

T H E L A S T M I R A G E

# GAJIAPAAGOS

Isabela

> SEEN FROM SPACE, THE LARGEST ISLAND OF THE ARCHIPELAGO IS REMINISCENT OF A GIANT SEAHORSE FACING THE GREAT BLUE OF THE PACIFIC. AS YOU APPROACH LAND, THE CAP OF THIN WHITE CLOUDS DISSIPATES AND ISABELA ISLAND TRANSFORMS INTO A MAJESTIC LANDSCAPE.



Sealion chasing a school of black striped salemas.



Sunfish, Moon Is.

: PIERRE CONSTANT [www.calaolife.com](http://www.calaolife.com)

A perfectly aligned shield of volcanoes rising over 1,000 metres stretches southeast to northwest. Among them Wolf volcano peaks at 1,700 metres; crossed by the equator, it is the highest of the Galapagos group. Over the last 700,000 years Isabela's six volcanoes: Cerro Azul, Sierra Negra, Alcedo, Darwin, Wolf and Ecuador, have evolved into gigantic calderas. Following successive rise and fall of the magma, the rim of the volcanoes has collapsed into the crater. With a diameter exceeding 10 kilometres, Sierra Negra is by far the largest of the island's calderas. If the Galapagos are a renown 'hotspot' of the east Pacific, Isabela is the most active volcanic island, last erupting in 2005. An incandescent lava flow invaded the crater at sundown, a fascinating experience for the locals.

EMETEBE's Twin otter flies daily from Baltra to Puerto Villamil in 30 minutes. On descent, the small propeller airplane flies over '4 Hermanos', alias the four brothers. These tuff cones in a pale brick red colour have been eroded by wave action of both the South Equatorial and Cromwell Currents. Two of the islets are

moon crescents gaping southwards. Easily accessible by boat from Puerto Villamil, the '4 Hermanos' have several good dive sites.

On the port side, another huge crescent is fringed by a ring of white surf. Almost circular, Tortuga Is., also known as 'Brattle', is a seabird refuge for Nazca boobies, tropicbirds and greater frigatebirds which nest on the outer crater slopes. A stone's throw to the north, 'La Viuda' - the widow - juts out of the ocean like a grim rock finger pointing skywards, all that's left of a tuff cone totally destroyed by the elements. In its formidable solitude it is one of the best dive sites, only 20 minutes away from Puerto Villamil. A resting place for blue footed boobies, it always attracts a few sealions.

As the 'avioneta' does its final loop above Pto. Villamil Bay, the pastel green and emerald waters are fringed by black lava. Successive waves tear apart in snow white foam on the tormented coastline. A long sand beach stretches west towards the dark hills, once the site of an infamous penal colony (1946-59). An arid hostile landscape is covered in

'palo santos', Opuntia and candelabra cacti, and spiny shrubs. Everything here indicates extreme conditions contrary to the idyllic cliché of Isabela. Welcome to the 'Enchanted Islands', where the hidden side of paradise reminds you of the ruthless reality of a world apart and its fabled history.

**Isabela** Diving here is different to Santa Cruz or San Cristobal Islands. Isabela is the 'far west' of the archipelago in every sense of the word. The islets south of Pto. Villamil are at the crossroads of two major currents which meet each other head on. The South Equatorial Current (Humboldt current) moves east to west during the dry season aided by the southeast tradewinds blowing from May to December, bringing cool waters ranging from 18°C to 22°C.

Originating from the Central Pacific, the Cromwell Current flows along the equator from west to east at a depth of 300 metres with a core temperature of 13 degrees. It creates an upwelling on the west coast of Isabela and Fernandina, when nutrient rich deep waters come up to the surface, attracting a profusion of fish and gorgonians (66% of endemic



Left: Aerial view of the bay of Puerto Villamil, Isabela.  
Below: Galapagos "Doris sp." with orange spots, endemic, Tortuga Is.; Galapagos sheephead, Pyramid Is.; Pacific seahorse, Crescent Is.

species). As a result, the area is a playground for whales, mantas, and orcas.

The Cromwell Current sweeps the northern and southern tips of Isabela, meeting the South Equatorial Current in the centre of the archipelago, triggering another upwelling. This current brought the giant freshwater eel *Anguila marmorata*, that established itself in the Puerto Villamil lagoons.

Marine fauna found west of the archipelago includes unique species such as the harlequin wrasse *Bodianus eclancheri*, which displays a chromatic variation from orange to white and black. Discovered by Darwin in 1835, the Galapagos sheephead *Semicossyphus darwini* has a brown to purple colour with a yellow blotch on the sides. Deeper is the black and white spotted 'tigris' *Oplegnathus insignis*. Marlins, spadefish and sawfish are common pelagics. South Isabela is an important nesting ground for the Pacific green turtle in several lagoons and beaches.

**Los 4 Hermanos** These tuff cones have been eroded by wave action; three have been carved into moon crescents. It takes 45 minutes by *fibra* from Pto. Villamil. Pyramid Island is conical with two rocks emerging south, remnants of the original crater rim. A vertical wall on the outer slope is covered with brown gorgonians, yellow bushes of black coral, soft corals. At times, manta rays come to feed in the current.

On the west the crater rim heads north at a depth of 28 metres with a white sandy

bottom on the right hand side and a dropoff on the left. Marble rays are often at play. An old stem of black coral is covered by leopard anemones. Mixed schools of metallic grey Peruvian and Galapagos grunts (silvery with a yellow eye) roam the area. Turtles and sealions are active, and the GLPS blue porcupinefish is common. A school of diamond shaped steel pompanos with a swallowtail often engulfs the deco stop.

The two horns of Moon Island form a little bay and the western tip is washed by surf. Underwater, the site centres around a pinnacle with a whirlpool of life: blue and gold snappers, harlequin wrasse, spotted eagle rays, and a 25cm tall orange Pacific seahorse swims near the bottom. In the shallows under an overhang covered in light brown and purple gorgonians, 15 spiny lobsters lurked. Mouthwatering yes, but fishing on a scuba tank is strictly prohibited in the Galapagos! A nice photo will have to do.

In July 2001 I attempted a dive at Moon Island's east point. The ocean was choppy and the cape was clouded in bubbles. The current was strong, so I entered at a respectful distance. The vertical wall was etched by holes, home to sea urchins. The site was dotted with blue and red sponges, black coral, soft corals, gorgonians, and orange cup coral – ideal biota for blue-eyed damselfish, Cortez rainbow wrasse, large banded blenny, plus a few goby and octopus species.

Busy shooting a longnosed hawkfish in black coral, I suddenly sensed a



presence. Turning, I was shocked to see a two metre wide sunfish staring at me with a round black eye. Totally stunned, I stared back! It looked like a giant triggerfish with dorsal and anal fins in the vertical axis, moving sideways like a pendulum, like a big head without a tail. This deep water species belongs to the continental shelf in the 200 metres depth zone. It feeds on drifting benthic organisms, jellyfish, salp and ctenarians. Mola mola rise to around 20 metres to be cleaned by wrasses or even to the surface where seabirds also do the job. They prefer areas of upwelling and converging currents, as is also the case in Bali. Two sunfish species are found in the Galapagos, the other one being *Ranzania levis*. A new *Masturus* species was discovered in April 2008.

Below: Giant tortoises, at the breeding centre, Pto. Villamil.  
Bottom right: School of yellowfin surgeonfish, Tortuga Is.; Giant stingray, La Viuda.

When I dived Crescent Island, the third of the 4 Hermanos group I again encountered a sunfish at two metres. On the north of the biggest island is a long tunnel penetrating the volcanic tuff. The entrance cave is at 13 metres and the tube reaches a dead end after 70-80 metres. This shelters lobsters, stingrays and sealions at play. A gentle slope outside the cave has scattered boulders with Mexican hogfish, grey grunts, harlequin wrasse, King angelfish and seahorses. The underwater landscape is very colourful.

**La Viuda & Tortuga** From the sky, Tortuga's flooded crater is broken on most of its southern edge, with two small islets pounded by the surf. I flew over the island one clear morning in February 2006; the pilot did an ascendant spiral to give me 'a better view'. Tied by a rope around the waist in the luggage hold, I was taking pictures through the open hatch.

Northeast of Tortuga, La Viuda is barely seen at water level. The inconspicuous rock finger looks like a black thumb covered in bird shit. My favourite dive site, it is a true aquarium bathed by the northeast current. It is definitely not for novices and the dropoff plummets to 40m on the sandy crater floor. A unique Galapagos species is found here, the 'Blanquillo' or ocean whitefish *Caulolatilus princeps*. Squads of golden rays skim the bottom. Following the inner slope of the crater is a series of small pinnacles, alternating with passes where the current is felt. Clouds of fish move through, a school of barracudas, spotted eagle rays in formations. Sometimes eagle rays join

in. Other days, schools of tunas, yellowtail scads, Spanish mackerels show up; even Galapagos sharks and hammerheads can be seen! Closer to the rocks, yellowtail surgeonfish, King angelfish, barberfish, three-banded butterflyfish, humphead parrotfish, bacalao grouper and myriads of creolefish run. Various seastars species are found at La Viuda. If you're lucky, the carnivorous nudibranch *Roboastrea* sp. will reveal its black, yellow and blue stripes. This predates on the smaller *Tambja mullineri* nudibranch, striated black and turquoise blue, endemic to Galapagos.

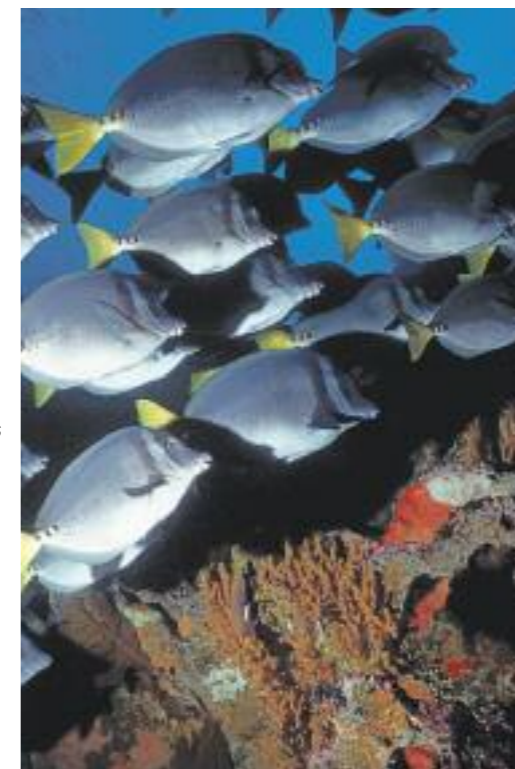
An easy shallow dive with no current is on the north coast of Tortuga. Gentle slope, volcanic sandy patches, in between ridges of tuff, small dropoffs and overhangs. The site is great for dive courses. Species include the Galapagos porgy, soldierfish and squirrelfish, guinea fowl puffer, soapfish, dusky chubs, scorpionfish and the charming Pacific snake eel *Ophichthys triserialis*, cream with rounded black spots, foraging in the rocks.

Stimulated by the steady current flowing south, Tortuga's east coast towards the point is more animated. The underwater scene is contrasting: canyons, pinnacles, small dropoffs and boulders and turtles, sea lions and stingrays are the norm. The particularity of the site is the great number of flat oval-shaped nudibranch, white-ish with orange spots and gills. This species of Galapagos doris is probably endemic and still unidentified. It prefers

cool waters, under the thermocline with temperatures of 12°C to 19°C and at an optimal depth of 25 metres. The Galapagos doris nestles into cavities carved by sea urchins on big boulders exposed to the current. Another species of nudibranch here is *Glossodoris dalli*. The large triton Panamic horse conch is also found on rocky substrates, with a red flesh dotted with blue. Some nice specimens of scallop hide under the overhangs. The southeast point ends abruptly with a sheer wall plunging vertically to 50 metres. Galapagos sharks and manta rays may surprise you here.

In March 2005 in the 'galapagenian' summer I dived the tip of El Triangulo, the islet south of Tortuga, exposed to the open ocean swell. I found an unusual species of flat oval nudibranch, the *Carolyn doris*, brown with white blotches. Another endemic! As we exited, my companion pointed towards the bay of the crater. "Over there, dolphins!", she shouted. But neither the back nor the very tall dorsal fin coincide with the norm. "Holly shit – these are orcas". Five killer whales frolicking in the bay is an opportunity not to be missed. "Wait for me!", I yelled. I signaled the boatman to stop the outboards, and I changed the macro lens for a wide angle.

Godfrey Merlen, a specialist of cetaceans and long time resident in Galapagos, did some research on these fascinating dolphins between 1992 and 1999. Statistics show that at least 135 sightings have been made, mostly while the orcas





'Tigris', Tortuga Is.

**BOOKS by Pierre Constant**

www.calaolife.com

- *The Galapagos Islands*, a natural history guide. (8th ed. 2009, Odyssey Publications, Hong Kong).
- *Marine Life of the Galapagos* - a diver's guide to the fishes, whales, dolphins, marine invertebrates. (3rd ed. Paris 2007).

were hunting at the surface. Common prey include sealions, sharks, mantas, hammerheads, stingrays, sunfish, turtles, dolphins, whales and sperm whales, you name it... A top predator, it is known as the hyena of the seas.

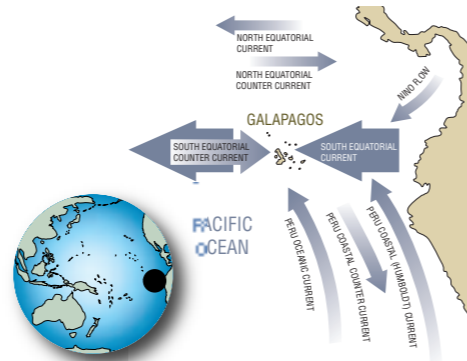
I gestured to the 'pangero' to move slowly towards the pod. One killer whale broke away from the group and came straight at the fibra. I slid into the water. The creature zoomed in on me like a torpedo. I framed it and fired the strobe at less than three metres. The beast turned slightly, overtook me and turned immediately for a better look. Pure adrenaline! The orca swept by again,



Bat eagle ray, La Viuda.



Galapagos blue porcupinefish, Tortuga Is.



flashing a white abdomen and eyeing me in a comic way. The coat of the orca is so silky it reflects the sunlight, creating an eerie blue aura... I shot various pictures in natural light, then surfaced, in total joy. Reassured, my friend joined me in the water and we freedived, as the dominant female passed underneath with a companion and a young calf cruising just in front of us. An awesome, unforgettable moment.

Life is simply here and now.

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**Silent Killers**



HOLLY LOHUIS

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

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

Jean-Michel Cousteau's report and some astounding images are on [www.oceanfutures.org](http://www.oceanfutures.org)



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