



BACK TO THE GARDEN

***Lessons in sustainability:
Agriculture meets conservation in Central America***

by Kenn Kaufman

Our first night at the farm in Nicaragua, I dreamed about the Garden of Eden.

We were staying in a small cabin deep in the woods at Gaia Estate, a shade-coffee farm in the foothills south of Managua. The cabin was not truly isolated: the farm's assistant manager lived with her family in a house only half a mile away, and her security-guard husband would be out patrolling the farm on horseback several times during the night. But from out in front of the cabin we could see no lights except the brilliant stars overhead, hear no sounds except the occasional deep barks of mottled owls and the rushing, restless wind in the treetops.

We should have been tired enough to sleep soundly. Kimberly and I had arrived in the country just the night before. After sleeping a few hours in Managua we had had a day of intense focus: our first introduction to the cities and countryside of this Central American nation; a quick tour throughout Gaia Estate with its owners, Jefferson and Gabriela; learning a thousand details about coffee farming from our hosts, and from Bob and Carmen, visiting coffee experts from the USA. At the end of the day, we should have been tired enough to sleep through the night. But the gusting wind awakened me repeatedly, and each time I fell asleep again I fell into dreams about the Garden of Eden —or about my childhood impressions of what that garden stood for.

When I was about 11 years old, already a rabid young birder, I was hitting the library to read everything I could about nature.

During that same period, my parents were still insisting that I go to Sunday School. Our teacher had a particular fascination with the book of Genesis; when she talked about the Garden of Eden I was only half-listening, and the other half of my mind was putting my own spin on the story. Other kids in class might be snickering at the thought of Adam and Eve running around the garden naked, but my focus was elsewhere. I was wondering what habitat prevailed in the garden, what birds lived there, what a perfect ecosystem it might have been before humans figured out how to mess things up.

I had already joined the Audubon Society and had begun receiving their magazine. My first issues of Audubon came as a shock: until I read them, I had known nothing of threats to the environment. Now I read about forests being clear-cut, pollution turning rivers into dead zones, poisons driving species toward extinction. All of these man-made threats were alarming to an 11-year-old with no power to do anything about them. So when the Sunday School teacher spoke of the Garden of Eden, I imagined a time when the earth was still unblemished, when humans lived in harmony with nature.

As a teenager, I continued reading and thinking about this. It was obvious that humankind as a whole would never return to a primeval state of wearing fig leaves and living simply off the land. But it was also obvious that we could not go on living as if there were no tomorrow. The history of western civilization was a history of using

things up: chop down the forest until it's gone, then move on. Hunt the buffalo until they disappear, then move on. Dig up the coal and burn it, pump the oil and burn it... Inevitably, we would run out of things. There had to be some middle ground between going back to the Garden of Eden and pushing forward to consume the last of the planet's resources.

The concept that I was groping toward, as a puzzled young man, was an idea that hadn't become a buzzword yet: sustainability. Humankind had to find resources that were renewable, practices that could be sustained, if we were to have a long-term future.

Flash forward a long, long way, to January 2011. Our trip to Nicaragua was built around a mission that had sustainability at its core. Kimberly and I were going to survey the birdlife on a coffee farm to see if it did, in fact, merit its designation as "Bird Friendly."

I have written about shade coffee before, but the basics are worth repeating. Coffee originally came from Ethiopia, where it grew as a shrub or small tree in the undergrowth of mountain forest. Brought to the Americas in the 1700s, it eventually became one of the most important cash crops in Latin America. Millions of acres were converted from forest to coffee farms. But this conversion to agriculture was not a total disaster for birdlife, because most of that coffee continued to be grown in the traditional way, in the shade. Often the farmers left the canopy and subcanopy of native trees in place. As a result, coffee farms often looked almost like native forest, with the understory partly replaced by coffee bushes. These rustic or traditional coffee farms provided habitat for a wide variety of bird species, supporting a level of bird diversity almost like that of natural forest.

Unfortunately, a major movement began about 40 years ago to convert shade coffee farms to sun coffee. The forest cover was cut down, and the existing coffee plants were replaced with a variety that would grow in full sun – as long as enough fertilizers, pesticides, and other chemicals were used on it. Sun coffee wasn't as

healthy for the local farm workers and it didn't have the same rich flavor, but it could be produced in mass quantities, producing larger profits for the biggest landowners and factory farms. In just a couple of decades, more than two million acres of shade coffee in northern Latin America were converted to sun coffee.

This loss of habitat was particularly hard on long-distance migrants, birds that nest in Canada and the U.S. and winter in the tropics. But this effect did not go unnoticed. Ornithologists from North America carried out research in several areas, documenting the value of shade coffee to bird populations. By the mid-1990s, the word was out that people who cared about birds should be seeking out shade-grown coffee.

And there the matter stood, a decade later: the word was out, but it wasn't having much effect. Many avid birders remained mostly unaware of the issue, even as some opportunistic companies began slapping "shade grown" labels on coffee that really wasn't. Scientists from the Smithsonian Migratory Bird Center had developed criteria for the growing conditions that equaled "Bird Friendly" coffee, but the scientists were having limited success in selling the idea either to growers or to the public. And in the meantime, wintering habitat for birds continue to dwindle.

It was against that backdrop that I got involved with Bill Wilson and his coffee company, Birds & Beans. Bill was determined to make a difference. Through Birds & Beans, he would promote and sell only coffee that had been certified as Bird Friendly by the Smithsonian, and he would somehow bring the birders on board to support this good cause. And unlike the rest of my bird-crazed friends, Bill actually had enough business experience and marketing savvy to make something happen. I signed on enthusiastically as an advisor for this new coffee brand.

And just the year before, Bill Wilson had located two people who shared his combination of idealism and practical experience: Jefferson and Gabriela, owners of the coffee farm at Gaia. Jefferson had come to Nicaragua from the U.S. as an idealistic student and had stayed, shuttling

to other underdeveloped nations and back, using his technical knowledge to help poor people learn to help themselves. His wife Gabriela was from Nicaragua originally, but had earned a master's degree in international development and had worked in Europe before returning to her native country. Both were keenly interested in sustainable agriculture, and they had bought their farm—where coffee had been grown in the shade for almost a century—to put these ideas into action. Their farm had just become the first in the region to gain the Smithsonian's certification as Bird Friendly.

That was why Kimberly and I had come here, on a trip hastily arranged just weeks before, to make a quick survey of the winter birds of their farm. Bob and Carmen Garver, from the coffee roaster Wicked Joe, had come here to look at the farm from their angle of expertise.

Throughout our first day, touring the area with Jefferson and Gabriela and the Garvers, we had marveled at the effort and care that went into growing this coffee. Every one of the 50,000 coffee bushes on the farm was tended by hand. Everything was organic – they even made their own fertilizer from the pulp of coffee berries and manure from their own farm animals. Jefferson seemed to pay as much attention to the trees providing the shade as he did to the coffee bushes themselves, strategically planting new native trees to keep the cycle of shade unbroken.

We were there during the harvest, and teams of local people were moving quietly



measuring the day's coffee harvest

and methodically through the farm, picking only the ripest coffee berries. Others were engaged in cleaning, extracting, sorting, and drying the coffee beans, processes that could last for days; the high-quality beans that made it into the final product would have been examined a dozen times by skilled workers. All the people working here were from the immediate area, so the farm was helping to support the local community. Everything about Gaia Estate spoke to the principles of sustainability.

But as fascinated as I was by the integrity of the effort, in the back of my mind was the question: Okay, but what about the birds?

The Smithsonian certification as Bird Friendly was based on complex standards of tree diversity, shade, and other factors, so the presence of birds was assumed, but Kimberly and I had come to see exactly which birds were using the property. No two spots in Latin America have exactly the same birdlife. For birders buying coffee from Birds & Beans, we needed to be able to tell that side of the story. And as the sun set on our first day, as an unseasonable wind swept through the trees, we still had not really surveyed much of the farm for birds.

So all that night, in fitful sleep, I dreamed of the Garden of Eden—and around midnight, I realized why: it was because of the name of the farm. The Gaia Hypothesis was the concept that Earth itself is alive, a living system composed of land and water and air and all creatures inhabiting this vital planet. Gaia was the goddess of Mother

Earth in Greek mythology, perhaps not so far from the Eden story in Genesis; my subconscious mind was putting them together in my sleep, and tying them up with the promise that birdlife would respond to this offering of shade-coffee habitat. At dawn, I felt as restless as the wind. I had to get outdoors to see if the promise held true.

In the dim light, Kimberly and I worked our way down the slope behind the cabin, between orderly rows of coffee bushes, scanning the trees overhead. Gusts of wind still shook the branches, and birds were quiet, but then Kimberly pointed to a straggling

flock of birds flying in to land: slim and graceful, with streaming tail feathers, they were all scissor-tailed flycatchers! Then a dozen shorter-tailed birds landed in the same treetop: western kingbirds. These were both species that I had known as a kid in Kansas, but here they were on their wintering grounds, a thousand miles south of their nearest breeding range. As we watched, we realized that the scissor-tails and the kingbirds were feeding on small fruits in the treetops. As the morning went on we would see dozens of scissor-tails and kingbirds throughout the farm, all feeding on wild fruits.



Rose-breasted Grosbeak

But at this moment we were distracted by a chattering behind us, and we turned to see seven or eight Baltimore orioles foraging in another tree. More birds were flying into the tree, and we thought they were more orioles at first, but then we realized that they were western tanagers. These were all migrants from far to the north. It seemed odd to see orioles that might have come from the woods of Maine, and tanagers that might have come from the mountains of California, foraging side by side in Nicaragua —along with the blue-gray tanagers, a local tropical species, that were now moving into the same tree.

The rest of our morning went that way, as Kimberly and I trekked through the coffee zones of Gaia Estate, being surprised by birds at every turn. We would be watching yellow warblers flitting among the leaves, just as we might have seen them during spring migration in Ohio, and suddenly they would be joined by a raucous flock of gaudy, tropical magpie-jays. We would be watching a rose-breasted grosbeak, a familiar bird

from home, and then start hearing the harsh cries of white-fronted parrots behind us. Everywhere was a song and a celebration, a mix of migratory birds from the north — warblers, vireos, flycatchers, thrushes — and tropical birds such as motmots, parakeets, and toucans. By the time we had to leave, a couple of days later, we could say with confidence that the term “Bird Friendly” was no exaggeration. And yet this was a working farm, producing a valuable crop, contributing to the economy, providing good income for local people, and doing so in a way that could be sustained for generations.

I’m not under the illusion that one little piece of the system can save the world. But I do believe that genuine shade coffee—not semi-shade or fake shade, but the real thing, certified as Bird Friendly by the Smithsonian Migratory Bird Center—is a step in the right direction. Consumers drive the market; if every coffee-drinking bird watcher would demand Bird Friendly coffee, it would require thousands more farms like Gaia Estate. Many sun coffee plantations would have to be converted back to shade, and bird habitat in Latin America actually would increase. We, the birders, could have a positive impact, if only we had the will to do it. We could support birds and promote sound agriculture, support communities in Latin America and promote responsibility and awareness. This wouldn’t be a move backward toward some primeval Garden of Eden existence, but a move forward, toward a sustainable future.

Sources for more information

Birds & Beans: The Good Coffee
<http://www.birdsandbeans.com>

Gaia Estate
<http://gaiaestate.com>

Smithsonian certified Bird Friendly coffee
<http://nationalzoo.si.edu/scbi/migratorybirds/coffee>

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