

THE WATCH MAGAZINE BY  
IWC SCHAFFHAUSEN — NO. 01/2014

# WATCH



THE AQUATIMER EDITION

DARWIN'S HERITAGE — THE GALÁPAGOS ISLANDS

NEW AQUATIMER COLLECTION — ENGINEERED FOR DIVERS

TROUBLEPROOF — IWC TEST LAB

10 EURO



# DRAGONLAND





FOR MORE THAN HALF A CENTURY, THE CHARLES DARWIN FOUNDATION  
HAS BEEN RESEARCHING THE FLORA AND FAUNA OF THE FAMOUS  
GALÁPAGOS ISLANDS AND ACTING AS ADVISER TO THE ECUADORIAN  
GOVERNMENT'S EFFORTS TO PRESERVE THIS UNIQUE, NATURAL  
PARADISE. NOTES FROM A VISIT TO THE GUARDIANS OF EVOLUTION.

TEXT: DIRK C. RHEKER   PHOTOS: MICHAEL MULLER





## “GALÁPAGOS EMBODIES THE PROMISE OF AN ALMOST MYTHICAL NATURAL STATE.”

CAROLINA GARCÍA PARRA

# T

————— The primeval dragon, shimmering with reddish glow, violently kicks his more than three-foot long body from side to side. Carolina García Parra and her assistant hold the huge saurian by its tail, press it down to the ground, and then swiftly grab the animal's neck — right where the back spurs emerge to form a stiff comb, which gives the creature a look like it starred in the dinosaur thriller, *Jurassic Park*. With a syringe, García Parra expertly extracts a few drops of blood and then releases the animal. The iguana scurries away, searching out safety behind the nearby black lava rocks. “We found several dead large marine iguanas here on Santa Cruz Island in the past week alone,” the veterinarian from the Charles Darwin Foundation says by way of explanation for her mission. “Now, in coordination with the Galápagos National Park's rangers, we're trying to find out what exactly caused the animals' deaths.”

An estimated 30 carcasses of marine iguanas were ultimately found in Las Palmas on Santa Cruz, later the mysterious disease spread to Tortuga Bay and even to the dock colony at the Charles Darwin Foundation. Then dozens of animals on Floreana were affected as well. Altogether, about 150 marine iguanas perished. In order to find out the cause of the epidemic, García Parra will send blood samples of the healthy male together with tissue samples of his dead brethren to a specialty lab at the University of Florida in Gainesville. “Peculiarly, all the dead individuals seemed to have been relatively well nourished and their stomachs were still full of green and red algae,” García Parra says with a hint of worry. Since all water samples came out clean, poisoning of the animals was ruled out. “Thank goodness we haven't found any dead animals so far on the islands of San Cristóbal and Plazas Sur,” García Parra utters with a sigh of relief.

Drama in the Garden of Eden? Investigations such as these are part and parcel of the daily routine of the young veterinarian from Barcelona who has been working on Galápagos for two and a half years now. In a joint effort with other renowned biologists, oceanographers, ornithologists and botanists at the Charles Darwin Foundation, Carolina García Parra applies her scientific competency to protect the Galápagos Islands. The organization was

founded in 1959 under the auspices of UNESCO and has extensively explored and researched the fragile biotope since then. The foundation also acts as the main authority advising the Ecuadorian government on the preservation of this breathtaking archipelago and world heritage site: a paradise of isolation.

From the moment we set foot on the islands, we were riveted by their unique and mysterious landscape: the jagged coasts with their black lava fields and the barren, scorched hillsides, where prickly cacti and sandalwood trees thrive almost miraculously. And also the green interior highlands, where the climate is moist and cool and a slight mist seemed to hover eternally over the lofty peaks. It was around five million years ago that these volcanic islands rose from the depths of the Pacific Ocean floor and therefore they have never been connected to the South American continent. The Galápagos' unique fauna made its way to the islands from the mainland across more than 600 miles of open water, mostly involuntarily. Arriving after the exhausting passage by air or cold ocean current, the creatures faced hard times among the rugged lava fields. Those who survived became specialists in adapting to the archipelago's unique environment, which at the same time is both breathtakingly beautiful and hostile to life.

The intricate ecosystem of plants and animals we see before us is unique on this world. “Three quarters of the animal species of the Galápagos islands are endemic,” says Swen Lorenz, the German-born director of the Charles Darwin Foundation. “The giant Galápagos tortoises, the Darwin finches and the marine iguanas — you will not find those anywhere else in the world.” But this paradise is endangered: by human development, by the importation of alien species, by overfishing, and by climate change. Quite likely the Galápagos would have long since lost its original character if the Charles Darwin Foundation hadn't taken on the fight to preserve the archipelago's unique ecosystem. Today more than 100 scientists, students and volunteers are constantly working on an awareness campaign, backed by scientific research that combines the islands' ecological and economic interests and — in a best-case scenario — even reconciles them.

Only a few years ago, the unique plant and animal world of the Galápagos was gravely threatened by a steady increase in tourism, with the related issues of garbage and sewage accumulation, oil accidents and imported bacteria pests and invasive species. The Ecuadorian government, under the relentless pressure of the Charles Darwin Foundation, finally started a campaign to save the islands. Illegal occupants, for example, were ordered back to the mainland. Access through tourism was severely regulated and a system was devised to help the islands' population



ness on the ongoing dangers and threats facing this unique Ark in the South Pacific (see interview).

Working at the research station is most certainly a dream job for veterinarian Carolina García Parra. "For every biologist, the Galápagos embody the promise of an almost mythical natural state so original that it can be found only in a few places on our planet," she says. Preserving this place means more than just saving a rocky archipelago somewhere far out in the middle of an ocean – it also has the symbolic character of proving the need for a gentler approach towards Mother Nature all over the world.

We return to the beach where the famous marine iguanas are slowly wending their way back to the water where they swiftly disappear to feed among the seaweed forests. The equatorial sun is burning hot among the black lava rocks. Hundreds of other iguanas are lying tightly packed on the cliffs, soaking up the rays. They look like miniature dragons. "Gremlins of darkness" the British scientist Darwin named them rather unsympathetically after

he first visited the Galápagos Islands in 1835 and started to develop his famous evolution theory. With their thorny, salt-encrusted heads and their spiky combs stretching from neck to tail, they are anything but cute. Add to that the powerful claws, widely spaced eyes, a bright red tongue which flashes each time they open their mouths to reveal rows of sharp, pointy teeth – and you get the primordial look of a creature left behind from the long-gone days of the earth's earliest history.

On the other hand, doesn't beauty lie in the eye of the beholder? When Carolina García Parra looks at "Amblyrhynchus cristatus," which is the iguana's scientific name, she sees it as part of the fascinating diversity of the Galápagos Islands, containing a sort of magic that can't be fully expressed in words. "You have to experience it yourself," the scientist from Spain tells us as we take our leave. "Each of the islands here is a like jewel, each shining brightly on its own accord and capable of holding you captive forever!"


Diving in the Galápagos is a magnificent experience with sightings of eagle rays, exotic reef fish or hammerhead sharks. So it is no surprise that this archipelago has been named one of the Seven Underwater Wonders of the World by amateur and professional divers alike.











**“CONTRARY TO ALL  
PROPHECIES OF DOOM, THE  
GALÁPAGOS ISLANDS  
ARE A HUGE SUCCESS STORY.”**

SWEN LORENZ

The legs of the Galápagos Green Sea Turtle are shaped like flippers to aid in swimming.



INTERVIEW — SWEN LORENZ

## “WE’RE NOT DONE YET”

**WATCH INTERNATIONAL: Mr. Lorenz, can the Galápagos Islands be saved?**

**SWEN LORENZ:** I firmly believe so! Contrary to all prophecies of doom, the archipelago really is a huge success story. During the past years and decades, the Ecuadorian government and the Galápagos National Park Service have jointly managed to create a growing awareness of the islands' unique value. With our ongoing scientific research, we at the Charles Darwin Foundation were hopefully able to make a modest contribution to this achievement. In addition, the restoration efforts include some very specific measures designed to restore the islands to their original state.

**For example?**

One thing is the extermination of the non-native rats on the islands, which have been threatening many endemic species. Our goal is to have all islands of the archipelago free of rats by 2020. Another example is the research effort by our botanists to find ways to stop the spread of invasive plant species like the blackberry. Or trying to figure out how to effectively deal with “*Philornis downsi*,” a fly species introduced via freighter whose larvae develop inside bird nests where they feed on the chicks' blood.

**But wouldn't you have to accept the very Darwinian fact that evolution also continues to be a natural part of the Galápagos Islands?**

No, because in fact the natural evolutionary process itself is massively under threat here. You see, we never before had a bird species go extinct on the Galápagos. But today, the very existence of *Philornis downsi* is threatening several bird species, among them several species of Darwin finches.



With great passion for both the flora and fauna of the Galápagos, German-born Swen Lorenz has headed the Charles Darwin Foundation since 2011.

**The battle against invasive plant and animal species is very expensive – where does the money to support all this work come from?**

Tourism remains an important source of income. Visitors will therefore continue to be welcome on the islands, as long as they leave nothing but footprints. We actually plan to make good use of the stream of visitors in the future. We're currently developing an app every visitor can download upon arrival which will then relay information back about what that person sees and experiences during their visit. It will give us an incredible wealth of data that would otherwise take us years to accumulate!

**People can now also take a virtual stroll across the islands with Google Street View and can even go diving off the coast.**

Yes, this was a cooperative effort between Google Maps, Catlin Seaview Survey and the Galápagos National Park Service that we initiated. The images were not taken from a car, but during a hike with the Street View Trekker, a camera backpack that allows a 360-degree view. Quite the gadget! And a great way to open up new avenues for catching the public's eye and thus making the world more aware of our fragile paradise.

be more self-sufficient. This allowed a drastic reduction of imported goods and therefore the danger of importing foreign animals or diseases along with them. In addition, the renewable energy supply based on solar and wind power received a large boost. As a result of these combined measures, the Galápagos Islands were taken off UNESCO's endangered “red list,” to which they had sadly been added in 2007. “Contrary to all prophecies of doom, the archipelago really is a success story,” Swen Lorenz declares.

IWC Schaffhausen joined the ranks of supporters and guardians of this ecological jewel in 2009 – the year the scientific world celebrated Charles Darwin's 200th birthday. “Without significant business support, our work would hardly be possible,” says Swen Lorenz. Nonetheless, the constant constraints of limited funding often force scientists to take a more creative approach. Today, Lorenz and his team are taking advantage of the Internet and modern communication technology to focus the world's aware-





(Above) The Galápagos marine iguana has the ability, unique among modern lizards, to live and forage in the sea. Adult males can dive over nine meter (30 ft) into the water. Its laterally flattened tail and spiky dorsal fins aid in propulsion, while its long, sharp claws allow it to hold onto rocks in strong currents. (Below) The Galápagos Islands consist of 18 main islands, three smaller islands and 107 rocks and islets.

