

BY TERENCE LOOSE ///  
PHOTO BY RALPH PALUMBO

# PARADISE WITH A PURPOSE

**FORMER UCI PROFESSOR HANA AYALA ENVISIONS A WORLD WHERE GOING ON VACATION COULD MAKE YOU SMARTER, FUND SCIENTIFIC RESEARCH, AND PROMOTE CONSERVATION. OH, AND YES, THERE WILL BE MAI TAIS AND SPA TREATMENTS.**

**W**hat if when you went on vacation, you not only reclined on the beach with a Mai Tai and pampered yourself with a hot stone massage, but also learned about coral reef formations or collected data alongside scientists studying ancient civilizations? What if when you paid your bill at checkout, you were helping to fund vital scientific research, protect habitats, and contribute to the greater knowledge of mankind? What if the nation of Panama was as important, wealthy, and powerful as the United States? Or the docile island nation of Fiji was an economic superpower?

Sounds ridiculous? Well, not in the world of Dr. Hana Ayala, a former UCI faculty member and the founder of Pangea World, a corporation dedicated to uniting the resort industry with scientific research and conservation. She believes the resort business and science make perfect partners, and in countries that are currently no more than impoverished postcards of paradise, Ayala sees the raw assets to make them major players in the 21st century knowledge economy.

No, they aren't sitting on vast fields of untapped oil, or stashes of diamonds, or even piles of precious metals. Instead, they are spots in the world that have been blessed with something Ayala believes is much more valuable to the future of our planet and our species. Something she calls banks of "knowledge minerals." These are the natural wonders that scientists study to promote our understanding of the world—and which



*Hana Ayala at the Irvine home she shares with husband Francisco Ayala, an esteemed UCI professor*



**"I AM SENDING A MESSAGE. THAT IN THIS CENTURY OF KNOWLEDGE ECONOMIES, CONSERVATION AND SCIENCE SHOULD BE ELEVATED TO ECONOMIC FORCES."**

CLOCKWISE FROM TOP: Ayala honored by Masaryk University, in the Czech Republic, "In recognition and appreciation of extraordinary merits in advancing science, culture, and art" ↔ Ayala in Fiji, with Ambassador Winston Thompson and Dr. Michael T. Clegg ↔ an aerial shot of a typical luxury resort in Fiji ↔ Hana Ayala ↔ Ayala and German investor Claus Mittermayer

lead to everything from developing new medicines to tracking climate change to, yes, discovering that supreme facial rub.

To mine these knowledge minerals, or more to the point, to help the people of those nations and the world benefit from what they have to offer, Ayala has established Pangea World, a for-profit corporation that hopes to transform the way we humans go about conservation and scientific research. She wants to take those endeavors and make them attractive to business, producing wealth for nations and industries, while producing and promoting knowledge and protecting environments. To do it, she says that the luxury resort industry is the perfect vehicle since it could provide a worldwide network of low-impact, high-profit locations that could double as vacation spots as well as integrated research facilities.

Ayala says that a main problem with the current research and "knowledge mineral mining" model is that scientific research and conservation are mostly thought of as donation-dependent, or nonprofit activities. In a world focused on profits, that's a major headwind. It's also why she created Pangea World as a for-profit corporation, despite many of her peers questioning the move.

"I am sending a message. That in this century of knowledge economies, also called the century of biology, conservation and science should be elevated to economic forces," she says. Make that major economic forces. It's a model she says she's been working toward her entire life.

In fact, she first became intrigued by geography when she was about eight years old, living in landlocked Czechoslovakia. Her room, she says, was more like a

cartographer's loft than a little girl's haven. Maps and globes replaced dolls and games.

"My little bed was always surrounded with maps of the world. I was looking for linkages and relationships. I looked at the world very much as one entity," says Ayala.

**ISLANDS OF KNOWLEDGE**

But as much as she loved imagining herself visiting all parts of the world—interacting with cultures, conducting scientific research, discovering new species—she knew that was going to be challenging given her small, remote native country and little-known language. So, from an early age she took languages—French, English, Spanish, Latin, Russian—and studied the natural sciences. Her emphasis became landscape ecology, or what we would call cultural geography, studying the interaction between society and environment over hundreds, even thousands, of years. It was the perfect subject for a budding scientist who also yearned to travel and interact with different cultures.

"You had to study enough environmental science, ecology and biology to understand the natural part, but you also studied economics,

social sciences, and art to understand the other part of the interaction," she says.

But even before this, as a little girl staring at her big maps, she had become fascinated with two parts of the world: Fiji and Panama. Though they were merely places on a map, and Ayala had never even swum in an ocean, she felt they had an unparalleled richness, a natural "heritage bank" of "knowledge assets," as she labels them today. She saw these two places as special in the history of the world.

"Fiji, a nation made up of 350 islands, has myriad island types, ecologies, geological formations, fossil records, an unparalleled amount of geology and coral reefs formed over millions of years...what a remarkable heritage bank," she says, as excited as that schoolgirl who stared at the map above her bed, unable to get to sleep from the wonder of it all.

"And in Panama I saw a fascinating geological wonderland. An isthmus that divides oceans and unites continents, that is literally packed with marine fossils that chronicle this vast archipelago into the present day isthmus of Panama, creating a passage for these plants and animals to intermingle among the Americas," she continues.

With time and research, she validated her theories that these two nations indeed were richer than most of the nations of the world with "opulent heritage banks and evolutionary theaters." That is, their opportunities in the way of scientific research and knowledge attainment were priceless.

With time, however, she also realized that the knowledge mankind could derive from this natural history was untapped. And worse, the potential financial boom these riches could deliver was being missed by the nations themselves; their citizens were still very poor. In fact, as time went by, Ayala came to the somewhat disheartening conclusion that many countries with some of the most culturally and evolutionarily rich landscapes were also some of the world's poorest.

But, she says, in the emerging knowledge economy this doesn't have to be so.

She began to wonder what industry could best serve as a conduit to bring these knowledge riches to the world. Which industry would, essentially, be okay with passing on the knowledge, scientific and otherwise, to the world free of charge. More than that, which industry would benefit from passing on that knowledge? And the one she came up with surprised even her: the international resort industry.

Far grander than a world filled with simple and separate eco-resorts, Ayala's IQ Resorts would be places where knowledge and scientific research was not just passed on to the traveler, but it was mined by both the traveler and teams of scientific researchers. So, in essence, each IQ Resort would double as a scientific research base.

"If we had such a matrix of scientific scenes, it would create a unique foundation on which tourism, conservation, and research could grow together," she says. This became her TCR model, which stands for Tourism for Conservation through Science. "This," she adds, "could become truly a catalyst of turning each of those nations into an unparalleled highly competitive destination, not only for tourism, but also for many other sectors of the economy."

In essence, she saw that the resort industry was the one industry that was supremely positioned to become a partner to science-based research. And ironically, an industry that is normally thought of as intruding on nature and counter to the conservation movement could become their biggest fundraiser. That's because Ayala believes a partnering of resort and scientific research would captivate international travelers



## IS IT A TROPICAL RESORT OR A SCIENTIFIC RESEARCH STATION? DOES THE ANSWER MATTER?

This is when she founded Pangea World, which hopes to bring a matrix of high-end resorts across the globe that not only pamper and educate travelers, but make scientific research and conservation profitable. In essence, to bring a noble purpose to world travel.

And after years of ups and downs, in 2010, German investor Claus Mittermayer agreed to offer up his three tropical islands for the first IQ Resort. Ironically, they are Panamanian islands—Islas Bayoneta, Canas, and Caida—which lie in Panama’s pristine Pearl Archipelago. They, says Ayala, are the perfect test subjects for her grand vision. The islands have great scenic beauty, are completely undeveloped, boast 50 pristine beaches, include scientifically significant rainforests, and are surrounded with marine life, including one of the world’s largest turtle nesting grounds.

And already there has been scientifically significant research done as a result of the partnership. A team led by Anthony Coates, a senior scientist emeritus at the Smithsonian Institute in Washington D.C., performed a preliminary survey of the islands for the planning of the resort and discovered subspecies of birds not previously known to inhabit them.

Further, scientists from the Smithsonian have agreed to perform research on the island. So, if all goes as planned, someday soon, while you lap in the luxury of a world-class spa, your kids could be knee-deep in pristine tropical water alongside Smithsonian scientists helping to gather data.

Is it a tropical resort or a scientific research station? Does the answer matter? The real point is that conservation and scientific research would actually drive the luxury-tourism business model, generating income for local populations, preserving habitats, and adding to the scientific knowledge of the world. The luxury travel business would generate enough income to fund research and give resorts profits.

“These places would address scientific questions and studies that are beyond the current research because they are too expensive to pursue. This model makes them possible,” says Ayala.

That’s a vacation to write home about. ♦

who are increasingly interested in environmental learning. Thus, conservation would become profitable, not something looking for a handout.

“This business strategy generates robust incentives for investment—not donations—into training, development of scientific infrastructure, such as research stations, and conservation across vast land and marine habitats possessing untapped economic worth in the potential scientific knowledge they contain,” says Ayala.

Not surprisingly, the governments of Fiji and Panama embraced the idea, and for years, Ayala worked with their leaders, along with representatives from the National Academy of Sciences, UNESCO, the Smithsonian, and others, to bring her vision to fruition. In Panama, there was a presidential decree making this model the official model for the country, and many of the South Pacific island nations came on board as well.

### RESORTS AND RESEARCH

But some things never change, even in the knowledge economy, and instability and political change got in the way. “In Fiji, several political upheavals in the government took place, which set back the work. In Panama, elections took place, governments changed and with that the entire project froze. I started to be concerned about protecting the integrity of the project,” she says.

This was the 1990s, and by 2001, Ayala had another great epiphany about her project. It was an insight that harkened back to that little girl trying to find relationships in the different colored places on the map. “I became convinced that we cannot continue using a nation’s borders as a boundary for the economic model opportunity. This only scratches the surface. Because the natural world is not structured around political boundaries. The evolutionary and ecological fabric transcends them,” she says, speaking like the scientist that she is.

TOP TO BOTTOM: Hana Ayala unveiling the Pangea World-UNESCO Pacific Partnership Agreement, at the Arnold and Mabel Beckman Center of the National Academies of Sciences and Engineering in Irvine → children on a Fijian beach