

GALÁPAGOS'S green evolution

Jon Stibbs finds sustainable and mass models of tourism vying for survival among the boobies and sea lions

A cruise yacht sails through the waters around the Galápagos Islands. About 190,000 tourists visit the archipelago every year, putting pressure on its endemic species and isolated ecosystems

Welcome to paradise!' says Ivan Lopez, our ebullient guide, as he greets the latest arrivals to the Galápagos Islands. The sense of excitement among my fellow visitors is palpable; for even the most jaundiced traveller, the islands made famous by Charles Darwin hold a unique appeal.

Since peeping out above the surface of the Pacific Ocean about five million years ago, the Galápagos Islands have been colonised by a limited number of animals and plants, which have since been free to evolve in glorious isolation, thanks to the distance from the mainland – about 1,000 kilometres. It was into this crucible of life that Darwin stepped some 175 years ago, and thanks to the insights he gained there into the mechanisms that power evolution, the islands have taken on a mystique and a lure that time has yet to dim.

But unfortunately, that lure looks increasingly to be the archipelago's undoing, and the challenge for Darwin's Eden is to retain its innocence in the face of the tempting apple of mass tourism.

RISING INFLUX

When tourism began to take off in the Galápagos during the 1980s, it drove up local salaries, which led to immigration from the mainland. Between 1992 and 2007, tourism expanded by 14 per cent per year, leading to a concomitant

growth in the island's population. Figures collected by the Charles Darwin Centre suggest that the number of beds rose from 40,000 in 1990 to more than 145,000 in 2006. Today, about 190,000 people visit the island every year.

According to Dr Christophe Grenier, social science project manager of the Charles Darwin Foundation, the Ecuadorian government's entire model of attracting ever-larger numbers of visitors is to blame. 'The way we're doing tourism is wrong, and the main cause of degradation of the environment and

'The inward flow of people requires transport, which brings invasive species, ending the ecological isolation'

society,' he says. 'The tradition of growing tourism can only be bad.'

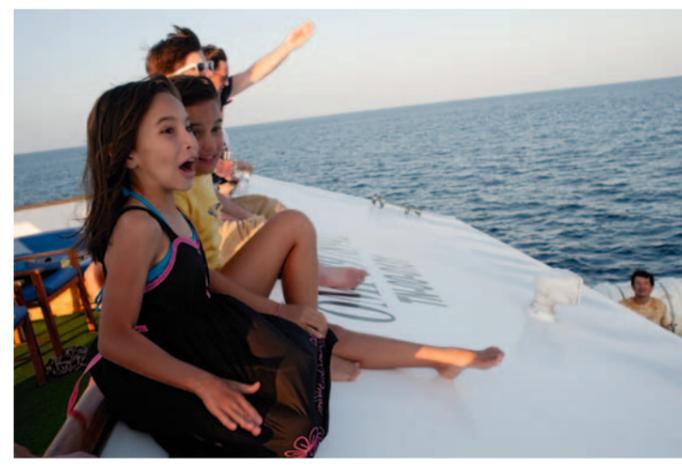
However, despite the influx of both tourists and those chasing the tourist dollar, it's generally agreed that the real threat to the islands comes from elsewhere. 'Individual tourists aren't the problem,' says biologist and long-term resident Godfrey Merlen. 'It's the foreign animals and insects that are destroying the islands.'

'The inward flow of people requires transport, which brings invasive species, ending the ecological isolation,' Grenier explains. 'Tourism is driving this geographical opening.'

The good news is that 95 per cent of the archipelago's native species remain intact today; the bad news is that among the animal species, of those that remain, seven per cent are critically endangered, nine per cent are endangered and 23 per cent are considered to be vulnerable – and the figures for the plants are even worse. The islands' isolation, which has led to high levels of endemism, also makes the native species vulnerable to new arrivals, as they have evolved in a world with little predation or competition.

The list of species that have been introduced to the Galápagos is long and depressing. There are now some 750 introduced plant species on the islands, nearly 90 per cent of which were brought deliberately by humans for agricultural and ornamental purposes. About 543 alien insect species, more than a quarter of the total insect fauna, have been registered in the Galápagos, most having arrived in shipments of lumber, fruits and vegetables, and other organic material. Those that pose the most serious threats to the Galápagos's ecosystems include two fire ant species, two wasp species and a parasitic fly that feeds on nestling birds.

However, the most destructive imports are the vertebrates, 36 species of which have been introduced, with 30 of them becoming established. Of these, the most devastating have been the goats, rats, cats, pigs, and dogs.



ABOVE, FROM LEFT TO RIGHT: cruise guests kit up on a Galápagos beach to go snorkelling. The Pacific waters around the archipelago harbour a rich diversity of wildlife, including bottlenose dolphins, eagle rays and several species of shark; a Galápagos sea lion and a ten-year-old tourist have a curious encounter in Gardner Bay in Isla Española (also known as Hood Island); from her vantage point on the sun deck of the *Letty* cruise yacht, a young girl spots a manta ray leaping from the water; **RIGHT:** a moulting marine iguana basks in the sun on the shores of Isla Fernandina, the westernmost island in the archipelago. The species is endemic to the Galápagos Islands



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Such was the severity of the threats to the islands and their original inhabitants that in 2007, much to the embarrassment of the Ecuadorian government, UNESCO declared the Galápagos a World Heritage site at risk.

Given the Galápagos's prominent position in the pantheon of nature destinations, it's little wonder that many local tourism operations have taken notice of the islands' changing fortunes and are keen to stress their green credentials. But many are cynical about the authenticity of those credentials. As Merlen says: 'What's green about it, the tourism or the greenbacks?'

CRUISE CONTROL

There's no doubt that tourism poses a threat to the Galápagos on several fronts, but there are many who still believe that it can also be the tool we need to save them from ourselves. Indeed, Cristian Cavicchiolo, a Galápagos-based sustainable development expert, is 'firmly convinced that tourism is the key for supporting ecosystems in the Galápagos'.

All visitors to the Galápagos National Park and/or the Galápagos Marine Reserve must now pay a US\$100 entrance fee, 45 per cent of which goes to the marine and national park, where it funds a process of introduced-species eradication, monitoring and research across the islands.

Meanwhile, guides such as Ivan act as the eyes and ears of the marine reserve and national park authorities, ensuring that the rules are adhered to and reporting on wildlife sightings



RIGHT: passengers from the *Letty* jump into the Pacific Ocean from the yacht; **BELOW:** a view of Kicker Rock near San Cristobal Island. Known in Spanish as León Dormido (Sleeping Lion), these two basalt formations tower 150 metres above the sea and are separated by a narrow navigable channel; **FOLLOWING PAGE:** a Sally Lightfoot crab



and activity. He and his sister Karina work for Ecoventura, a cruise company that began offering tours in the Galápagos in 1991.

Their first job upon boarding the 20-berth *Flamingo* is to check the boat's permits and that the itinerary matches that laid out by the national park authorities. The park monitors the operators, ensuring that they limit pollution and meet their environmental requirements. In order to avoid overcrowding at popular sites, the authorities decide where each boat visits and when.

Ecoventura is typical of the new 'greener' Galápagos tour operators. It

