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DESIGNING DARWIN INTELLIGENTLY



by C. Flisi

If you are an animal lover, the Galapagos Islands, 600 miles off the coast of Ecuador, are heaven on earth. You can have a close encounter — on land or in the water — with wildlife that exists nowhere else on our planet. All the reptiles, half of the plants

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and 40 percent of the birds seen in the Galapagos are unique to this 13-island archipelago.

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Pass within 50 feet of waved albatrosses sitting on their nests, swim with Galapagos turtles and sharks, witness sea lions mating on the beach (completely oblivious to your presence), stand a yard or two from shiny red and green Christmas lizards defending their territory, and watch the world's smallest penguins dive next to your boat.

You observe these wonders under the watchful eye of a local guide who works for Ecuador's National Park Service. The park (encompassing 97 percent of the total land area of the islands) was established in 1959, and in 1961 the Charles Darwin Research Station was created on the island of Santa Cruz (the second largest island in the archipelago). The Research Station trains the

guides who work for the Park Service, who in turn educate the 150,000-some tourists who visit the islands each year.

Whether or not you tour the Charles Darwin Research Station, or visit some of the projects being financed by the Charles Darwin Foundation, or pick up a t-shirt with the stolid likeness of Darwin staring back at you, you will hear the name “Charles Darwin” dozens if not hundreds of times during your stay in the Galapagos. As any biology student knows, Charles Darwin, author of “On the Origin of Species” and “The Descent of Man”, spent five years circling the globe on the surveying vessel, the HMS Beagle, including five seminal weeks around these islands. Although his books were published decades after his visit, the impact of some of the animal adaptations he observed, such as

the beaks of finches, can be directly traced to his Galapagos experience.

Every single mention of Darwin in the Galapagos — signposts, speeches, guides, displays, books — takes evolution for granted as a scientific reality. Not once is “intelligent design” offered as a viable alternative, in spite of the fact that 95 percent of Ecuador’s 13 million-plus population is Roman Catholic.

Your initial exposure to this point of view is at the Interpretation Center on San Cristobal Island, for many tourists their first introduction to the islands. Various displays describe the volcanic origins of the archipelago around four million years ago, a process that is still continuing. Evidence of the islands’ age and ongoing (excuse the term) evolution is so self-evident that the creators of the

Interpretation Center never thought to suggest any alternative explanation.

{By contrast, a book that claims the Grand Canyon was created by Noah's Flood is being sold in Yellowstone National Park in the U.S. Called "Grand Canyon: A Different View," by Tom Vail, the book's sales were temporarily blocked by the park's superintendent a few years ago, but he was overruled by the National Park Service, which has subsequently ignored protests from Park geologists and the presidents of seven scientific societies. So much for the separation of religion and public administration in the world's mightiest — but scientifically suspect — economy}.

There IS one nod to religion at the Galapagos Interpretation Center. "Darwin questioned divine creation, commonly

accepted at the time,” says one exhibit. In fact Darwin had considered becoming a clergyman before he settled on biology, and had married his first cousin Emma Wedgwood, a woman of strong traditional religious beliefs.

Partly for these reasons, he waited 22 years before publishing “The Origin of Species”. He realized that his work would challenge conventional religious tenets, including the accepted chronological age of the earth popularized by 17th century Irish bishop James Ussher. “As far as I know everyone has yet thought that six thousand odd years {the chronology calculated by Ussher} has been about the right period,” he wrote in a letter to his sister in 1836, “but Sir John Herschel {a noted geologist of the period} thinks that a far greater number must have passed.”

The different islands of the Galapagos reflect different passages of time — certainly more than 6,000 years! — though you need to be trained in geology or have an able guide to note the telltale signs. For example, Fernandina is the youngest island in the archipelago and one of the world's youngest volcanoes (it last erupted in May, 2005). It is the home of endemic flightless cormorants, Galapagos penguins and hawks. (“Endemic” means a species that developed in the islands and is found nowhere else.) Española, the oldest island, is the only place where waved albatrosses can be found.

Floreana Island is host to a colony of flamingos that differ subtly from their mainland South American counterparts, reflecting their adaptation to the island environment. Genovesa Island is home to a panoply of birds: frigates, swallow-tailed gulls, red-footed boobies, and

lava gulls and herons. It took thousands of years for some of these species to evolve, and the process continues:

contemporary biologists Peter and Rosemary Grant have been able to document natural selection based on the feeding habits of Darwin's finches over three decades on the Galapagos island of Daphne Major.

Eventually Darwin became an agnostic. A University of Missouri/Kansas City Law School analysis of Darwin claims he "referred to himself as 'the Devil's Chaplain' and complained that publishing the theory felt 'like confessing a murder.' He knew especially well how his ideas troubled his pious wife. "

Natives of the Galapagos and mainland Ecuador don't have to be as troubled as the biologist whose work they honor at every opportunity. The Catholic

Church has made it easier for them. In 1996, Pope John Paul II officially declared, in a message to the Pontifical Academy of Sciences, “New knowledge has led to the recognition of the theory of evolution as more than a hypothesis. It is indeed remarkable that this theory has been progressively accepted by researchers.”

The key to reconciliation is distinguishing between two different questions: HOW life evolves, as illustrated so clearly and dramatically in the Galapagos, and WHY it evolves, which is not the realm of science at all. Stephen Jay Gould, noted American geologist, argued in 1987 that the mistake is to equate evolution with “the search for life’s origins,” rather than the process by which “life changes after it originates.”

For the average Ecuadorian, as

for the average North American, these distinctions may be hard to grasp. Take the experience of “Lucilla”, a lay teacher of religion at a school in Quito, Ecuador’s capital (public schools offer a non-compulsory period of religion each week). She was teaching Bible stories in more or less traditional fashion, while evolution was being taught in science classes. “My students were asking me, ‘How did our South American condor fly to Palestine, or wherever it was supposed to fly to, to be on Noah’s Ark? It can’t fly that far. If Adam and Eve’s only children were Cain and Abel, then who married them? Where did THEIR children come from? Did they sleep with their mother?’” she recalls.

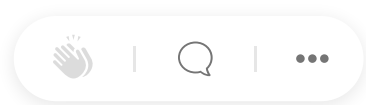
She and her colleagues decided to reconcile Darwin and religion by teaching the Bible as parable — stories meant to illustrate

human foibles but not meant to be accepted as literal truth. This appeased the students but initially incurred the wrath of their more traditional parents. “I had to meet with the parents three times,” she recalls, “so I tapped the authority of a respected priest-professor to add weight to my explanations.”

Pope John Paul recognized this kind of dilemma when, in 1996, he acknowledged the “apparent contradictions” between science and religion. He urged that a resolution be found because “truth cannot contradict truth.”

In the Galapagos, it doesn't.

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