn't read the Galapagos diving guide book and thus did not provide the clear visibility as expected. Not to worry—what was lost in visibility, was made up in encounters with hundreds of sharks, dolphins, rays, sea lions, turtles and schooling fish by the hundreds of thousands.

My most memorable dive occurred early in the week. Upon entry, I was immediately escorted by two friendly and playful sea lions. It was as if they were guiding us, and welcoming us to their land of



plenty. I looked up, only to find a small group of hammerheads swimming above (my first of hundreds observed during a typical week).

Just minutes later, I was diverted by a small school of eagle rays, swimming together with a handful of large and girthy Galapagos sharks, a scene rivaling anything my imagination could have conjured up.

All the while, dozens of white tip sharks, many with recent mating scars, scoured the

reef below looking for an easy meal.

If life came with background music, this would have been a classic scene, complete with a poetic zen-like rendition of the jaws theme fused with Asian melodies and tribal drums. But even without the background music, this dive has been etched in my memory forever.

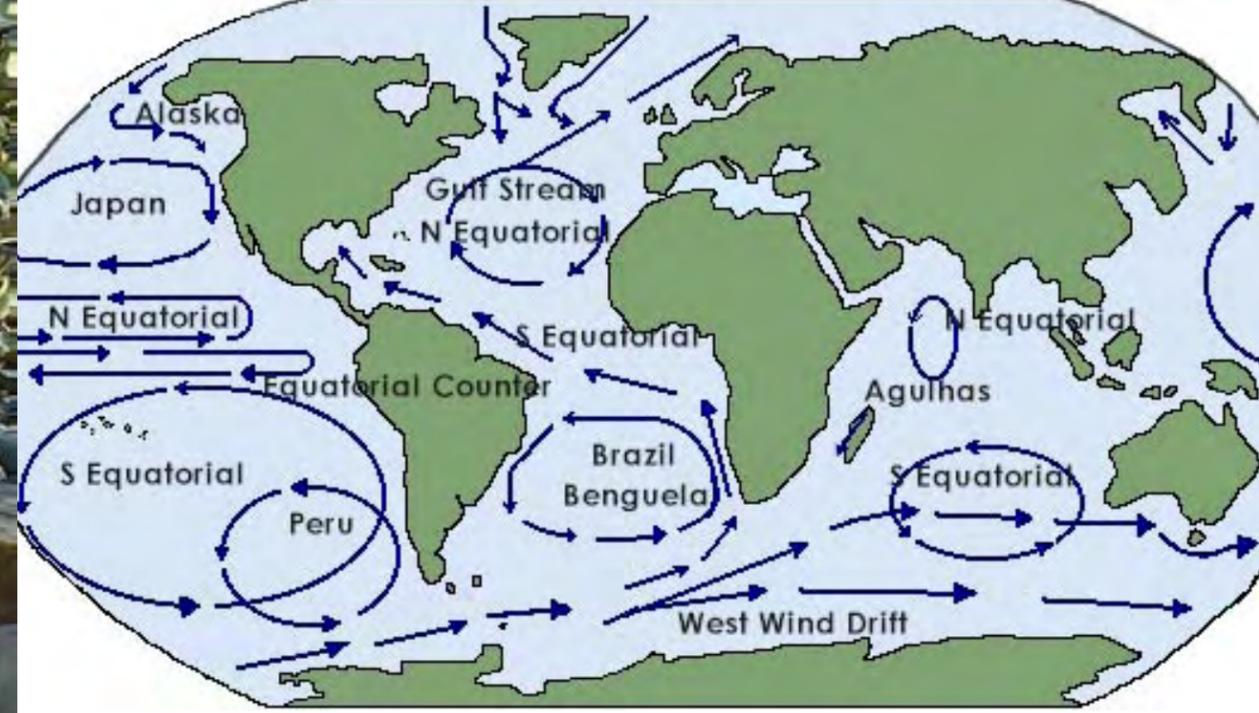
Towards the end of the dive, I was in for a truly grand finale. While attempting to photograph a sea lion against a background of Galapagos shark silhouettes, my serenity was broken by a symphony

of tank banging. I reluctantly turned away from my surreal scene, only to catch a final glimpse of four mantas parading off single file into the distance. I can see everyone else grinning around their regulators, elated from the experience.

Encounters that could have otherwise taken half a lifetime of diving to fill a log book, have all been experienced on one dive. I could have hung up my fins and camera and never dived again, and would have still been happy...well, metaphorically speaking of course!

One of the Galapagos tortoises. Recently, Harriot the Tortoise who was one of the world's oldest known living creatures, passed away at age 175 this year in the Galapagos due to heart failure after a brief illness. SOURCE: BBC

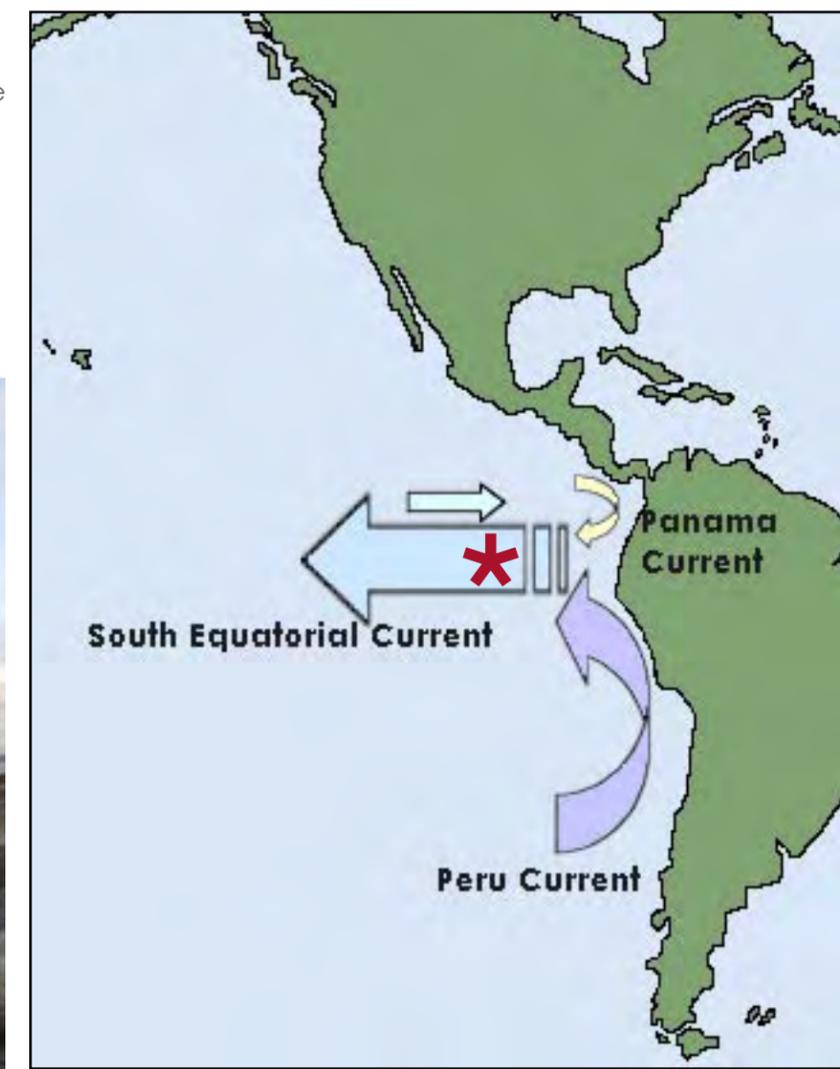
ABOVE: Close-up of a banded shrimp



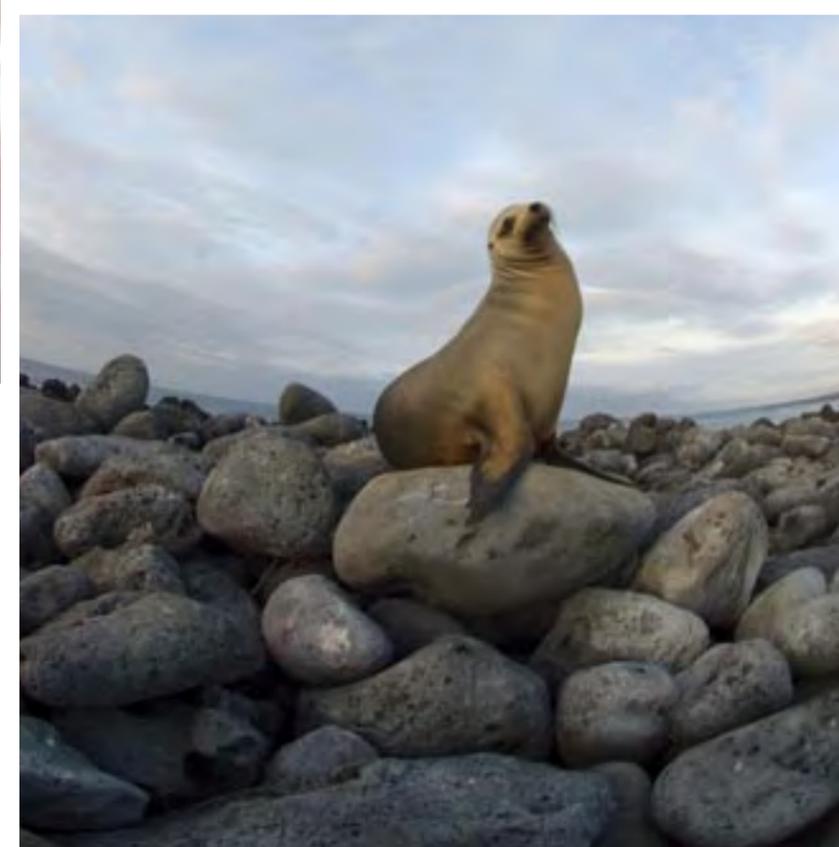
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Maps of the world and Western Hemisphere show the currents of the oceans and the unique placement of the Galapagos Islands in these currents denoted by the red star

LEFT: Female sea lions rest in the shade on a Galapagos beach  
INSET: Close-up of a fish eye  
BELOW: Sea Lion poses on the rocks



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**An Evolving Destination**

All diving and land excursion itineraries are moderated by the Galapagos National Park. This process evenly distributes the impact of over 100,000 tourists annually, in an effort to preserve the natural behavior of the islands' inhabitants. Some species, such as the endemic marine iguanas, playful sea lions, and a variety of sea birds, still have an apathetic view of human presence and have not learned to fear man. But how long will this last? And at what threshold of tourism does this fragile ecosystem change?

The Ecuadorian government wants to boost tourism in a down economy, and 2006 indeed marks a change in tourism for the Galapagos. Approval for the 500-passenger cruise ship *MV Discovery* to include an itinerary, thankfully limited to San Cristobal, might just be the beginning of a trend to increase tourism revenues at the

expense of one of the last true frontiers on earth. The local government has struggled with illegal fishing, shark finning, sea cucumber harvesting and corruption. It's actually quite easy to understand. The illegal fishing trade is a multi-billion dollar market worldwide. One illegal long-line vessel can catch hundreds of thousands of dollars worth of tuna and shark fins. One can imagine the difficulty and complexities associated with preventing and combating corruption within the political system. But without ongoing proactive protection, the Galapagos can not remain what

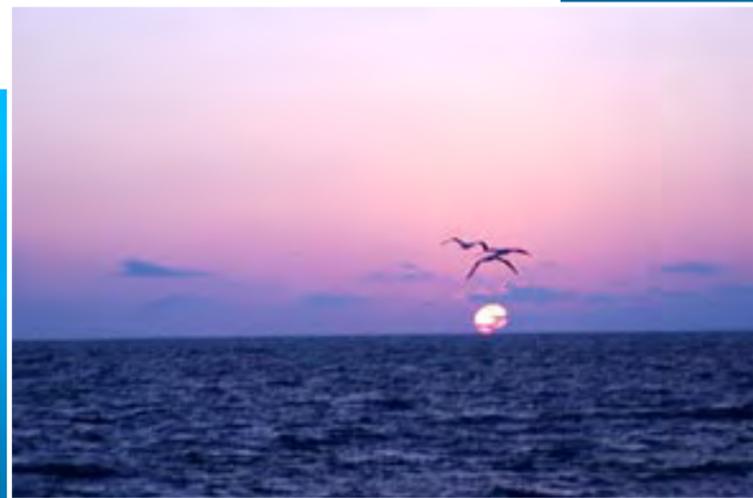
it is, and what it hopefully will always be. These rich open waters are one of the last of their kind.

Rouge fishing vessels spend the days outside the boundaries of the national park and then under the guise of night, swoop into the fish-rich waters within the park and deploy a horribly wasteful fishing practice known as long-lining. This technique involves laying miles of line with thousands of baited hooks across the ocean, indiscriminately catching everything in their path, from tuna to turtles, manta rays to

dolphins, sharks and even birds.

The sharks are fanned, with the carcasses thrown back into the ocean sometimes still alive, the tuna and swordfish are harvested, and the remaining by catch, up to 90% of the total catch, will have been brutally killed and discarded.

On a dive at remote Wolf Island, we discovered a discarded longline hook right on the dive site. Further protective measures are essential to ensure that the uniquely abun-



ABOVE. Dusk descends over the Galapagos waters  
LEFT: Sea turtle soars through schools of fish  
RIGHT: Hammerhead sharks on patrol



dant and bio-diverse waters of the Galapagos remain preserved.

### History

The Galapagos are indeed a special place. In 1835, English naturalist Charles Darwin visited these very islands, and based on five weeks of research in 1859, released his book, *On the Origin of the Species By Means of Natural Selection*.

Unfortunately, Darwin wasn't a diver and only got to skim the surface regarding the wonders underneath

the waters in the Galapagos. If Darwin had ever dived the Galapagos, his renowned book might have had an underwater sequel, and English research vessel *HMS Beagle* would have went down in history as the first live-aboard in the Galapagos.

### To the North

By far the best way to dive the Galapagos is by live-aboard. There are a small number of land-based operators, but they are limited to dive sites around one or two islands. I chose to

### Foreign species invade Galapagos, threaten natives

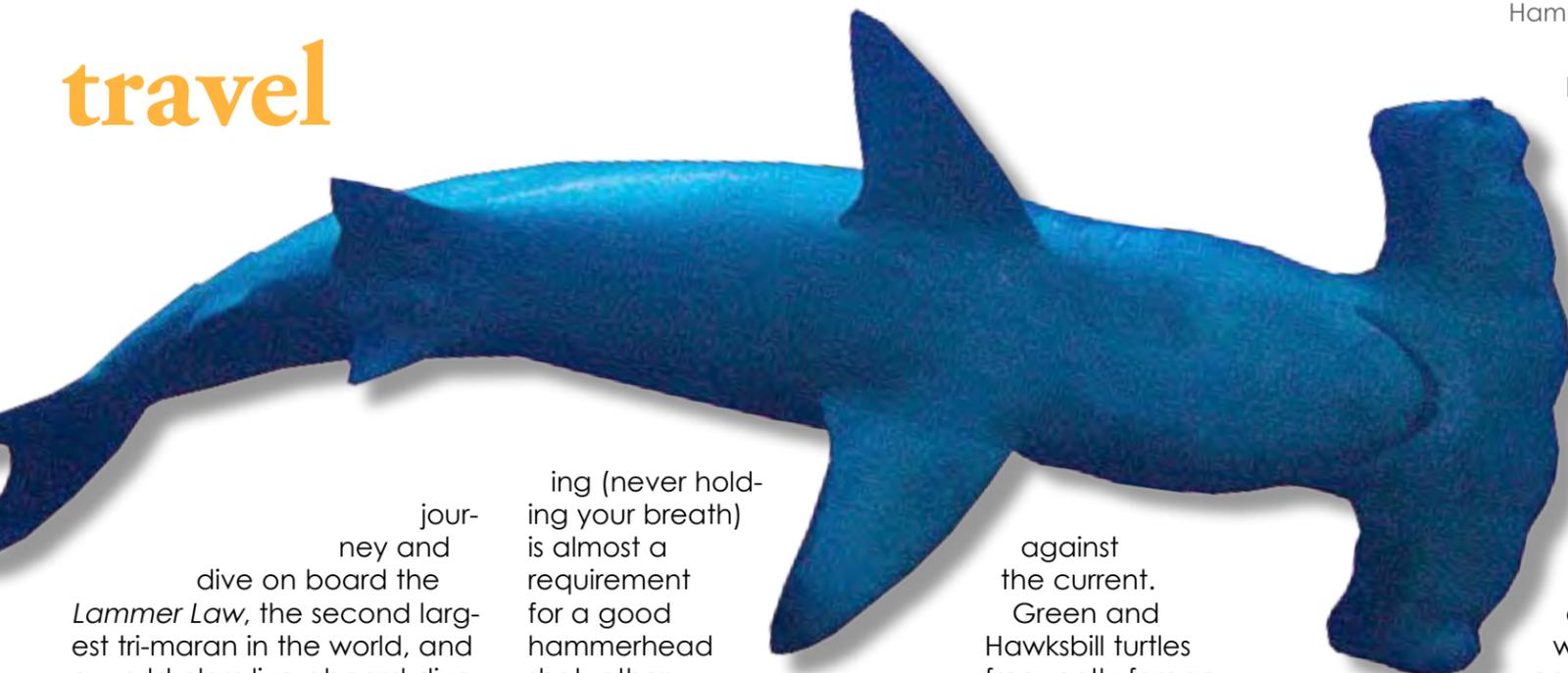
The discovery of foreign species on the Galapagos Islands has got Ecuadorian officials worried. Even though incoming ships and planes are inspected regularly, locals found a turtle and an iquana that most likely came from mainland South America.

One of the main threats to native species is Invasive foreign species, specifically animals that compete with native

species for food and prey. Affected natives include the giant tortoise, finches, and marine iguanas—the very same animals that enchanted Darwin as he developed his theory of evolution. Islands which makes their ecology unique. The islands' isolation was and is what makes the Galapagos unique in flora and fauna.

Now the booming tourist industry, migration and fisherman brings foreign tortoises, turtles and monkeys.

SOURCE: BBC NEWS



Hammerhead shark

ing (never holding your breath) is almost a requirement for a good hammerhead shot, otherwise the shy and majestic creatures will keep their distance.

journey and dive on board the *Lammer Law*, the second largest tri-maran in the world, and a world class live-aboard dive boat by any standards.

Although there is no bad diving in the Galapagos, the real action is at the northern islands of Wolf and Darwin, home to schooling hammerheads, Galapagos sharks and other varieties of "Mr. Big" (a.k.a. large pelagic species).

Many live aboards offer specific itineraries that focus mainly on Wolf and Darwin, and rightfully so! My first dive at Wolf was an adrenaline rush. Schools of hammerheads in the hundreds circle the island, allowing careful and relaxed photographers the opportunity to capture some great images of the oddly beautiful creatures.

Since Hammerheads are timid around exhaling divers, it is essential to keep your exhaust bubbles to a bear minimum. Blatantly violating the first rule of div-

ing (never holding your breath) is almost a requirement for a good hammerhead shot, otherwise the shy and majestic creatures will keep their distance.

Wolf was all about the hammerheads. The dive plan was always the same. Drop down and figure out which way the current is moving, find a convenient spot to wedge yourself into the rocks and don't get swept out into the swift current. Then you can relax as a procession of hammerheads, Galapagos sharks and the occasional turtle or eagle ray eventually swim slowly past you

against the current. Green and Hawksbill turtles frequently forage between the rocks for a quick meal. Not nearly as aerodynamic as the large sharks and rays, the turtles would sometimes have to fight the currents, which would flip them upside down or pin them to the rocks while they explored the crevices between the large boulders.

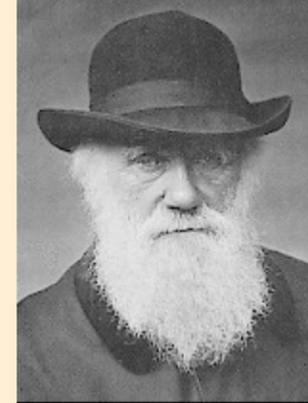
If shooting photography, a reef hook is recommended in order to keep your hands on your camera versus clinging onto the rocks to prevent drifting off with the currents.

Extending the cord on your reef hook and hanging tethered in the current is a pretty cool feeling. Realizing that the current is so strong that it bends your reef hook out of shape and sends you flying into the current is not.

Darwin Island and Darwin's Arch, world renowned for consistent schooling hammerheads, was sadly under-inhabited. We witnessed only one sole hammerhead in two dives at Darwin's Arch. The silver lining was a special encounter with another large pelagic. For an entire dive, I could hear the tell-tale chirping of a nearby dolphin. Towards the end of the dive, he appeared, gracefully swimming right towards me, slowing down to stare into my eyes with as much curiosity as I into his. Without warning he darted upwards to catch a meal, polarizing a school of baitfish and creating a beautiful silhouette against the azure background. Then he swam out of site. I could hear the distant chirping throughout my safety stop.

Just before climbing on board the panga, I took one more deep breath

The title page of the 1859 edition of *On the Origin of Species*.



Charles Darwin 1809 – 1882

Darwin normally considered a biologist, actually began his university education by studying medicine at Edinburgh. Not finding it to his taste, however, he began to prepare for the Church at Cambridge University. Obviously, this didn't seem to grab his attention either, for friendships with the geologist Adam Sedgwick and the botanist John Henslow led to an interest in natural history i.e. the study of animals and plants in their wild state. This interest, luckily for the future of what would become evolutionary theory, was to remain with him for the rest of his life.

This interest, and contacts through Sedgwick and Henslow, led to Darwin obtaining a position of naturalist on board *HMS Beagle*, which was preparing to survey the coast of South America and the Pacific.

The *Beagle* sailed in 1831, and Darwin was initially mostly concerned with the geological aspects of his work. Yet, he was also struck by the way animal species gradually changed from region to region, causing him to ponder on the development of life.

It was his arrival in the Galápagos Islands, which eventually was to lead to his theory on the development of the species. For it was here that he observed the, now forever famous, finches. He was particularly struck by their variation where he found 14 different species, each thriving in a particular region of the islands.

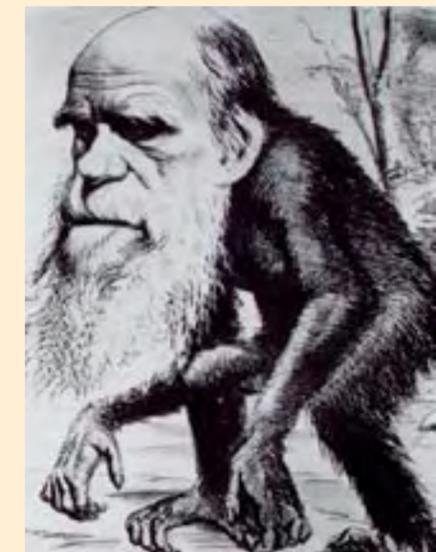
Arguing that it was unlikely that each species was individually created, he reasoned that they had probably evolved from a parent species of finch on mainland Ecuador. This led him to question the theory of the immutability of the species and to formulate a theory of evolution by natural selection. Darwin

A typical satire was the later caricature in *Hornet* magazine portraying Darwin as a non-human ape.

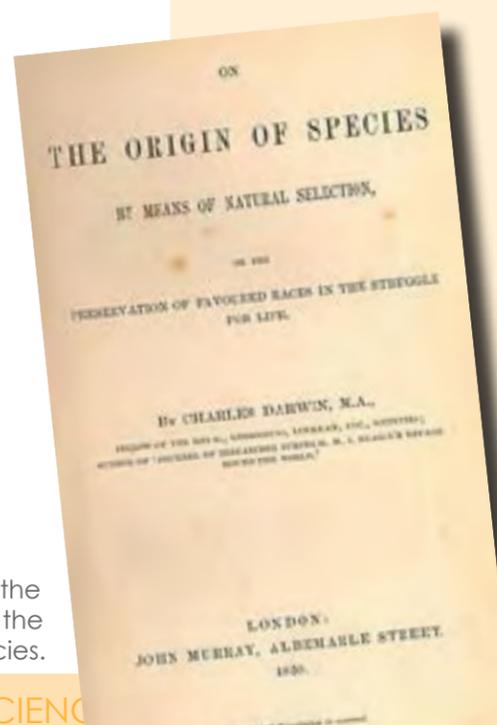
was to spend more than the next 20 years amassing evidence to support this theory. The results of these deliberations was to lead to the publication, in 1859, of one of the classics of scientific literature: *On the Origin of Species*. This was followed in 1871 by *The Descent of Man*, which applies the theory of evolution to man.

There were still flaws in his theory, for he could not explain, for example, how the variations, so essential for natural selection to act on, come about. This question was first resolved nearly 20 years after his death by the rediscovery of Mendel's work on the principles of heredity

And the rest, as they say, is history. Well! Not quite. To this day, and perhaps even more so, the battle is still being fought between Darwinism and the Creationists. When will they ever learn? ■



HMS Beagle in the seaways of Tierra del Fuego, painting by Conrad Martens during the voyage of the Beagle (1831-1836), from *The Illustrated Origin of Species* by Charles Darwin, abridged and illustrated by Richard Leakey ISBN 0-571-14586-8



and listened to the last chirps from my new friend. I thought about just how remote we were, about the wild frontier around me, about how harsh a fight for life and death that dolphin has to endure each and every day, even without humans in the equation. Will he survive or will he succumb to natural selection, or worse, get caught by a long line hook? Yet, he seemed happy and blissfully unaware of the gravity of life, he seemed to be smiling. One surface interval later, with Darwin's Arch behind us, we decided to return to the action at Wolf.

The islands of Wolf and Darwin don't provide many anchorages suitable for night diving. The sheer faces of the large mesa-shaped shield volcano islands do not have many bays or other safe havens free from the raging currents. There is however at least one such place, on the lee side of Wolf. This would be the only night we were able to go diving. Having spent our days face to face with large Galapagos sharks, and stories of silky sharks and the occasional tiger feed-



Sunset against the landscapes and natural monuments of Bartolome

ing in the area at night, we otherwise didn't mind not diving at night.

At about 20 meters, we hit a no-nonsense thermocline. The temperature difference was steep enough to make me consider hovering on the warmer side for the remainder of the dive, but not strong enough to keep me from getting up close and personal with a small school

of odd red lipped batfish scuttling on the floor below at 30 meters.

The rocks surrounding the site were littered with one species of endemic nudibranch, the blue striped *Tambja multineri*. I must have counted about 30 or 40 before I realized that they were simply everywhere.

As far as night dives go, it was mediocre—I've done much better. But the experiences we had each and every day more than balanced out the lack of night diving.

### The Rest of the Archipelago

A typical itinerary begins with a shallow dive at the sea lion rookery at Isla Lobos. Scores of playful female sea lions and their pups take to the water as soon as they hear visitors.

We were warned several times to stay clear of any males. Male sea lions are easily discernable by their size and the shape of their heads. Males are significantly larger than the females, and sport very large "sea lion chic" humps on their heads. Male sea lions vigorously protect their harems of sea lion vixens. An attack by a large bull can inflict some serious wounds. On land you may have a chance to out run an angry male, but in the water, the sea lion is master



Sea Lion pups play in the sun while their mother watches from a distance



This goat skull is a reminder of the desired fate of non-native species. Goats are not native to the Galapagos and the government has been attempting to eliminate them

of their domain and amazingly agile. Fortunately, the males will bark and warn you when they're upset, and that's your cue to back off.

However, the females and pups would want nothing more than to play with you all day long. Like bullets that change trajectory at the very last second, they dart in and out of view, usually too fast for your camera to focus on. However, as soon as one of these furry projectiles catches a glimpse of her reflection in my camera dome port, she stops to curiously investigate the pretty stranger intruding on her territory. Strobes fire —moment captured. Unfortunately the shallow



LEFT: Bright orange cup coral polyps at night. INSET: Large blue Seastar. ABOVE: A diver meets a massive school of fish swarming through the waters around Galapagos. INSET: White tip shark

water and 14 other divers stirring up the 3-meter water made for less than desirable photography conditions. However, since this was my first time diving with sea lions, I thoroughly enjoyed every minute of it!

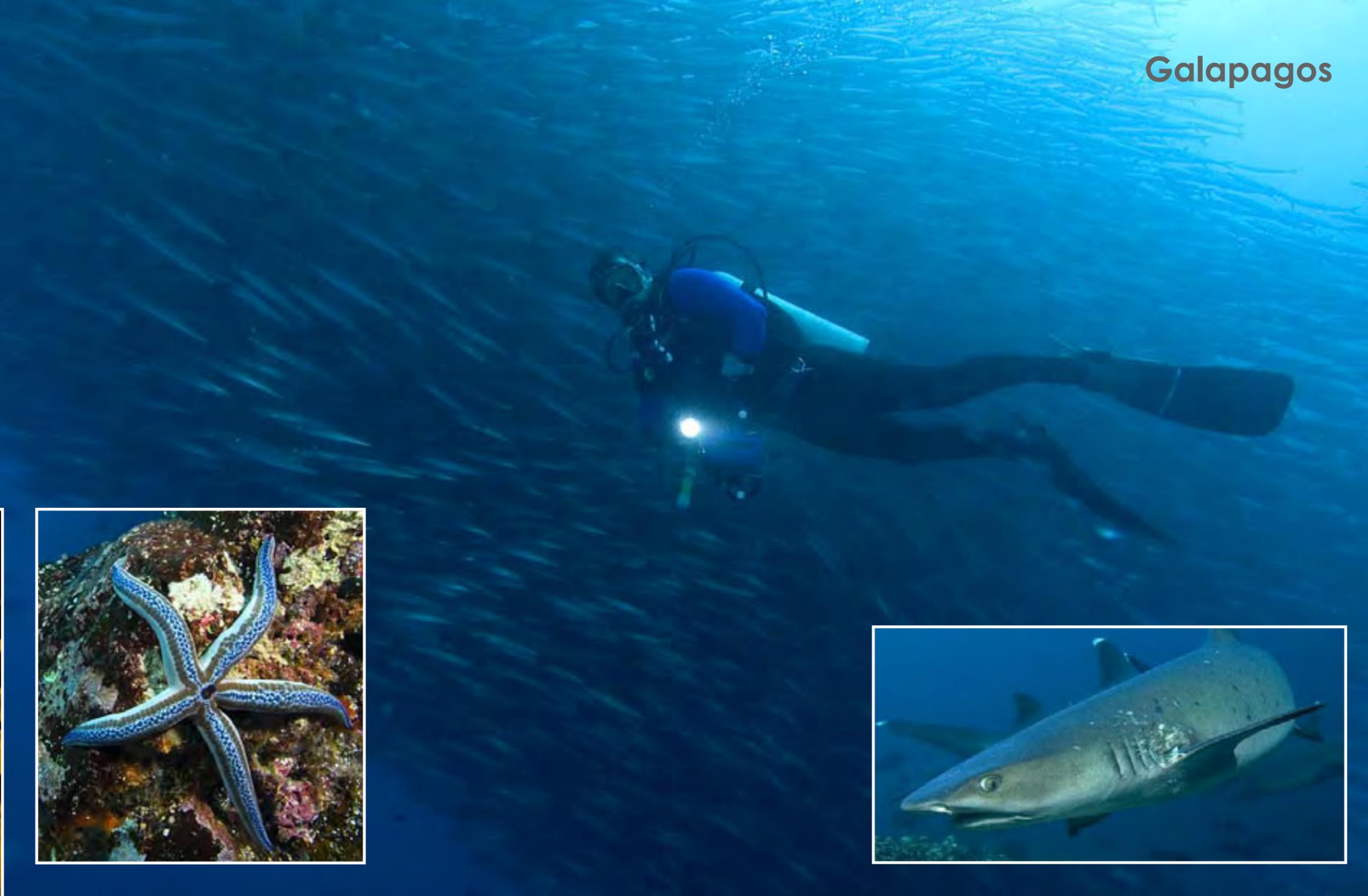
Towards the end of our itinerary, we

dived the eastern corner of Isabella, where we were on a quest for mantas. OK, I was on a quest for mantas. Early in the week some of the other divers were fortunate enough to see 4 mantas parading in single file while my viewfinder focused on a sea lion and Galapagos

sharks. So, it was my turn to see the mantas.

We encountered some soupy visibility while on Isabella and at some point commenced on a swim towards a large pinnacle in the hopes to find mantas or other pelagics swimming in the blue.

We continued on a bee-line towards the pinnacle, but found ourselves approaching it much more slowly than anticipated. As we drew nearer, the pinnacle began slowly moving away from us! What we had initially thought was a pinnacle turned out to be the largest





ABOVE: Marine Iguana, endemic to the Galapagos Islands. RIGHT: The beautiful highlands and volcanoes of mainland Ecuador. LEFT: The naturally sculpted and remote Darwin's Arch

school of Chevron Barracuda I have ever seen.

We slowly approach from in front and below. We see a mass of reflective scales and fins so dense that it blocked the sunlight from penetrating underneath. There must have been several hundred thousand fish tightly packed in this uniformly undulating and polarizing ball of life.

We each take turns immersing ourselves in the school, and then slowly retreating, overcome by the feeling of such a mass of life swirling around us.

Our last dive was at a site called Gordon Rocks, which are actually no ordinary rocks, rather the opposite sides of a once intact caldera, now home to fur seals and Galapagos sea lions.

The dive encompasses navigating the inner wall of one side of the caldera, and shooting through the channel to the other opposite caldera wall and completing the dive on the far outside wall. Exposed to the currents, Gordon Rocks also gets its share of pelagics, and we were happily shown off by a farewell procession of schooling cow nosed rays.

### Top side

Our land excursions took place on the islands of Bartolome, Santiago and Santa Cruz. The Galapagos are young, actively volcanic islands, and nowhere is that more evident than among the small calderas from the vents of shield volcanoes on Bartolome.

The hike to the top of the island provides some beautiful vistas of other nearby volcanic islands, submerged calderas just off shore, and picturesque beaches. Galapagos penguins and fur seals are among some of the species that call Bartolome home, but our itinerary did not include diving on this island.

The second land excursion on our week long journey was on the island of Santiago, home to hundreds if not thousands of marine iguanas, as well as a healthy community of sea lions. Sea lion pups just barely weeks old can be found in the warm tidal pools, with their mothers keeping a close eye from nearby. Marine iguanas fill their lungs with saltwater and submerge beneath the waves to feed on algae, emerging to congregate and warm up with others, group-snorting the excess salt out

of their nostrils.

Other than the constant reminders of the impact of tourism from the many other boats visiting the island, it was a privilege to be in the presence of nature at its rawest and purist. As divers, we are accustomed to having the utmost respect for the pristine environments that we visit. I often worry about tourists that are not accustomed to such self-regulated restraint to remove anything from or leave anything behind in such fragile environments. Only time will tell. The Galapagos National Park and the Charles Darwin Research Station have done a great job so far.

We spent the last night drying our wetsuits anchored off of Puerta Ayora on Santa Cruz. This is the central city of the Galapagos and home of the Charles Darwin Research Center, where we saw our only giant Galapagos tortoises of this itinerary.

I learned that there are actually seven distinct species of Galapagos tortoises. They are magnificent animals. Looking into a 120 year old pair of black eyes makes you wonder what events of natural or man-made history

Frog fish



this creature has witnessed and weathered on these islands.

Beyond tortoises, Puerto Ayora has a few bars and lounges and enough souvenir shops to rival some popular Caribbean destinations. In retrospect, that last afternoon and evening in Puerto Ayora was a good way of easing back into human society without too much of a shock after a week of living in one of the last frontiers.

**Revel in South American Culture**

A trip to the Galapagos is not complete without a visit to mainland Ecuador. If you allocate appropriate time you can hike Cotopaxie, an immense glacial volcano, or visit the Amazon rain forest. A quick one or two-day layover in the high altitude capital city of Quito gives you enough time to visit the Otovalo market, an indigenous market of local crafts and foods in the highlands. The scenic drive to the market provides views of large volcanoes and lakes. The history of geologic activity of the region is evident everywhere.

Of course, no trip is complete without stopping to straddle the equatorial line.

The theory is that on the equator, you can balance an egg on its bottom. Just to be sure, the display egg was nailed in place and very well balanced—so it must be true.

While in Quito, a must-visit is the historic district of Colonial Quito. Surrounded by over 30 colonial churches, the central plaza, complete with its cafes and shops, is still a step back in

time. The cobble stone streets and large gothic doors instill an authentic renaissance feel, a nice touch in the heart of the otherwise hectic capital city.

As demand for Galapagos tourism increases, supply is sure to follow. The islands still have a serious illegal fishing and shark finning problem. In other develop-

tourism and the fragile ecosystems that deserve vigilant conservation. Let's hope it remains this way.

Old salts always start every dive story with, "You should have seen [insert favorite dive destination here] 20 years ago...", I don't want that to be the first line of the Galapagos stories I tell my children and grand children one day.

You can help to support the Galapagos simply by diving there. Our support, our voices and our images all help to further shape the evolution of this iconic marvel as a sustainable eco-tourism destination, not a port for large cruise ships! ■



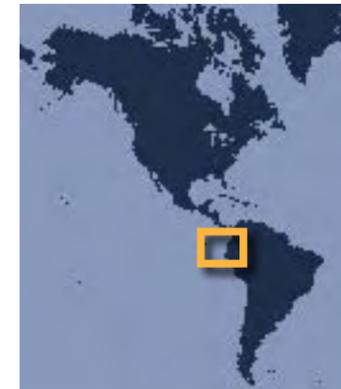
ing nations, tourism revenues have helped to offset the revenues and corruption of illegal fishing, but in the Galapagos it is not that straightforward. The government does plan on exponentially increasing tourism over the next decade, but must do so delicately as to not disrupt the ecosystem. To date, the National Park Service has done a great job of maintaining the delicate balance between growing

FAR LEFT: *Lammer Law* dive guide Robert Grimstone with a discarded long line hook on Wolf Island. INSET: Reference guidebook for Galapagos creatures. ABOVE: Colorful beans in the Otovalo market in the highlands of Ecuador. RIGHT & CENTER INSET: Dramatic Colonial Quito at night

# fact file



## Galapagos, Ecuador



**History** The Galapagos Islands are part of the country of Ecuador, which is located in Western South America, bordering the Pacific Ocean at the Equator, between Colombia and Peru. The region that now makes up Ecuador was once part of the northern Inca Empire. In 1533, the Spanish conquered the region. In 1563, the city of Quito became a seat of Spanish colonial government, and in 1717, became part of the Viceroyalty of New Granada. Independence was won by the territories of the Viceroyalty - New Granada (Colombia), Venezuela, and Quito - in 1819. They formed a federation known as Gran Colombia. In 1830, Quito withdrew and the traditional name was changed to the "Republic of the Equator." However, territories were lost between 1904 and 1942 in a series of conflicts with the country's neighbors. In 1995, a border war with Peru erupted, but was resolved in 1999. In 2004, Ecuador celebrated 25 years of civilian governance. However, political instability marred this period. No less than seven presidents governed Ecuador since 1996. Government: republic. Capital: Quito

**Geography** Ecuador encompasses coastal plain (costa), inter-Andean central highlands (sierra), and flat to rolling eastern jungle (oriente). Lowest point: Pacific Ocean 0 m. Highest point: Chim-

borazo 6,267 m. The highest active volcano in the world is Cotopaxi in the Andes.

**Climate** is tropical along coast and cooler inland at higher elevations; Tropical climate is found in Amazonian jungle lowlands

**Environmental issues** Ecuador experiences frequent earthquakes, landslides, volcanic activity, floods and periodic droughts.

**Economic** Petroleum resources have accounted for 40% of Ecuador's export earnings and one-third of central government budget revenues over the past few years. Thus, fluctuations in world market prices have a substantial impact domestically. Ecuador suffered its worst economic crisis in the late 1990s. In 1999, natural disasters and sharp declines in world petroleum prices drove Ecuador's economy into a tail spin. There was a contraction of more than 6% in real GDP. Poverty worsened significantly. In addition, the banking system collapsed, and later that year, the country defaulted on its external debt. In 1999, the currency depreciated by around 70%. Under the threat of hyperinflation, the MAHAUD government said it would switch the economy to the dollar. However, MAHAUD was ousted from office by a coup in January 2000. But the short-lived junta failed to obtain military support. Consequently, Vice President



Gustavo NOBOA became president, and in March 2000, structural reforms were approved by Congress that also provided the framework for the dollarizing the economy in Ecuador. This led to stabilization of the economy, and economic growth regained its pre-crisis levels in the following years. Ecuador's economy benefited from higher world petroleum prices in 2003-05 but reversed reforms led to the country's vulnerability to petroleum price swings and financial crises. Natural resources: petroleum, fish, timber, hydropower. Agricul-

ture: bananas, coffee, cocoa, rice, potatoes, manioc (tapioca), plantains, sugarcane; cattle, sheep, pigs, beef, pork, dairy products; balsa wood; fish, shrimp. Industries: petroleum, food processing, textiles, wood products, chemicals

**Population** 13,547,510 (July 2006 est.) Ethnic groups: mestizo (mixed Amerindian and white) 65%, Amerindian 25%, Spanish and others 7%, black 3%. Religions: Roman Catholic 95%, other religions 5%



Schooling fish make way for a dolphin hunting the fish for a meal

**Languages** Spanish (official), Amerindian languages (Quechua)

Galapagos, Ecuador  
Phone/Fax: +593 (52) 526 91

**Deco Chambers**  
SSS NETWORK / Galapagos  
Protesub S.A.  
Calle 18 de Febrero y General Rodriguez Lara  
Puerto Ayora, Santa Cruz

**Web sites**  
Ecuador Tourism Board  
[www.ecuadortouristboard.com](http://www.ecuadortouristboard.com)

# *Diving hot spots of* **Vancouver Island**



Text and photos by Barb Roy

**My dive buddy and I enter the cool clear water and descend down a mooring line to the deck of the 110-meter (366-ft) wreck Saskatchewan. The water is 8°C (47°F). I look up to see the rest of the group silhouetted in a light emerald hue arrive like slow motion skydivers. Visibility is at least 27 meters (90ft). My buddy and two others glide by on their scooters, anxious to explore the ships interior while I join underwater photographers equally as anxious to explore the wreck's exterior cloak of invertebrate life.**

Upon the railings and deck resides an outline of white plumose anemones, all varying in height. Small swimming scallops, curious juvenile rockfish, brit-

tle stars, decorator crabs and colourful nudibranchs seem to occupy the rest of the deck structures. Clusters of sponge, delicate feather stars and small orange anemones crowd any



vacant spots between giant lingcod and cabezon as the fish settle in on prime breeding grounds. As we proceed to the bow, the once battle-ready forward guns now lay dormant, softened over time by the duties of a sea life refuge. Even the wheelhouse wears a disguise of colourful critters. From there I am enthralled by the

sight of the mast and radar tower as I look up towards the surface. No straight lines can be found amongst the anemone camouflage. Although it is possible to see most of the ship on just one dive, two to three will permit a more detailed coverage. We ascend up the line, all pleased with our photographic treasures and exploratory jaunts, anxious to soon return.

British Columbia (BC) has always been known for its scenic beauty, powder ski slopes, and excellent restaurants, but most global visitors have no idea that this coastal Canadian province also has some of the best temperate scuba diving in the world! In fact, Vancouver Island boasts a cold-water paradise like no other, complete with unique underwater residents, nutrient rich currents and vibrant colors that will put most tropical reefs to shame. Of the many choice diving sites in British Columbia to choose from, I have selected four on the 460kilometer (286 miles) long Vancouver Island to cover for this story. These are by no means the only four on the island, just four that will

LEFT: Large fish-eating anemone. TOP: Kayaking in Rainy Bay. INSET: Bloodstar



Vancouver



Tower of the *Cape Breton* wreck



portray BC's incredible diversity.

When flying into this region there are three main airport terminals; Sea-Tac International in Seattle, Vancouver International on the BC mainland and Victoria International on Vancouver Island. Proof of citizenship is highly recommended when entering Canada. Many of the dive stores and operators offer travel packages, which include diving, accommodations, tanks and weights. Live-aboard dive boats commonly pick up in Vancouver, Nanaimo and Port Hardy. Rental dive gear is readily available throughout the island as well as specialized Nitrox, Trimix and Argon gas.

BC Ferries offer daily service from Tsawwassen or Horseshoe Bay on the mainland, across Georgia Strait to Duke Point or Departure Bay in Nanaimo, taking approximately two hours. When traveling at peak times, ferry reservations are a good bet and can be made on-line.

**Vancouver Island Travel Info**

- Tourism Vancouver Island  
[www.islands.bc.ca](http://www.islands.bc.ca)  
1-250-754-3500
- Tourism British Columbia  
[www.hellobc.com](http://www.hellobc.com)  
1-800-435-5622
- BC Ferries – [www.bcferries.com](http://www.bcferries.com)  
1-888-223-3779 or 250-386-3431

**Nanaimo**

I refer to Nanaimo as Vancouver Island's "front door" because it opens up to a variety of diving activities to suit anyone's needs. There are 8-12 excellent boat dives and several good shore dives to pick from.

Popular wrecks include the retired naval ships *Saskatchewan* (111m/366f) and *Cape Breton* (122m/400f) scuttled as artificial reefs in 1997 and 2001 by the local dive community and the Artificial Reef Society of British Columbia (ARSBC). The latest edition is a 47m/157ft North Sea Rescue Tug *Rivtow Lion* scuttled in 2005. Technical and extended



TOP: Glorious green anemones, Dodd Narrows  
BOTTOM: Dockside dining in Nanaimo



Divers explore the wreck of *Cape Breton*

RIGHT: Brittle star  
LOWER RIGHT: Diver  
and Wolf Eel

## Vancouver

range divers like to practice their skills in and on the two larger wrecks while photographers and naturalists enjoy them all. Maximum depth on the *Saskatchewan* is 36m/120ft, the *Cape Breton* – 43m/142ft and the *Rivtow Lion* – 24m/80ft.

If wall diving is your pleasure, huge deep walls can be found at Snake Island and Orlebar, on Gabriola Island. The Snake Island wall has enormous white plumose anemones cascading down sandstone formations, dotted with bright pink snakelock anemones, red blood stars and orange finger sponge. I have also seen wolf eels out in the open at 12m/40ft and clusters of cloud sponge at depth. In between dives, snorkeling with resident harbour seals is always an option. Orlebar is steeper, hosting an array of odd shaped chimney sponge (boot sponge), tiger and quillback rockfish and an assortment of crustaceans. This is also a shore-accessible site utilized by technical divers.

As for drift diving, there are two narrow passageways where the currents reach 8 knots at full flow. This in turn provides a nutrient-rich environment for a multitude of invertebrate life to flourish. Both are divisible during slack times (when the water stops to change direction). Dodd Narrows is located southeast of town between Nanaimo and Mudge Island.

Brilliant giant green anemones and aggregating green anemones with pink tips line the shore of Mudge in the shallows, along with yellow zoanthids, orange cup corals, and metridium anemones on the boulders below. Patches of orange colonial tunicates, burrowing sea cucumbers and several species of rockfish can also be found at depth.

Gabriola Passage is equally as picturesque, hosting a population array similar to Dodd. In addition I have found red sea urchins, gray encrusting lobed ascidians, cabezon fish, grunt sculpins hiding in empty giant barnacle shells and the ever brave little painted greenlings. Small healthy aquarium-like kelp forests are located at both ends of both channels.

When not diving, kayaking is one of the many fun activities to do. Kayak rentals and guided tours can be found in Nanaimo and on the artsy laid-back neighboring Gabriola Island (20-minute ferry ride from Nanaimo). Malaspina Galleries (sandstone overhangs) and the aboriginal petroglyphs on Gabriola is another attraction worthy



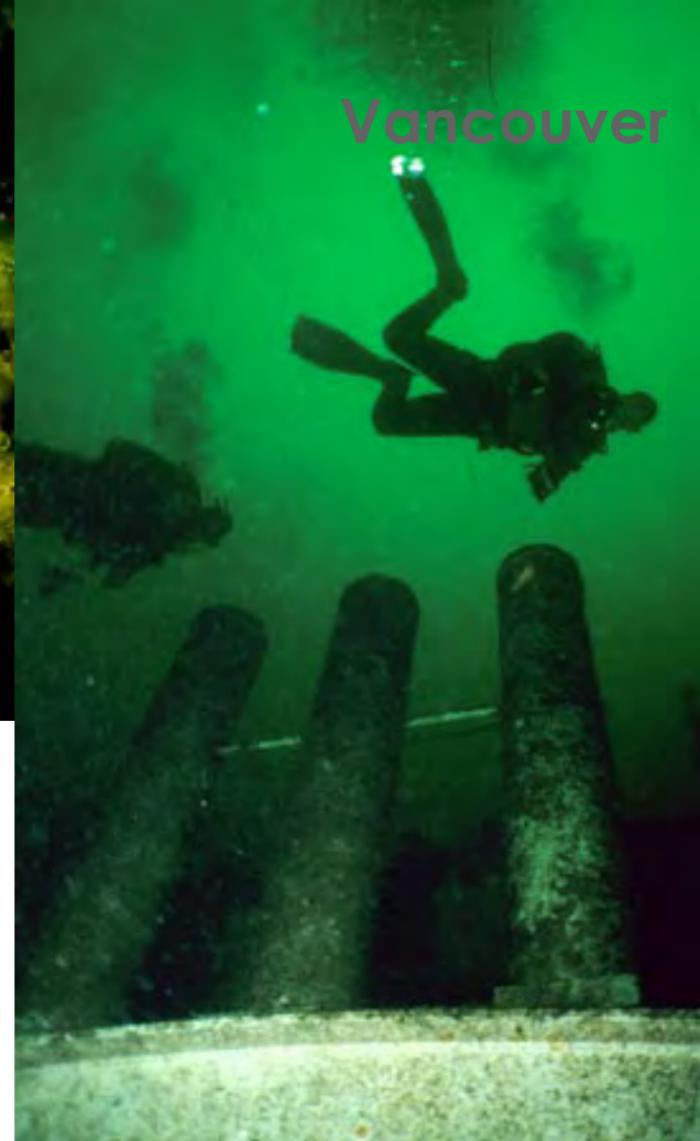
of a stop.

I wish to thank Ian Hall of Ocean Explorers Diving for taking us out on many memorable dive adventures during our Nanaimo visit!

### Travel Information Nanaimo

- Tourism Nanaimo  
[www.tourismnanaimo.com](http://www.tourismnanaimo.com)  
1-800-663-7337 or 250-756-0106
- Ocean Explorers Diving Ltd.  
[www.oceanexplorersdiving.com](http://www.oceanexplorersdiving.com)  
1-800-233-4145 or 250-753-2055
- Sundown Diving  
[www.sundowndiving.com](http://www.sundowndiving.com)  
1-888-773-3483 or 250-753-1880
- The Dive Outfitters Ltd.  
[www.thediveoutfitters.ca](http://www.thediveoutfitters.ca) 1-250-756-1863
- Divers Choice Charters  
[www.divingbccanada.com](http://www.divingbccanada.com)  
1-866-716-8867 or 250-716-8867
- The Buccaneer Inn  
[www.buccaneerinn.com](http://www.buccaneerinn.com)  
1-877-282-6337 or 250-753-1246
- Inn on Long Lake  
[www.longlakeinn.com](http://www.longlakeinn.com)  
1-800-565-1144 or 250-758-1144
- Long Lake B&B  
[www.lodgingnanaimo.com](http://www.lodgingnanaimo.com)





CLOCKWISE: Rockfish: Diver explores reef of strawberry anemone: Curious sea lion; Ling cod: Mortar guns of the *Columbia*

- 1-877-758-5010 or 250-758-5010
- Painted Turtle Guest House  
[www.paintedturtle.ca](http://www.paintedturtle.ca)  
1-866-309-4432 or 250-753-4432

### Campbell River

The community encompassing Campbell River stretches close to 24km (15 miles) along the mid-eastern coast of Vancouver Island north of Nanaimo. Quadra Island lies parallel to the town with the narrow current swept Discovery Passage in between. A majority of the diving is located within Discovery Passage along the Quadra Island side. Current slack times must always be followed and are well known by local dive charter operators.

In 1996, the ARSBC scuttled the retired 111m/366ft *Columbia* in northern Discovery Passage off Maud Island. The vessel is not as populated as the two in Nanaimo, but its six back mortar guns are very impressive. I have photographed three large giant Pacific octopuses next to the ship at 28m/95ft as two males courted a female. Around the corner is Seymour Narrows where whirlpools and standing waves form during full flow. For an underwater observer it is anemone heaven. Tan and yellow staghorn bryozoans, green urchins, China and quillback rockfish,

and orange tennis ball sponge are all over this rocky terrain.

Copper cliffs or bluffs are as interesting above water as below. Minerals seem to bleed through exposed top-side rock leaving it rippled in green. Below water is a colorful wall with ledges and huge algae covered boulders. Rose sea stars, juvenile box crabs, red Irish lords, and cup corals are just a few of the many residents. Massive clusters of giant purple-plumed feather duster tube worms can be found at Steep Island and a carpet of pink and red strawberry anemones are always a treat at Whiskey Point. On a single dive here I counted four large Puget Sound king crabs! End-of-the-road is similar, yet more of a nursery with young octopus and sculpins hiding amongst the blanket of invertebrates.

If weather permits, a day excursion south to Mitlenatch Island and the nearby wreck of the *Capilano* is well worth an extra day. Located on the south side of Grant Reef, between Savary and Harwood Islands, the 36m/120ft *Capilano* sits upright in 30-43 meters (100-145 feet) covered in a shroud of giant white plumose anemones. Here you will find lingcod, an assortment of gargantuan rockfish and bouquets of yellow and white cloud

sponge. The wreck's natural beauty creates exceptional video footage for documentation.

Another excellent site for diving and wildlife viewing is the semi-arid island of Mitlenatch. In Coast Salish language "Mitlenatch" means 'calm water all around'. On a sunny day in May the island's wildflower meadows explode in color. Due to the large number of nesting sea bird colonies Mitlenatch was designated a Provincial Nature Park in 1961.

Today, the island is home to the largest seabird colony in Georgia Strait, attracting Glaucous-winged gulls, pelagic cormorants, pigeon gillnetts and black oystercatchers. Otters, harbour seals, Steller's and California sea lions can be found lounging on smooth warm boulders along the eastern coast, with heavier concentrations occurring between November and May.

When not diving, visitors might want to check out a salmon snorkel float down the Campbell River during the annual salmon run in mid-July through early October.

I would like to extend a thank you to Earl Lowe with Abyssal Dive Charters for introducing us to some awesome dives!

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CLOCKWISE FROM LOWER LEFT: Red Irish Lord and nudibranch; Giant Pacific Octopus meets diver; Frosted nudibranch; Diver on *Saskatchewan*; Northern kelp crab



boat and trees above from 27m/90ft! Hordes of red, pink, and orange soft coral flourish at this site next to arm-length clusters of glove sponge, ruffled orange-peel nudibranchs

- 1-888-467-2822 or 250-287-9844
- DynaMike Charters  
[www.divedynamike.com](http://www.divedynamike.com)  
1-250-285-2891
- Paradise Found Adventure Tours  
[www.snorkelwithsalmon.com](http://www.snorkelwithsalmon.com)  
1-866-704-4611 or 250-287-2652
- Anchor Inn & Suites  
[www.anchorinn.ca](http://www.anchorinn.ca)  
1-800-663-7227 or 250-286-1131

### Port Hardy

This gateway to the Inside Passage and the Queen Charlotte Strait is located at the northern end of the Island Highway. Most of the diving in this area is done from live-aboard boats, land based resorts or remote lodges with small fast boats, departing from Port McNeill (south of town) or Port Hardy. Currents vary, allowing a wide selection of sites to choose from.

Perhaps the most famous site is the prolific Browning Wall, located in Browning Passage on the south eastern side of Nigei Island. Strong currents feed the multitudes of life so well it is rare to find an area void of life. During one of my winter visits, my buddy and I could see the



and white-spotted rose anemones. Macro photographers should keep an eye out for tiny white or yellow sea spi-

ders, found covering strands of sea strawberry soft coral.

Seven Tree Island also flanks Nigei and is another lush site where I have always had good luck finding the illusive decorated warbonnets, moshead warbonnets and an endless supply of rockfish. Barry Islet offers fields of miniature red, pink and white gorgonians, some even hosting small basket stars. Macro subjects at Dillon include purple-ringed topsnails, several species of nudibranchs and bright orange juvenile Puget Sound crabs. Larger subjects at Dillon include octopus, ancient-looking ratfish and friendly wolf eels.

On the north side of Crocker Rock, at the northern entrance to Browning Passage, the remains of the Themis can

### Travel Information:

- Campbell River Tourism  
[www.campbellrivertourism.com](http://www.campbellrivertourism.com)
- Tourism North Central Island  
[www.northcentralisland.com](http://www.northcentralisland.com)  
1-866-830-1113 or 250-830-0660
- Abyssal Dive Charters and Lodge  
[www.abysal.com](http://www.abysal.com)  
1-800-499-2297 or 250-285-2420
- Beaver Aquatics  
[baquatics@connected.bc.ca](mailto:baquatics@connected.bc.ca)  
1-250-287-7625
- Aqua Shack Diving Services Ltd.  
[www.aquashack.ca](http://www.aquashack.ca)



be found half in a forest of kelp and half covering a reef. At 12m/40ft the area clears somewhat, revealing weathered ribs and twisted sections of metal down to 21m/70ft. Although a bit unsightly, the distorted garble wears a colorful invertebrate cloak of textured life. Both harbour seals and sea lions have been sighted here. Keep an eye out for the bathtub!

Weather permitting, I have always enjoyed spending the day across the Strait exploring Slingsby Channel. Almost anywhere along the outer walls are excellent for photography or nature watching, above and below the water. Talk about seeing everything on a single dive, these walls deserve nothing less than a two-GB memory card with a macro or close-up lens!

Turret Rock (aka Tremble Rock) is another close site, in the middle of Nakwakto Rapids. Recorded at speeds of up to 22 knots, these fast-moving currents will take your breath away! Below the surface a diver will find huge clusters of unique Nakwakto goose-neck barnacles with 'red' lips and six-rayed white sea stars.

Large schools of Pacific white-sided dolphins tend to frequent the area around Nigei, presenting the opportunity for divers to see these fast moving critters in action. In mid-water when we have encountered them, they have always put on a spectacular show! Be sure to have a weighted reference line because they will spiral around

you, sending you deeper than planned. When not diving, kayak exploration in the calm bays and coves is both fun and easy. Paddlers have the opportunity to see black bears, orcas, porpoise, eagles, sea birds, otters, harbor seals and river otters.

I would like to thank John deBoeck of Browning Pass Hide Away on Nigei Island for sharing his area expertise and site knowledge. The orca rubbing beach was amazing!

#### Travel Information

- Port Hardy Visitor Info Centre  
[www.ph-chamber.bc.ca](http://www.ph-chamber.bc.ca)  
1-250-949-7622
- Port McNeill Visitor Info Centre  
[www.portmcneill.net](http://www.portmcneill.net)  
1-250-956-3131
- Browning Pass Hide Away (Nigei Island)  
[www.vancouverislanddive.com](http://www.vancouverislanddive.com)  
1-877-725-2835 or 250-753-3751
- North Island Dive & Charter  
[www.northislanddiver.com](http://www.northislanddiver.com)  
1-250-949-2664
- Sun Fun Divers (Port McNeill)  
[www.sunfundivers.com](http://www.sunfundivers.com)  
1-250-956-2243
- God's Pocket Diving Resort (Hurst Island)  
[www.godspocket.com](http://www.godspocket.com)  
1-888-534-8322 or 250-949-1755

Moshead  
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### Browning Pass HideAway Resort



[www.vancouverislanddive.com](http://www.vancouverislanddive.com)

Our trips will meet you in Port Hardy, transport you to Queen Charlotte Strait and the HideAway, provide comfy cottage accommodation with fireplaces, take you out on 3 (or more) great dives each day, and tempt you with our hearty home-style cuisine.

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ABOVE: Underwater photographer Roy Akeson on Browning Wall

LEFT: Black bear on beach next to lodge



Red-lipped Goose-necked barnacles



LEFT:  
Banfield

RIGHT:  
Kayaking  
in Barkley  
Sounds

INSET:  
Six gill shark



Diver and Wolf eel

### Barkley Sound

Located within the boundaries of the Pacific Rim National Park on the west coast of Vancouver Island, Barkley Sound has always been a favorite among divers. This unique wild coast wonderland is easily accessed by boat from Port Alberni, via the narrow 40km/25mi Alberni Inlet. An 89km/56mi gravel logging road from Port Alberni to Bamfield provides another access. Diving is available year-round from several operators offering both day and multi-day excursions. With over 100 islands in the Broken Group alone, it's easy to find a dive site even if the weather doesn't cooperate.

Chup Point is a favorite of mine for macro photography, night diving and being able to spot over five different species of rockfish on

a single dive! The depths vary from shallow to deep with little to no hint of currents. The colorful assortment of nudibranchs includes; yellow and white dorids, orange-peel nudibranchs, frosted and opalescent nudibranchs. Perhaps Renate's Reef should have been called "Wolf eel city" because of its numerous long gray residents of varying length and age. It's a rare occasion that I am not able to photograph at least five on a dive. Octopus, china and tiger rockfish and medium size lingcod also reside here.

Tyler rock is special because the first time I dove here I was greeted by eight six gill sharks, the largest one a female at over 3.6m/12ft! Waterfalls of white plumose anemones spill over steep slopes

beginning at the top of the reef. Ratfish, orange sea pens, octopus and sculpins can be found at 27m/90ft upon a sandy bottom within a valley separating two reefs. Unfortunately, recent sightings have not yielded as many, but other six gill sites are being discovered each year.

Although Barkley Sound has several shipwrecks to explore, there are two easily accessible ones: the *Vanlene* and an abandoned Chinese migrant ship scuttled as an artificial reef in 2003. Not much remains of the 142m/473ft freighter *Vanlene* since it went down in 1972 near Austin Island except sheets of mangled steel and knarled sections of hull structure. It too has broken apart from years of wild weather and storms.

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Toll free 1 877 777 9994 (USA & Canada)



Photo: J.P.Bresser



Vancouver

In the midst of this twisted turmoil, I have spotted adult Puget Sound king crab, multi-colored sunflower stars, rockfish, California sea cucumbers and abalone to photograph.

The *Vanlene's* bow can be found in the shallows as the rest of the ship seems to unfold down the bank like a broken puzzle to over 30m/100ft. The migrant ship is approximately 30m/100ft in length and sits upright with a maximum depth of 28m/95ft, near Canoe Island in Sechart Channel. The hull and wheelhouse are easy to explore, but we found most of the life growing on the outer hull and bow area.

When not diving, humpback and gray whale watching is superb during the warm summer months. Kayaking is another way to take in the areas magnificent scenery and wildlife.

I would like to thank Peter and Kathy from Rendezvous Dive Adventures for taking us out and letting us use their kayaks for a great photo shoot!

**Travel Information**

- Bamfield Chamber of Commerce [www.bamfieldchamber.com](http://www.bamfieldchamber.com) 1-250-728-3006
- Rendezvous Dive Adventures, Ltd. [www.rendezvousdiving.com](http://www.rendezvousdiving.com) 1-877-777-9994 or 250-753-5050

- Bamfield Dive Shed [www.dive-shed.com](http://www.dive-shed.com) 1-877-723-4837
- Broken Island Adventures, Ltd. [brokenislandadventures.com](http://brokenislandadventures.com) 1-888-728-6200 or 250-728-3500
- Six Gill Adventure Tours [www.sixgill.com](http://www.sixgill.com) 1-800-761-5661 or 250-720-7386
- Alberni Valley Divers [www.albernievalleydivers.com](http://www.albernievalleydivers.com) 1-250-720-1118
- Fat Salmon Backpackers (in Port Alberni) [www.fatsalmonbackpackers.com](http://www.fatsalmonbackpackers.com) 1-250-723-6924

Water temperature doesn't change much from one end of the island to the other, staying between 6-11°C (43-52°F) between November and April, increasing to 8-15°C (47-59°F) between May and October. This in turn requires a diver to wear full-body thermal protection in the form of a dry suit or a thick 6.5mm wetsuit.

Please remember, when visiting British Columbia, as with most prime dive destinations, the taking of marine life on dive trips is frowned upon and not permitted by most operators. Enjoy nature's cold water paradise as a respectful visitor,

because it will take you more than ten return trips to see a mere portion of British Columbia's underwater wonders. ■



CLOCKWISE: Reflections in Clam Cove; Bald eagle landing; Snake Island snorkling

LEFT: Resting at Abyssal Lodge





# fact file

## Vancouver Island British Columbia Canada



**History** Canada is a country of rich natural resources and vast distances. In 1867, Canada became a self-governing territory while retaining its relationship with the British crown. The country has developed economically and technologically in parallel with its southern neighbor along an unfortified border, the United States. After a decade of budget cuts, the country's greatest political issues are improving education and health care services. Recently, the issue of reconciling Quebec's francophone heritage with the rest of the country's population which is anglophone, has receded after a referendum held by the Quebec government failed to pass in 1995. Government: confederation with parliamentary democracy.

**Geography** Located on the northern half of the North American continent, Canada is bordered by three oceans: the North Atlantic Ocean on the east and the North Pacific Ocean on the west, as well as the Arctic Ocean to the north. After Russia, Canada is the second largest country in the world. It has a strategic position between Russia and the US on the north polar route; about 90% of Canadians are concentrated in the area within 160 km of the border with the US. Terrain: wide plains with mountains in the west and lowlands in the southeast; Natural resources: iron ore,

nickel, zinc, copper, gold, lead, molybdenum, potash, diamonds, silver, fish, timber, wildlife, coal, petroleum, natural gas, hydropower; Natural hazards: continuous permafrost in north is a serious obstacle to development; as a result of the mixing of air masses from the Arctic, Pacific, and North

American interior, cyclonic storms form east of the Rocky Mountains and produce most of the country's rain and snow east of the mountains.

**Economy** Canada closely resembles the US in its market-oriented economic system, pattern of production, and high living standards. It is an affluent, high-tech industrial society. Agriculture: wheat, barley, oilseed, tobacco, fruits, vegetables; dairy products; forest products; fish; Industries: transportation equipment, chemicals, processed and unprocessed minerals, food products; wood and paper

products; fish products, petroleum and natural gas.

**Climate** varies from temperate in the south to subarctic and arctic in the north

**Population** 32,507,874 (July 2004 est.) Ethnicity: British Isles origin 28%, French origin 23%, other European 15%, Amerindian 2%, other, mostly Asian, African, Arab 6%, mixed background 26%; Religions: Roman Catholic 46%, Protestant 36%, other 18%

**Currency** Canadian dollar (CAD)



ABOVE: Map of Canada  
LEFT: Map of Vancouver Island

Exchange rate: 1 CAD = \$ .82 USD / € .63 EURO

**Language** English 59.3% (official), French 23.2% (official), other 17.5%

### Web sites

- Vancouver Island Tourism [www.islands.bc.ca](http://www.islands.bc.ca)
- Vancouver Island & Victoria BC Tourism Travel Guide [www.vancouverisland.com](http://www.vancouverisland.com)
- Diving Vancouver Island [www.bcdiving.com](http://www.bcdiving.com)

### Dive Operators

- British Columbia Dive Guide [www.bcdiveguide.com](http://www.bcdiveguide.com)
- Dive charter operators and dive resorts in British Columbia [dive.bc.ca/links/charters.html](http://dive.bc.ca/links/charters.html)
- Ocean Explorers Diving [www.oceanexplorersdiving.com](http://www.oceanexplorersdiving.com)
- Abyssal Dive Charter & Lodge [www.abysal.com](http://www.abysal.com)
- Browning Pass Hideaway [www.vancouverislanddive.com](http://www.vancouverislanddive.com)

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**Nanaimo, British Columbia**  
[www.oceanexplorersdiving.com](http://www.oceanexplorersdiving.com)

Rendezvous Dive Adventures  
[www.rendezvousdiving.com](http://www.rendezvousdiving.com)

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Vancouver, BC, V5Z 4C2  
Information Line:  
1.866.884.0888 or 604.875.4252  
[www.vanhosp.bc.ca](http://www.vanhosp.bc.ca)