

Galápagos tortoises are spotted on Isabela Island. In some areas, human habitation has disrupted their migratory patterns

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By Adam Popescu

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pelago is a little world within itself," a young Charles Darwin mused in his London study in 1839. Four years earlier, the aspiring naturalist had spent five weeks on the Galápagos Islands, some 600 miles off the coast of Ecuador. So taken by the "extreme tameness" of the species he encountered, he wasn't an ideal visitor by today's standards: He hopped on the backs of giant tortoises and "pushed a hawk off the branch of a tree" with the muzzle of a gun.

These days, that "little world"

is brand-name nature, drawing an increasing number of visitors from around the world to see, among other creatures, bluefooted boobies, marine iguanas that swim alongside equatorial penguins and the giant tortoises for which the islands are named. In 2017, 241,800 people visited the islands, according to the Observatorio de Turismo de Galápagos, up from 173,419 a decade earlier.

Much of the growth - more than 90 percent from 2007 to 2016 - is from land-based tourism: visitors who fly into airports on the islands of Baltra and San Cristóbal, check into hotels and take a la carte tours that are considerably cheaper than the expensive cruises that traditionally are how most visitors have seen the islands. With round-trip flights from Quito costing as little as \$400 or so, and hostel accommodations starting at \$20 a night, the Galápagos Islands are no longer just for upscale travelers.

For the Galápagos National Park, which uses a portion of the \$100 fee that visitors are required to pay (\$6 for Ecuadoreans) to oversee the 97 percent of the islands that hasn't been settled by humans, land-based tourism offers much-needed funds. But that doesn't mean conservation groups - including UNESCO, which lists tourism growth as one of the primary threats to the islands - aren't alarmed by the lack of an enforced cap on landbased visitors. (Cruise passengers, on the other hand, are limited by the space available on expedition ships; last year, there were some 70 ships with room for about 1,700 passengers.) More

people on the islands means more pressure on existing infrastructure, encroachment on animal habitats, and a heightened risk of introducing invasive plant and animal species.

"It is simply not sustainable to have never-ending growth in land-based tourism in this fragile environment," said Jim Lutz, president of the International Galápagos Tour Operators Association, who expressed the same sentiment in a letter to Ecuador's tourism minister last February.

On a recent visit to the islands, I observed land-based tourism in action, and spoke to naturalists, guides and others about the effects of the travel boom, which, along with climate change, illegal – and legal – fishing and other threats, make the Galápagos a microcosm of conservation's modern challenges.

ON THE GROUND

Along with more visitors, the islands' permanent population (now about 30,000) has also swelled. About half of those residents – many from mainland Ecuador, were drawn here by the tourism business – are in Puerto Ayora, on the island of Santa Cruz.

In some ways, the town seems like any other tropical locale, with coffee shops, cafes and stores selling T-shirts; there is even a bit of a party scene when the sun goes down.

On an overcast Friday night in Puerto Ayora, I sat with Ulf Torsten Hardter, an environmental manager turned guide, on the patio of OMG Galápagos, a cafe with a life-size statue of Darwin sporting a Santa Claus-like beard, popular with the selfie set.

"The problem is that the islands lack basic infrastructure like waste, energy, water," Hardter said over an iguana-branded IPA. As we talked, the misty rain called garúa started, and one of Darwin's finches scavenged from my unfinished plate.

Hardter, who is originally from

Germany, came to the islands in 2006 to build a solid waste recycling center with the World Wildlife Fund. Today that center processes all of Santa Cruz's plastic and organic waste. With the influx of so many people, more environmentally responsible ways of dealing with everything from long-term waste disposal to drinking water are needed, Hardter said.

Later, I strolled past a fish market where a 16-foot marlin dangled from a hook, and sea lions, pelicans and frigate birds nudged iPhone-wielding tourists. A relative lack of predators and a curious public have made these animals fearless - and bold. More than once I saw someone get too close to a sea lion, which barked in displeasure – even, in one case, chasing a couple of tourists away. (In the national park itself, visitors are told to stay 6 feet away from the animals. Those rules, I was told, are routinely ignored, and my own observations bore this out.)

Not far from the market, Avenida Baltra is lined with mom-andpop stalls serving ceviche and marinero soup, and kiosks where tour operators hawk day trips geared to cost-conscious visitors. Most of these advertised ecofriendly specials; just how ecofriendly is difficult to verify.

Sometimes, these options are, by their very nature, the least impactful. You can visit highland jungle trails, coffee plantations or the twin volcano craters called Los Gemelos, all just outside town. Prices range from a few dollars for a cab ride to a couple of hundred for a day on the ocean in an outboard motor boat or small yacht. Or you can rent a bike for about \$15 and explore a paved road that cuts through a semiarid landscape to forest. A few miles away in the sleepy town of Bellavista, off a dirt road on a private farm, there are lava tunnels sculpted by years of magma flow. White pickups double as taxis and charge a dollar to take

you anywhere in town, even for DIY jaunts.

I went on one of those jaunts, getting dropped off at the edge of town where Avenida Baltra heads uphill and into the highlands. I was in search of tortoises, but instead I saw yapping dogs and fences protecting corn and cattle, all of which disrupt migratory routes of the tortoises. Hours later, tired and wet, I boarded a bus for 50 cents. Staring out the window, I finally saw giant tortoises on the side of the road – I lost count after a dozen – many

Galápagos continues on Z8 being fed by tourists (another thing that is discouraged, but nearly impossible to enforce).

WHERE YOU SLEEP

Where you spend the night is another indicator of change and the stratified options offered to visitors. Though the Observatorio de Turismo de Galápagos claims there are currently limitations on the number and size of new hotels, accommodations have increased dramatically over the last decade - from 65 to more than 300 - with prices running from backpacker rates to more than \$900 a night. I stayed in a standard room at the Ikala, an affordable lodging just a few steps from Puerto Ayora's marina. Many hotels have ecofriendly features, or at least claim to. At the Ikala, solar panels heat the showers and light the garden.

Across the bay, one of the island's oldest hotels (and most costly – a suite recently ran about \$800 a night) is Finch Bay, which feels like a slice of Malibu and takes its eco-friendly services seriously. An on-site treatment plant desalinates brackish seawater, a greenhouse supplies the kitchen, and all fish is bought from locals. In 1989, Finch Bay's parent company helped establish the recyclingcenter project Hardter worked on years later.

Renato Vasconez, quality

manager at Finch Bay, said that all the hotel's wastewater is treated before it is released. A new filtration system will boost production when completed later this year (the hotel already provides potable water to neighboring properties that the municipality cannot reach).

Finch Bay's adjacent beach is white sand, but that's only because staff clean it every day. "You can't imagine how much trash we find," Vasconez said. "The microplastic is the worst." Beaches on the Galápagos are public, and the masses litter, he said (and, indeed, I saw bits of green plastic that looked like kelp). Vasconez told me that he regularly found dead frigate birds wrapped in fishing nets. "It's something that gets me very angry," he said.

ON THE WATER

A boat is needed to get to nearby islands, so even land tourists may end up spending time on an expedition vessel operated by Lindblad or Quasar Expeditions. They aren't cheap - a week can run several thousand dollars - but the advantage is that you get the expertise of top naturalists employed by the cruise lines. Providers like Quasar are also plastic-free and support the national park and organizations like the Charles Darwin Foundation and the Galápagos Scouts, organizations whose researchers work to preserve the species that attract foreigners. Lindblad sponsors similar work, something smaller operators can't afford. Lindblad, Quasar and other expedition cruises, are typically allinclusive. Last-minute deals run as much as 30 percent off.

I decided to splurge on a Quasar cruise, which departed from Baltra and took me and about 30 passengers to several islands over the course of a week. Alex Cox, a veteran Galápagos-born guide with nearly three decades of experience and an encyclopedic love for nature, pointed out volcanoes and blue-footed boobies, and expounded on the complexity of the Galápagos every morning over a mug of hot water with lemon.

On a blustery morning, Cox and I were snorkeling off the islet of Genovesa. Something darted through my legs and I surfaced with an uncontrollable laugh: It was a sea lion. Bobbing at the surface, I noticed three fishing boats with gear I later learned was illegal. Although it is legal for these fisherman to catch tuna and other fish in much of the Galápagos Marine Reserve, Cox told me that the type of lines the fishermen were using could accidentally snag and harm or kill sea lions, sharks and turtles. Later, Sofia Darquea, president of the Galápagos Naturalist Guides Association, told me about the dangers of illegal fishing practices. If the marine life goes, she said, so go the birds and reptiles, and so, too, the tourists. "The national park doesn't have enough working boats to monitor what's going on here," she said.

The fact that only a fraction of the marine reserve – the waters surrounding the national park – are off-limits to fishing, had to be the most confusing thing I heard during my visit. I knew that the government faced pressure from local fishermen, and that there had been incidents of violence in the past. But shouldn't all of this land – and the surrounding sea – be off-limits? Wouldn't that protect this place for years to come?

"These marine populations are being depleted," Enric Sala, a National Geographic explorerin-residence, said. "If Ecuador wants the Galápagos to continue to be a unique place that attracts visitors from all around the world, and brings in hundreds of millions of dollars every year and supports tens of thousands of people, then they have to make a decision. Otherwise, the Galápagos risks going from being a unique place to being a very common place like so many others that have been destroyed through short-term interests."



A lizard crawls over marine iguanas off Fernandina Island.



Adam Popescu / New York Times

Tourists walk among sleeping sea lions on a beach in Galápagos National Park. Visitors are asked to stay 6 feet away from animals, but the request is often ignored.



Josh Haner / New York Times

Sally lightfoot crabs scamper on Fernandina Island.