

SMALL STEPS TO SAVE THE RAINFOREST:  
A PLEA FOR EXPERIENTIAL LEARNING

by

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## *Introduction*

Why is it important to save tropical rainforests? The answer that seems to me the best is that it is important to avoid further destruction of life on earth -- where a key indicator is the loss of species diversity -- and rainforests share with the world's oceans the distinction of harboring the greatest percentage of species known to science or waiting to be discovered by scientists. And there is urgency here because the best scientists I know believe that species loss is irreversible; once gone, a species cannot be revived, no matter what Jurassic Park might suggest or the marvels of DNA manipulations can now do.

To meet the challenge of species loss, one strategy that has been proposed is called "hotspots"; it singles out not only important locales where species are abundant, but also places where something can be done about slowing or stopping the loss. But the authors of the hotspots strategy say it will work only if we can develop a biodiversity preservation philosophy: saving species is *simply the right thing to do*.

Though I am a philosopher, I don't here try to spell out such a philosophy. Taking that philosophy for granted, what I'm interested in is *doing something* about the problem. And I have chosen as the locus of my work a country, the tiny Central American country of Costa Rica, in which people *are* doing something about the problem. One of my

ecology-minded graduate students introduced me to Costa Rica almost ten years ago, and I have taken it upon myself to go back again and again -- and to do my little bit in working with Costa Rican activists involved in the struggle.

It is not an easy task. Many government officials in Costa Rica -- not all, of course -- have been concerned over the last couple of decades, but even those with the best of intentions are stymied by the lack of money and political will. There have also been a great many international environmental organizations involved in Costa Rica; the best list can be found in Les Beletsky's *Costa Rica*, a "traveller's wildlife guide" (1998 and 2005 editions). Some of the organizations are still at work there, but others have moved on to other parts of the world where they think they can do more good. And so it goes through the ranks of leaders down to the level of ordinary citizens (or up from there). Some are apathetic. Some are concerned but feel they have higher priorities -- as basic as making a living for their families. Nor should we forget that, at all levels, there is sometimes open opposition to environmentalism in general or to particular efforts to save the forests.

The path that I have chosen is one described by another philosopher who has done work in Costa Rica, David Crocker of the University of Maryland. In a recent article in the quarterly newsletter of the Institute for Philosophy and Public Policy (Summer 2004), Crocker makes a case for "insider-outsider cross-cultural communicators" -- for non-resident outsiders with appropriate views and attitudes to work with like-minded people in a country or region to bring about change for the better. They don't need to move there, but they must make a commitment to work with natives of the region in activist

efforts to bring about positive change. And they can't come with the attitude that they have the answers. They must be open-minded and willing to learn. Costa Ricans in general are democratic in their approach and open to foreigners, perhaps especially North Americans, so this is an approach that has some potential. In any case, it is the approach I have taken and hope to continue to employ as long as I'm able and friendly Ticos (as Costa Ricans describe themselves) are willing to work with me.

Such cross-cultural communicators do not have to be philosophers, or academics of any kind. But my plea here is for *academics to get involved*: environmental scientists and ecologists, obviously, but anyone from any discipline -- a language teacher, a geologist, a geographer, anyone with some useful knowledge *who is willing to add to his or her knowledge by working with others* -- can play this role. It takes collaborators in the host country (in my case in Costa Rica), but the most important thing is that it takes a commitment on the part of the communicator.

I am a philosopher. An unusual one I admit. I am a pragmatist. That is not all that unusual among academic philosophers in the USA in the last couple of decades. What makes me unusual is that I am what I might call a *pragmatic* pragmatist, an *activist* for social and political causes, and I claim to do so *as a philosopher* and not just a citizen. I find that approach best exemplified in the work of the American Pragmatist philosopher, George Herbert Mead, who practiced his activism in the turmoil of Chicago in the first decades of the twentieth century. (See Andrew Feffer's *The Chicago Pragmatists and American Progressivism*, 1993.)

Mead was a friend and colleague of the equally activist John Dewey, who moved on from Chicago to be active on the national scene. But when he was still in Chicago, Dewey (with his wife Alice) ran what was popularly known as the Lab School; it was built on the principles Dewey had been working out in his educational philosophy, and the central feature was experiential learning. Here are two different accounts of the venture.

Robert Westbrook, in *John Dewey and American Democracy* (1991), shows how:

In [Dewey's Lab School] one can see not only how the child's interest in a particular activity of his own ([for example] building a model farm) served as the foundation for instruction in a body of subject matter (skills in measurement and the mathematics of fractions) but also how this method introduced children to the methods of experimental problem-solving in which mistakes were an important part of learning. Providing children with firsthand experience with problematic situations largely of their own making was the key to Dewey's pedagogy.

Then Westbrook quotes Dewey:

Until the emphasis changes to the conditions which make it necessary for the child to take an active part in the personal building up of his own problems and to

participate in methods of solving them (even at the expense of experimentation and error) mind is not really freed.

And Westbrook goes on, later in the book, to link such experiential learning to adults as well as schoolchildren, in adults' efforts to learn, from their own work experiences and from their dissatisfactions with politics as usual, to try to improve their lives and the society in which they live.

Jay Martin, in *The Education of John Dewey* (2002), offers a different perspective on the same material. His book shows how Dewey himself was learning new things all his life, just as he was advising teachers how to help their students -- children or adult learners -- to do that. Repeating some of what Westbrook says, Martin emphasizes that:

A child in Dewey's school was instantly a member of a cooperative commonwealth. Learning and creating knowledge were merely two forms of knowing, what Dewey called "methods of life." From occupations, students in Dewey's school proceeded naturally to their correlatives in the so-called disciplines: from production to economics; from cooperation to politics; from experiment to science; from activity in a community . . . to history, social studies, geography, and culture.

Martin echoes Westbrook in further emphasizing lifelong learning and education for citizenship, but his book's main focus is on how Dewey was constantly growing in his

psychology, making discoveries that paralleled other psychologists, including brain physiologists, but typically correcting or advancing beyond them. According to Martin, Dewey was a lifelong experiential learner.

I should add one more item here, that for the past twenty years I have worked in more than one department at the University of Delaware, including the Center for Energy and Environmental Policy. There, in contrast to most academic fields in contemporary higher education, graduate students are encouraged to combine their scholarly work with experiential -- even activist -- learning. These students come from all over the world, and after graduating a large number of them have returned to their home countries to continue activism there.

At the beginning of my philosophical career at the University of Delaware, I started to do my personal experiential learning in work with the then-new organization Common Cause, John Gardner's good government group that had as its goal the reform of democratic governance in the United States, both nationally and locally. In our tiny state of Delaware, I watched while the national organization narrowed its focus more and more until by the beginning of the twenty-first century it had become identified exclusively with the battle for campaign finance reform. In Delaware, we retained a broader focus. We did work to open up state government, with some success; but we also tried to open up the processes of professional regulatory agencies -- for example, the local medical society and similar bodies -- as well as to keep a focus on ending the Vietnam War and protecting the environment.

One of our Common Cause activists, the late Ernie Thorn, deserves most of the credit for the focus on the environment. I dedicate this essay, in part, to his memory. But Ernie was strongly influenced by Russ Peterson, former DuPont scientist, former governor of Delaware – where he was largely instrumental in getting the General Assembly to pass some of the first legislation for coastal zone protection in the United States – former environmental bureaucrat with Republican administrations, ex-Republican turned Democrat when his former party disdained environmental protection, now a retired full time activist helping to turn an old industrial district along the Christina River into a thriving retail area with a related wildlife sanctuary. Peterson also has an appointment in the Center for Energy and Environmental Policy. I dedicate the essay to Peterson as well.

Instead of Delaware, I have chosen to do most of my activist environmental philosophizing, my experiential teaching, in Costa Rica. Even there I think I am more than a little out of the mainstream. I have found no other philosopher-activists, Costa Rican or not, working there to protect some of the most pristine forests in the world. That doesn't mean there are no other philosophers with an interest in Costa Rica. I have already mentioned David Crocker, of the University of Maryland's Institute for Philosophy and Public Policy, who specializes in what he calls development ethics – and he has worked in Costa Rica. In the article I mentioned earlier, where Crocker makes his case for “insider-outsider cross-cultural communicators,” he provides one example with strong Costa Rican links, in the work of sociologist Paula Palmer of the University of Colorado. She now runs Global Response ([www.globalresponse.org](http://www.globalresponse.org)), but earlier she had

spent over a decade working in Costa Rica – and has written several books on efforts there (Palmer, 1986, and 3 books published in 1993).

There are visionaries with whom to work in Costa Rica. The best examples would include the outstanding tropical biologist, Dan Janzen, and the two people who are usually credited with founding Costa Rica's impressive national park system, Mario Boza and Alvaro Ugalde (both biologists by training). Boza has become the most visionary, working with international environmental organizations to establish a biodiversity corridor from Alaska to the tip of South America; while Ugalde has focused on the Osa Peninsula in southwestern Costa Rica – where I have concentrated my efforts. I would like to dedicate the essay to Boza and Ugalde as well.

I wish I could dedicate it to at least one female – and I will be telling the stories of a few female activists – but it is men who have dominated the environmental efforts where I have worked. To add a woman to this list, I should include Helena van den Hombergh, author of *Guerreros del Golfo Dulce* (1999). She would probably say it ought to be one of the heroic women whose efforts she describes there. But van den Hombergh's book is another example of what a cross-cultural communicator, who gets actively involved in struggles to save the rainforest, can do.

Mentioning these people leads me to one final introductory remark. I will be telling my story mostly through stories of others, of the individuals – and the groups they have worked with – who have done the most to save (or in some cases block the saving of)

Costa Rica's rich forests. This was the pattern followed by David Wallace in *The Quetzal and the Macaw* (1992), another book I admire, and I will follow his example wherever I can.



### *1. Dimensions of the Problem*

*As we all know, our planet is suffering from a variety of environmental ills, with issues like global warming, . . . air, soil, and water pollution . . . making news on a daily basis. . . . However, as serious as these problems are, we believe that the most far-reaching problem that we currently face is the grand scale loss of our planet's biological diversity. . . .*

*This biodiversity . . . is our living resource base, . . . and what distinguishes it is the fact that its loss is an irreversible process. (Hotspots, 2000, under heading, "The Global Significance of Biodiversity.")*

*. . . As indicated . . . the 25 biodiversity hotspots are absolutely critical to maintaining life on Earth. . . . To ensure this, it is . . . essential that we adopt a new biodiversity philosophy, . . . : we have to create a value system that recognizes maintenance of the full range of life on Earth as simply "the right thing to do."*

*. . . If we allow a "biotic holocaust" to take place, . . . this will be far and away the biggest "decision" ever made by one generation for future generations.*

*Conversely, if we were to take the decisive action necessary . . . , this would surely rank as the most “responsible” initiative ever taken by one human generation in support of those that will come after us. (Hotspots, under heading, “The Moral High Ground in Hotspots.”)*

*Hotspots* says that the problem is enormous. The hotspots plan seems to offer more in terms of solving the problem than any other proposal.

Sources for this plan include three books more or less by the same team: R. Mittermeier, Gil, and C. Mittermeier, *Megadiversity: Earth's Biologically Wealthiest Nations* (1997); the Mittermeiers and Gil, plus Norman Myers, *Hotspots: Earth's Biologically Richest and Most Endangered Terrestrial Eco-Regions* (2000); and the Mittermeiers plus several others, *Wilderness: The Earth's Last Wild Places* (2002).

All of the hotspots and similar efforts are based on the premise that it is important – possibly even morally imperative – to protect biodiversity worldwide. Perhaps nowhere is this more important than in the tropics, including the New World tropics or neotropics.

Many international environmental non-governmental organizations (NGOs) have been involved in preservation activities in Costa Rica in recent decades. The focus has included the Golfo Dulce and Corcovado National Park areas. For example, *Parks in Peril: People, Politics, and Protected Areas* (The Nature Conservancy, 1998), in a chapter on Corcovado National Park, mentions the roles of the Nature Conservancy and

the World Wildlife Fund. Its focus includes parks from southern Mexico and Belize to Peru (including a sideways jump to the Dominican Republic but nothing on Brazil or the north coast of South America).

Les Beletsky's *Costa Rica: The Ecotraveller's Wildlife Guide* (1998; 2005 edition changes the title slightly) adds the important work done by the Caribbean Conservation Corps in and around Tortuguero National Park, as well as their support for the formation of a biodiversity corridor from Mexico to the Panama Canal. The first edition of Beletsky's book detailed the work of the Wildlife Conservation Society (see Bronx Zoo and earlier versions of the society), which has a conservation program for most of Latin America, including the Brazilian Amazon all the way to Patagonia.

My favorite guide book for Costa Rica, Christopher Baker's *Costa Rica Handbook* (5th edition, 2004; I like the 2001 4<sup>th</sup> edition better) lists dozens of conservation organizations, adding, for example, the Rainforest Alliance (or Rainforest Action Network), but also emphasizing Conservation International, supporter of the hotspots program.

Helena van den Hombergh's important book, *Guerreros del Golfo Dulce* (1999) adds the German NGO, Pro Regenwald – to which I could add, based on personal experience, an Austrian Regenwald research group. (It is mentioned in Baker's *Costa Rica Handbook*, 4th edition.)

These Costa Rica-related environmental NGOs are just the proverbial tip of the iceberg (however inappropriate that phrase may seem for tropical Costa Rica!). There are many, many other organizations involved, including a United Nations-related IUCN (World Conservation Union).

These organizations are devoted to biodiversity preservation (whether worldwide or in Costa Rica) in general. For a capstone species-related story (specifically about large predatory felines), see *Time* (8/23/04): “Nowhere to Roam: Wildlife Reserves Alone Cannot Protect Big Cats; A Look at New Ways to Save Them.” The article mentions, without much detail, an effort to protect a habitat for jaguars that would extend from Belize to northern Argentina and would include Costa Rica’s significant jaguar population. For the jaguars of Belize, with almost nothing included about the corridor, see Susan McGrath, “Top Cat,” *Audubon* (July/August 2004).

By singling out Conservation International and the work of the hotspots group, I do not mean to denigrate any of these (and other) NGOs, international, multinational, national, or local. All I want to emphasize is that the hotspots plan seems to me to reflect the urgency of the problem better than anything else.

For a sketch of the lead scientist here, see the Conservation International website: [www.conservation.org](http://www.conservation.org).

It would be tedious to mention all of them, but Mittermeier has assembled around him an expert team. Some are fellow scientists, including experts for many specific regions

all around the globe, but others are corporate or business leaders with an interest in biodiversity preservation for a variety of reasons. Regions all over the world are included; and functional experts cover finance to outreach, again over a broad range. The regions include Mexico to the Philippines, Ghana to Cambodia, Brazil or Costa Rica to Madagascar, and so on.

A profile of Mittermeier by Roger Rosenblatt, who followed him for several days in the jungles of Suriname, can also be seen in *Time* magazine's "environmental heroes" series in 1998 ([www.time.com](http://www.time.com)).

My experiences in Costa Rica haven't been exactly like those of *Time* reporter Rosenblatt, though I have had many similar experiences spread over more than ten visits since 1998. Nor have I focused on a single scientist/activist like Mittermeier. I have followed many like him, looked at the fruits of the work of others firsthand, and met far more local leaders and just ordinary people than Rosenblatt mentions. But the overall flavor – along with the sense of urgency about preserving biodiversity – is similar enough to make Rosenblatt's account of Mittermeier a touchstone for my book.

On the other hand, I shouldn't end this discussion of the dimensions of the problem without at least referring to challenges that might be made to the hotspots/Mittermeier claim that stopping the loss of biodiversity is "simply the right thing to do." Moral philosophers, and more particularly environmental philosophers, rarely accept a claim that any activity is simply the right thing to do – without argumentation. And there is a lively debate among environmental ethicists about the priority, let alone unchallenged

duty, of preserving biodiversity or saving species from extinction. (See Bryan Norton, *The Preservation of Species*, 1986.)

So it may be worthwhile to end this chapter with some references to a spectrum of environmental ethics claims and the philosophers (and others) who make them.

Some people say that contemporary environmental ethics begins with the work of a scientist, Rachel Carson in *Silent Spring* (1962; see also Frank Graham, 1970). Others say the movement began earlier, with a famous debate between Gifford Pinchot, of the U.S. Forest Service, and John Muir, founder of the Sierra Club, over the Hetch Hetchy dam project in California in the early decades of the twentieth century.

But what I am talking about is not such disagreements among scientists; it is about philosophers' disagreements over the principles on which they think answers to questions such as water pollution or dam building must be based – as well as the spectrum of positions on that issue.

Many of these disagreements can be followed in two books: Michael Zimmerman, ed., *Environmental Philosophy* (4<sup>th</sup> edition, 2004 [copyright says 2005]), and Joseph DesJardins, ed., *Environmental Ethics* (1999).

Among the disputants, I begin with Andrew Light. He was co-editor of, among many other books, *Environmental Pragmatism* (1996). Most of Light's work in environmental philosophy (according to his web site) has focused on the failure of the discipline to

fulfill its promise as a guide to formulating better, more morally responsible environmental policies. Identifying several theoretical debates in the field which have prevented it from aiding in the development of better policies, Light argues that a pragmatist methodology is needed to transform environmental ethics into a more practical ethics, able to participate in the actual resolution of environmental problems. Light also says he is currently completing a monograph on ethical issues in restoration ecology and has been actively involved in that movement.

Light's (and others') environmental pragmatism and work on such issues as ecological restoration (typically around urban centers such as Chicago) brings criticisms from opponents on both the political left and the political right.

At the most extreme among critics of environmental activism are those who say there is no problem and restoration is wasted effort; some of these critics are people associated with the so-called Wise Use or Anti-Takings movements. (See, among others, Ron Arnold, 1999; and Gregg Easterbrook, 1995.)

From the other end of the environmental (and/or political) spectrum come critics, like J. Baird Callicott (for example, in the Zimmerman anthology), who worry that environmental pragmatists (he explicitly mentions Light) are simply avoiding the basic issue of environmental ethics – whether or not, and to what extent, non-human beings such as animals and plants and ecosystems have either interests or rights that conflict with human beings' rights. Callicott himself is a long-time defender of Aldo Leopold's

“land ethic,” which he has updated, turning it (he thinks) into a defensible holistic ecocentrism.

There are also Marxist and ecofeminist environmental philosophers for whom environmental problems are the result of various divisions within society or between humans *and nature* – class divisions, male domination ideologies, false nature/humans dichotomies, and so on. In my opinion, Karen Warren is the best defender of such views, and her latest version (as well as her best, I think) is also to be found in the Zimmerman volume.

I should add here radical defenders of wilderness for its own sake, such as David Strong in *Crazy Mountains* (1995).

As will be clear throughout this book, I side with the pragmatists against philosophers such as Callicott. (I do agree with Callicott that we need to see different viewpoints as complementary rather than antithetical.) My philosophical heroes, John Dewey and G. H. Mead, are often accused of anthropocentrism; but as Larry Hickman (2001) has ably shown, Dewey was no “liberal individualist” for whom solving human social problems was the only or the highest priority. And Mead’s views, as well as his association with early-twentieth-century Progressivism, were even more pronouncedly socialist/activist, including early forays into conservation. Callicott’s suggestion that pragmatists should see their approach as complementary rather than in opposition to radical theorizing is echoed by Bryan Norton (1994), who explicitly argues for a pluralism of viewpoints in

dealing with urgent environmental issues. To which I say amen. But I also say amen to Mittermeier's claim that preventing further loss of biodiversity is "simply the right thing to do" -- where I would emphasize *doing something*, along with others (not just philosophers by any means!), who are trying actively to prevent biodiversity loss.



## 2. *Costa Rica's Amazing Biodiversity*

It is hard to imagine that a country as small as Costa Rica can have the rich biodiversity it has. In a quarter of a hundredth of the total land mass of the earth, scientists have found five or six percent of the known species on earth. But there are good reasons. The land mass is recent, indeed is still rising from the seafloor as a tectonic plate moves inexorably northeast. (See Denyer and Kussmaul, editors, *Geologia de Costa Rica*, 2000.) When the isthmus that is now Central America formed, flora and fauna were already wildly abundant in tropical areas north and south. Some plants and animals moved north, others south. The greatest diversity ended up in what are now the two countries of Panama and Costa Rica. But there is more to the story. As eons passed, some of the plants and animals got cut off from the passage north or south, creating islands of what ecologists call endemism. Costa Rica has a very large percentage of the endemic species in what Mittermeir calls the Mesoamerican Hotspot, extending from southern Mexico to Panama. And two areas are particularly high in endemism, the Talamanca mountain range (with mighty 12,000-foot Chirripo at its center) and the Osa Peninsula. In tiny Costa Rica, where scientists have found up to six percent of the known species on earth, *half* of this abundance is found on the Osa Peninsula.

Thanks to some farsighted scientists – who will be sketched here – the Costa Rican government (really a series of governments of alternating parties) has established an ambitious program for protecting all of this biodiversity. The effort is centered on a remarkable national park system, but there are also areas of protected forest outside the parks, and there is a fair amount of government-sanctioned protection even on private land. W. R. Wallace, in *The Quetzal and the Macaw* (1992), tells this story in an animated and informative way. His book is one place I learned to use personal sketches, often based on interviews, to tell a story. In this chapter, I will lean on Wallace for sketches of two scientists, Daniel Janzen and Mario Boza, though I will supplement Wallace's sketches with some of my own or ones I could find on the Internet.

I want to begin with another scientist who is less well known. But as it happens, he was the one who introduced me to Costa Rica, to its biodiversity, to governmental claims about sustainability (sometimes dubious), and especially to the Osa Peninsula and Corcovado National Park. I'm talking about a former philosophy student of mine, but also a student in the Center for Energy and Environmental Policy, where he received his doctorate: Cesar Cuello Nieto.

Cesar was the most important person involved in getting me to Costa Rica in the first place, but, more important, in getting me to Corcovado National Park with its magnificent tropical rainforest. When Cesar's first research project involving Costa Rica did not receive external funding, he turned to the Osa Peninsula, to study the discrepancy between official governmental rhetoric about sustainable development and what is

actually happening. (See Cuello Nieto's doctoral thesis, "Sustainable Development in Theory and Practice: A Costa Rican Case Study," 1997.) Sustainable development is supposed to do (at least) two things simultaneously, preserve the environment (in this case primarily a magnificent tropical rainforest) while providing jobs and income for people in buffer zones around protected areas such as national parks. Although Cuello is listed as only one of the authors of the chapter on Corcovado in *Parks in Peril*, in fact he did the majority of the field research. That work ended up providing most of the material for his thesis.

In early 1998, Cesar invited me and my wife Lydia to come to Costa Rica and, among other things, hike the trail from Los Patos to the Sirena Biological Research Station on the Pacific Ocean side of Corcovado National Park. It was a hike we will never forget, not only because of how difficult it turned out to be for us poorly prepared gringos to do in the tropical heat, but also because of the sheer magnificence of the setting of the Sirena station at the end. We arrived to the sound of dozens of pairs of scarlet macaws, then slept in a tent at the edge of Sirena's airstrip, only to be awakened at 4:30 AM to the sound of howler monkeys that sounded like roaring lions right outside our tent. We were exhausted from the hike, but after a little recuperation we fell in love with Sirena, as close to an earthly paradise as either of us had experienced. Thanks to Cesar's invitation, and contacts he helped me make, I have now been back to Sirena every January since – and to the Osa Peninsula more than ten times.

Cesar is a modest man, but he has been involved in successful projects that one would never know about because of this modesty – unless you talked with the many people with whom he has interacted so well and with such good intentions. He is now back in his native Dominican Republic, continuing the same sort of work there.

Cesar ended up working in Cost Rica because of his wife Sandra, who is herself a scientist, an economist, and a native of Costa Rica. The two of them met, and got married, in Moscow when they were part of a Soviet effort to influence young people in Latin America. When Cesar began his doctorate with me in Delaware, he was already planning to rejoin his family in Costa Rica. By the time he finished – and invited me and my wife to visit Costa Rica – he already had a job as director of field projects for the Fundacion Neotropica. Osa was the focus of one of the projects, and Cesar introduced me to a group there with whom I have now become good friends. The devotion of these people, to both saving the rainforest and helping the local people to learn how to make a living without destroying the forest, is a marvel to behold.

For my part, I started planning immediately to bring groups of undergraduate students to Costa Rica to compare and contrast preservation efforts in Corcovado with those in other forested areas on the Pacific slope of the isthmus. The students – eight groups by 2006 and more planned for the future – are always impressed with the beauty of the forest; but they are also impressed with the tranquility (Costa Ricans call it *pura vida*) and the simple lives of the people on Osa, no matter how poor they are. The students in

the early years met Cesar, and at least a significant percentage of them have shared his devotion to the dual task of preservation and sustainable rural development.

Part of my effort has also included an attempt to gain a foothold for graduate students of environmental policy. That work has proceeded more slowly, but a group of these graduate students did join my undergraduates the very first January (1999). And they were as impressed as the undergraduates with the benefits of experiential learning.

I can only hope, in some small way, to help to advance some of the projects that Cesar was partly responsible for initiating. On one occasion, he introduced me to the next character I will talk about, national park co-founder *Mario Boza*. One of my journals for Costa Rica visits says it was 2001 when I heard Boza talk about corridors. It must have been the time when I had paid my own way to Costa Rica for a board meeting of a group, Amigos de Corcovado, that Cesar Cuello and I were trying to establish. The organization's focus at the time was on a proposal to establish and preserve a biological corridor linking Corcovado National Park, by way of its buffer zone, to Piedras Blancas National Park on the mainland at the entrance to the peninsula. The corridor focus was enough to make me want to hear Boza talk about corridors, not only on Osa or in Costa Rica more generally, but for the whole Pacific coast of North and South America.

Boza is, as Wallace says in *Quetzal*, scholarly and shy looking; tall and thin and with the general demeanor of an accountant. His presentation that day fit the image: it was

careful in detail and tightly structured – but he also fumbled around a good bit with his over-heads, sometimes tried to show pages from books to an audience of over 50 people, and so on. He would fit right in on campus.

Though he spoke in Spanish that day, his English is flawless, as I found out when I was introduced to him afterwards by Cesar. The introduction wouldn't have meant much to him. I was just one more gringo trying to show interest in Costa Rica's biological corridors, and the Osa corridor at that. Boza now hangs out mostly with leaders of important environmental NGOs trying to establish the *long* corridor along the Pacific coast from Alaska to the Southern tip of South America. When I met his co-worker in the earliest days of the Costa Rican national park system, Alvaro Ugalde, he said, "Oh Mario, his head is always in the clouds nowadays!"

But Boza and Ugalde hardly had their heads in the clouds in the old days. They worked literally on the ground, in the parks. Like almost everyone I've met connected with Costa Rica's parks, the uniform is jeans and a short sleeve shirt. In fact, the favored shirt of most young people in Costa Rica would be a tee shirt with some North American team logo on the front – whether the wearer had any idea which sport the team plays or not. Park workers and administrators are not that informal, but they do tend to wear this national uniform. And Boza and Ugalde worked really hard in those first days, under conditions that would have seemed primitive even to today's park workers, though living conditions are not all that much better today.

What Wallace says they accomplished – not singlehandedly, of course; they ended up getting regular and ongoing support from lots of people all the way up to the presidents of Costa Rica – was the transformation of a budding park system into one that can truly be called a model for the world. Boza wrote an influential and attractive book, *The National Parks of Costa Rica* (1998, with later editions in paperback and compact form). Nowadays the parks make up over 12 percent of Costa Rica's land surface (and some ocean territory too), and are surrounded by or otherwise supported by another system of protected areas, mostly forest. The total takes up about 25 percent of Costa Rica's land.

Though Wallace says Boza was reluctant at first, both Boza and Ugalde were also instrumental in adding still another feature: SINAC, the Sistema Nacional de Areas de Conservacion, is devoted to further supplementing the park system by adding such features as local control in the various areas, outreach to the neighboring communities, including environmental education, services such as fire prevention, and, most important, employment. That means jobs of various sorts, from park guards to naturalist guides, including maintenance and service chores in and around the parks and protected areas. I can say from firsthand experience that the system is not perfect, and never really provides enough jobs or education. But it's definitely a needed next step after forest protection, and as Dan Janzen (see his story below) figured out long ago, Costa Rica's amazing biodiversity won't be protected for long without a system something like this.

Boza, from the beginning, has often been the “big idea” man on these issues – and Wallace says he quickly bought into the SINAC idea when he was convinced that it would not take too many resources away from the parks and protected lands themselves.

At some risk because of its length, I include here an interview in which it is possible to get a better picture of Boza’s thoughtfulness than I could ever convey.

*Interview with Dr. Mario Boza [CRNews.net – date uncertain]*

Conservation visionary Mario Boza co-founded Costa Rica's National Parks Department in 1970, while still in his twenties. Now a consultant with the Wildlife Conservation Society, Boza envisioned the 'Path of the Panther' biological corridor, to link parks and protected areas throughout the length of Central America. The Path of the Panther served as a blueprint for creation of the Mesoamerican Biological Corridor, signed by all seven Central American nations at the Presidential Summit of the Americas in 1994, and funded with nearly \$100 million in international support.

Dr. Boza is currently leading an initiative to expand the "Path of the Panther" into the "Ecological Corridor of the Americas," an ambitious program to link biological corridors and parks throughout the western hemisphere, and ultimately

create an unbroken chain of protected areas from the Arctic to Tierra Del Fuego.

*Is progress being made on the Mesoamerican Biological Corridor?*

No, on the contrary. There is no progress anymore.

The fact is that the Wildlife Conservation Society decided to discontinue the project that was originally called Path of the Panther. The Path of the Panther no longer exists. It was transformed into the Mesoamerican Biological Corridor.

The Wildlife Conservation Society was very active in the beginning, but we aren't involved now. No one in the WCS is promoting the Mesoamerican Biological Corridor.

*Why isn't the Wildlife Conservation Society involved in the Mesoamerican Biological Corridor?*

First, because it is in other hands. It is the responsibility of the United Nations Development Program, the GPZ of the German government, the World Bank - the organizations that finally allocated funds.

This doesn't mean that organizations that haven't contributed funds are not involved. For example, the IUCN and other organizations are involved. Not the

WCS, because of lack of funds, although Archie Carr helps in some projects in Mesoamerica. But this is not necessarily under the umbrella of the Mesoamerican Biological Corridor.

*What's wrong with the Mesoamerican Biological Corridor project?*

I'm disappointed with the role of the corridor in helping protected areas. Protected areas are in the same bad shape as they were before. The corridor has not been of any substantial help to the protected areas system in the different countries. That's because they are involved in so many different things that the original idea - the original biological idea - became a small department. There is now a department of protected areas.

Originally, what we conceived for the Path of the Panther was a major effort in the consolidation of protected areas, creation of biological corridors, and restoration of biodiversity to the region. It was specifically a biodiversity program.

But it changed. Now you have a lot of things, including the alleviation of poverty in Mesoamerica. Well, that's totally wrong! To alleviate poverty is the role of the government, not of a specific program that has another role. They are working in so many different areas that the attention paid to biodiversity is minimal.

*Has the Mesoamerican Biological Corridor been taken over by commercial interests, such as transnational corporations as part of Plan Puebla-Panama?*

I cannot say. I don't know really.

My concern, again, is biodiversity and protected areas. They are working in the fields of women and development, watersheds, pollution control, I don't know how many other things, and the original effort on behalf of biodiversity became diluted, and the effort is very small. That means that the protected areas continue to be in the same situation as they were before this program started.

*You mean that the protected areas in Central America remain as isolated islands?*

Yes. Perhaps only in Costa Rica is there much effort in the creation of biological corridors. Really, only in Costa Rica

*Is the progress that has been achieved in the creation of biological corridors in Costa Rica a result of local initiatives, such as the San Juan -- La Selva corridor, rather than the Mesoamerican Biological Corridor?*

Yes. I'm part of the local advisory group for the corridor here in Costa Rica, so I have been trying to give more emphasis to corridors and protected areas in general, but the problem is that the money available for protected areas is very small, because they have to use the money for many other things.

*So there's not enough money available for the purchase of lands necessary for the creation of biological corridors?*

Purchase of lands? Forget about this -- there's no money for the purchase of lands. That's not in their budget.

*What is the money being used for?*

To pay personnel, as always happens. The major part of the money goes to pay personnel.

*So in fact there's no environmental impact resulting from the Mesoamerican Biological Corridor?*

No, I don't see any real environmental impact. They make a lot of noise, but the reality in the field is different. I don't see any major or important impact on the forestry sector or on biodiversity.

*Does the Environment Ministry have a budget for the purchase of new protected lands?*

Very little, almost nothing, because of budgetary constraints. There is not enough money for land acquisition.

*Is land acquisition most important in the creation of a biological corridor?*

Yes. In some cases you can create the corridor by giving incentives and promoting better use of land. In other cases you have to acquire the land. Incentives include environmental services payments - for example, paying for the water that a privately owned forest produces. But that's not happening at the country level.

It's happening in a few local cases. There are three or four cases where an electrical utility is paying the owner of a forest. The owner of the forest is a conservation NGO, such as the Monteverde Conservation League.

But at the national level, payments for water as an environmental service do not exist. It's a pity, and I'm very concerned, because this could mean a real revolution. For me, the green revolution is not the agricultural one, it's the protection of forests for the use of the environmental services that the forests can provide, and recognizing the owner for the services.

Those services include scenic beauty, water, carbon-fixing, mitigation of disasters, and so on.

*Is the Environment Minister aware of your views, and is anybody working to achieve this?*

They're not only my views, they're the views of a lot of people. Yes, we published a large document of recommendations for the new administration, and everything that I'm saying is included in that document.

*Is the Minister favorable to those recommendations?*

It's rather strange. Everybody says, "Yes, you're right, we're going to promote this." But nothing happens.

*Is that simply due to the budgetary restrictions which the government's under as a result of the Fiscal Contingency Law?*

That's only part of the problem. If you don't have enough money in the budget, why not go to other sources of funds - environmental services, the funds that protected areas can generate through research, entrance fees, concessions ... whatever. International cooperation is also not moving here in Costa Rica.

There are all kinds of sources of funds, but nobody is looking for funds in a serious way.

*Are there opportunities for private entrepreneurs to operate environmentally friendly concessions in the national parks?*

It's totally open.

Now we're promoting the concept of co-management. This means that a private nonprofit conservation organization, a conservation foundation, administers protected areas under contract on behalf of the ministry. This is happening in Guatemala and Peru with a lot of success at present.

The national park will continue to be a national park, but the management will be handed over to a private conservation NGO with enough capabilities to administer the protected area. In this way, all revenues through entrance fees, research fees, concessions - whatever revenue a park can raise -- remains at the park, and doesn't go to the government's general treasury as at present.

*Isn't that what they were trying to do at Manuel Antonio National Park -- keep the resources generated in the park for local administration?*

Yes, but that won't last, because of a decision by the Controller General that made it illegal to have trusts in the park, or in any other public institution, including museums, national theaters, all of this. Consequently, all funds have to go to the central fund of the ministry of finance.

The National Museum is in a crisis because of that decision. When you pay your entrance fee for admittance to the Museum -- they are not able to keep those funds anymore.

So we have to change this trust scheme from public to private, to a joint venture.

*Because of the problems in public parks, are private reserves important for conservation? For example, is the purchase of Costa Rican lands by wealthy*

*foreigners a positive factor in environmental preservation?*

Yes, extremely positive. At present, about 5 percent of all protected areas are in private hands, including private owners, private conservation NGO's, universities. It's most important when they are in the buffer zones of public parks.

*Would the millions of dollars spent on Puntarenas Marine Park have been better invested in the national parks and other protected areas, to hire more park guards and purchase supplies and equipment for them to do their jobs?*

Certainly. The money invested in the Puntarenas Marine Park is a waste - a total waste of money. They spent hundreds of millions of colones which, had it been spent in the parks - in lands acquisition and improving the facilities - would have been much better spent.

Costa Ricans don't usually go, but if they go, they go once and then forget it. A tourist? Well, when you have in the States the Miami Seaquarium, the Santa Barbara Aquarium and the New York Aquarium, and all those extraordinary attractions, you're not going to come to Costa Rica to see a tiny marine park with little importance.

The ex-Environment Minister had a lot of influence, and she forced public

institutions to allocate money to that, so they spent several hundred million colones which, to me, that's a disaster.

*What about the fact that the fuel taxes aren't allocated to pay environmental services, as required by law? Does that affect parks and other protected areas?*

Just a fraction of those funds that were supposed to be used for reforestation are being used for that purpose. The rest is allocated at the ministry of finance to other needs. It's a mechanism that does not work to the benefit of the environmental sector.

(End of interview)

If Boza is a thoughtful scientist involved in efforts to preserve Costa Rica's rich environmental resources, the next person I'd like to introduce is a legend. I have not yet had the good fortune to meet Dan Janzen, which is not because he is inaccessible. One of my graduate students working in Costa Rica, Noah Toly, simply contacted Janzen's website and got an immediate answer. My closest contact was with one of my groups of students. We were hiking a short trail in Santa Rosa National Park when we came across some mousetraps. Our guide checked them out, and sure enough they were part of a project Janzen was working on with a group of students. But meet him in person or no,

Janzen is a legendary force among tropical biologists in Costa Rica, but also more generally, with stories about him coming at you from every side. Actually, my first encounter with him, if you can call it that, was with the incredibly influential book he edited, *Costa Rican Natural History* (1983). Anyone who wants to know anything about the amazing biodiversity of this small country will find it there.

Daniel Janzen is a professor at the University of Pennsylvania, but he has been associated with the study of tropical biology in Costa Rica for decades. In 1980 or so he headed the project that generated the book, *Costa Rican Natural History* (1983), that gold mine of mostly otherwise unavailable data on everything from geology to what is currently known about the flora and fauna of CR. And, as my story above about mousetraps suggests, he's still doing active field work.

In most people's opinion, Janzen gets major credit for the science infrastructure at Santa Rosa – housing for foreign (and long-time) researchers, lecture halls and office buildings where seminars can be given (I'm talking about in-the-forest scale), a dining hall, as well as administration buildings both for the park and for the investigators.

What Wallace in *Quetzal* gives Janzen greatest credit for is the establishment of Guanacaste National Park. For Janzen, it meant a huge step toward restoring the dry forest that he wanted to re-establish; without uplands, including cloud forest, animals – both insects and larger critters – which would in the past have migrated according to wet and dry seasons would have no place to go in the driest part of Guanacaste's long dry

season. So they would be threatened, if they did not actually become extinct. And to make the new park happen, Janzen took off his scientist's hat and became a major fundraiser, particularly in the USA and with large corporations as well as major environmental NGOs. Wallace's book puts the figure at about \$12 million, but I have seen reports of double that (and Wallace may include the higher figure too).

This major fundraising effort also enabled, or at least greatly augmented, one of the significant advantages that the Guanacaste Conservation Area has in relation to all the other parts of the national conservation system (SINAC): namely, its large endowment fund.

Here is *Hotspots* on these efforts of Janzen:

Working with the Costa Rican Government and the Nature Conservancy International Program since 1985, Janzen obtained donations from governments and private foundations to engineer a debt-for-nature swap of \$25 million for this area. In response, Costa Rica set aside the Guanacaste Conservation Area and created a \$12 million endowment for it. Once the area was established, the challenge was to demonstrate its value to the region and to the country as a whole, which Janzen has done by describing the area as a "farm" rather than a traditional protected area. This farm differs from others in that it is not cultivated and does not produce the usual cows, alfalfa or rice. Rather, its products are eco-tourism, research opportunities, educational

programs for students at all levels, pharmacological products for drug companies, and water supplies for the entire region. It also produces “ecosystem services” such as carbon fixation – basically a deal offered to large utility companies that emit carbon into the atmosphere. The idea is to pay countries like Costa Rica to protect more forest as a “carbon sink” or to plant lots of trees which, through their growth, will remove carbon from the atmosphere. This innovative process, called “joint implementation,” is a win-win situation in which the national government and the international community credit the utility company for cleaning up the environment and give it a greener image, while the company in turn provides the financial resources to protect natural forest and increase forest cover through reforestation. Aside from the many direct conservation benefits provided, the Guanacaste Conservation Area has also served as a stimulus to and testing ground for the growing field of Restoration Ecology, in which Janzen is one of the pioneers and leading practitioners (p. 101).

And here is Janzen’s bio sketch from his University of Pennsylvania website:

“Janzen is one of the foremost ecologists and tropical biologists in the world. His indefatigable field research has provided much of our present understanding of coevolution in terrestrial arthropods and plants, as well as the extent and impact of seed predation by insects.

“Research Interests: I am a tropical ecologist who specializes on animal-plant interactions in Costa Rican tropical dry forest and on biodiversity development and management of large conserved tropical ecosystems. I work as a team with my wife, Winnie Hallwachs, likewise a tropical ecologist. Special research emphasis is given to Lepidoptera larvae (caterpillars), their food plants, and their parasitoids (parasites). This information is processed into user-friendly databases, images and web pages available in the public domain. Special conservation emphasis is given to seeking ways for decentralized administration of the non-damaging use of large conserved wildlands by society. Examples are biodiversity prospecting, carbon sequestration, ecotourism, biodiversity services to agriculture, and direct field research.”

Another sketch might be helpful here, not of an individual but of an institution: the *Organization for Tropical Studies*. There are a number of important research institutions in Costa Rica – especially for the study of tropical ecosystems – but this one is probably the most important. Its history is unique; it was begun with support from the US National Science Foundation when that institution was trying to develop a major niche in biological research to rival the National Institutes of Health. Initially a group of North American biologists at well known universities banded together to get it underway; now there are upwards of 70 institutions involved, and counting. OTS (in English; in Spanish it’s OET, Organizacion para Estudios Tropicales) has three research centers in Costa

Rica. OTS hosts countless students and researchers in Costa Rica, from the undergraduate level to world-famous scientists.

In place of a sketch, I will just summarize here one course that seems to me especially relevant to my concerns: an annual course on managing tropical forested areas (*manejo de areas silvestres tropicales*). It is related to the limited involvement of OTS/OET with *policy* research, as opposed to its mammoth tropical biology involvement. The online advertisement for the fifth such course, October-November 2003, is what I quote from. The course is offered by the *environmental policy* office of OTS.

The general objective of the course is to offer participants overall instruction in both theoretical and practical aspects of the management of forest areas, with an orientation toward professional development and real improvements in the places where the participants work.

Specific objectives include:

1. To explore the principles of managing forested areas, such related fields as ecology, administration, environmental extension programs, and all of this with an eye to practical applications.
2. To foment an interdisciplinary and teamwork approach aimed at identifying and resolving problems that affect the national parks and other areas of protected forest.

3. To share apprenticeship experiences in demonstration protected areas of Costa Rica, chosen for applicability to similar Latin American areas.
4. To promote an ongoing interchange of ideas and experiences among the participants, including foundations for follow-up work after completing the course.
5. To familiarize the participants with the potential of modern techniques using advanced technologies (GIS, computerized databases, etc.), as well as strengthening the participants' abilities in oral and written communication.

The course takes advantage of participants' prior knowledge and experience as a teaching tool. Other teaching modalities include informal seminars, case studies, group exercises, the preparation of reports, writing and presenting a proposal, living with the personnel in areas visited, and analysis and discussion of the relevant literature.

The course is taught in Spanish, and participants must be citizens of and have official forest management responsibilities in Central American or Caribbean countries (with some exceptions permitted), with at least two years of work experience (some of which can be as a volunteer) – and they should have some post-secondary education.

This is clearly serious business, with serious objectives, on the part of the Organization for Tropical Studies.

Another important Costa Rican science organization is the National Biodiversity Institute (INBio). Here is *Hotspots* on that:

Founded in 1989, this nonprofit entity has as its mission the promotion of greater awareness of Costa Rican biodiversity both to conserve it and to use it to improve the quality of life for people. It has a number of programs, including a national biodiversity inventory, an information management program, a bio-prospecting program, a conservation for development program, and a social program aimed at transferring biodiversity knowledge to Costa Rican society at large. Although an NGO, INBIO works closely with the Ministry of Environment and Energy (MINAE) and the National System of Conservation Areas (SINAC) of the Costa Rican government. Among its many accomplishments was a 1992 bioprospecting agreement with the pharmaceutical giant Merck, the first agreement of its kind between a pharmaceutical company and an institution in a tropical country. [INBio by 2004 had nearly 30 similar agreements.] Also of note is its world-renowned Parataxonomy Program, a country-wide biological inventory program in which local villagers are trained in collection and preparation of museum specimens. An outstanding example of local capacity building, a number of the people who have participated in this program have gone on to higher-level training in biodiversity (p. 101).

INBio and OTS collaborate on this final item, training for other countries.

Maybe I should summarize what I think these sketches tell us. Cesar Cuello was my ticket to Costa Rica, to its incredible biodiversity especially on the Osa Peninsula, and to

all the people I have met there; but he has now returned to his native Dominican Republic. Mario Boza is practically a legend, as is Dan Janzen for sure. Nowadays Boza represents corridor work, not only within Costa Rica but also far beyond. And as we will see next, protecting the Osa corridor is absolutely essential to preserving the magnificent rainforest of Corcovado. Janzen's work has been mostly in the Northwest, in Guanacaste, where he has documented a level of biodiversity that parallels that of Osa; and he has shown how to do more than just preserve what he found. He worked forcefully to expand Santa Rosa by adding Guanacaste National Park to provide the space that species need to survive. He was also largely instrumental in creating the infrastructure needed for that project in the Guanacaste Conservation Area. The Osa Conservation Area, as we will see, needs a similar infrastructure – and may have the needed champion in Alvaro Ugalde, Boza's co-worker in the founding of the national park system, along with the National System of Conservation Areas (SINAC), as we know them today. INBio is unique, but the Organization for Tropical Studies is just one – albeit the best known -- of the science institutions in Costa Rica. To my knowledge, they are unique in having science *policy* programs as well as ecology and tropical biology programs. And biology alone, without the right kinds of policies, is not going to save Costa Rica's forests and other natural resources. Janzen is proof of that. He is also proof that it is necessary to go beyond science and science policy to *activism*, as in his search for funding for the establishment of Guanacaste National Park.



### *3. The Osa Peninsula within the Costa Rican Picture*

I start this chapter with my second oldest friend in Costa Rica, after Cesar Cuello. When my wife and I arrived on the Osa Peninsula, in January 1998, the first person we met (we were introduced by Cesar) was Jose Rogelio Vargas. He was director of the Tropical Youth Center of the Fundacion Neotropica, from which we would set out very early the next morning for our difficult hike through Corcovado National Park to the Sirena Biological Research Station. Since there were several other Jose's in the group, he was introduced to us as Rogelio, and that's what I have stubbornly insisted on calling him ever since.

I begin with Rogelio partly because of his position with the Fundacion, but also partly because of the role the Fundacion had played on the Osa Peninsula in the previous five years or so. There had been confrontations earlier, in the struggle to save this pristine forest from loggers, but the 90's was the time of a major campaign against Ston Forestal, the Costa Rican subsidiary of the Stone Container Corporation based in Chicago. For starters – though the story is much more complex – Ston had been given approval by the government to build a chip mill in Rincon del Golfo. It would be situated in Rincon, the northwestern corner of the Golfo Dulce that divides the Osa Peninsula from the mainland, and the chips would be used for paper production. The chips would be produced from Melina trees that Ston had planted a decade earlier. Unfortunately, according to environmentalist opponents, the mill would lie squarely within the hoped-for Osa corridor, and trucks leaving the site would also pass through the corridor. The struggle can be followed in detail in Helena van den Hombergh's *Guerreros del Golfo Dulce* (1999). Rogelio played some part in the Fundacion Neotropica's important (but

Van den Hombergh says ineffectual) scientific contribution to the solution of the problem. But when we met him his job was primarily that of an environmental educator for Osa youth and for foreign visitors like those I would later bring to the TYC, as it was known.

Rogelio is thus (or was until recently) inextricably linked with the Fundacion Neotropica and its efforts in the local education and employment sectors of sustainable development on Osa. In the *Guerreros* struggle, he had a minor part to play in the Fundacion's scientific study that was part of the anti-Ston campaign. I wrote the following paragraphs in January 2004 during that year's student trip to Osa.

Originally just Rogelio for the students as well as myself, in January 2003 Jose Rogelio became (or wanted the students to call him) just Jose. In 2004 he was nowhere to be seen. He had been director of the Tropical Center (formerly Tropical Youth Center) since I first went to Costa Rica in January 1998. In 2004 not only was he no longer director, he did not even have an office in the TYC for his Avina project. I had hoped to see him during my month in Costa Rica, but even that turned out not to be assured.

In January 2003, Rogelio had served both as our local director and as the director of an Avina project for "young entrepreneurs on Osa." (See below.) Avina ([www.avina.net](http://www.avina.net)) is a Swiss-based non-governmental organization that aims to develop entrepreneurship, especially in so-called developing countries. Here what that means is helping young people (the oldest of Rogelio's group is in her early thirties, but most are younger) to

develop sustainable projects that will allow them to make a living in non-traditional ways. There are a couple of organic farming projects, but most are organized around tourism and similar ventures, rather than the traditional farming (typically on the family farm rather than their own) or especially instead of timber cutting or any other activity that would threaten Corcovado National Park or its buffer zone all the way to and surrounding Piedras Blancas National Park on the mainland. One of the highlights for our 2003 students was meeting with the Avina group, playing soccer with them and the locals, and learning salsa dancing from two members of the Avina group. I had hoped to repeat that the following year, but something happened.

Part of the reason may have had something to do with our guides, Quira Expeditions. All the principals in Quira had once worked at the TYC, and all had left on more or less bad terms with Rogelio. He had told me that he wished them well in their venture, but he also gave me some very vague and unspecific warnings. Part may also have to do with the latest of several reorganizations of the TC after Rogelio became director of the Avina group.

Whatever, it was our loss, and I felt sad about it.

This sad sketch gives a lopsided picture of Rogelio and his contributions to forest protection on the Osa Peninsula. Until he started the Avina group, his role had been primarily that of an environmental educator – and he could claim modest successes in that endeavor. For example, my students were always impressed with the focus on

teaching future generations about sustainable development. In 2003 they were equally impressed with the vitality of the Avina group of young entrepreneurs. Apart from the sad experience (mostly my sad experience) in 2004, the students I have taken to Costa Rica and to the Tropical Youth Center have all gone off with fond memories of Jose Rogelio. And, for the most part, I have watched with admiration the respect Rogelio receives from Osa's good people.

The Fundacion Neotropica's efforts on the Osa Peninsula have been anything but uniformly successful. The first major venture, under an umbrella name of Boscosa (Bosques de Osa), involved teaching locals how to plant a saleable crop, palmito. Unfortunately the trees that were planted turned out to be sterile, and, equally unfortunate, the Boscosa name has stuck to the Fundacion's efforts ever since. Whenever we gringos tell locals where we are living on Osa, they say, "Oh yes, Boscosa" – not Fundacion Neotropica or Tropical Youth Center.

But none of this has dimmed the luster of Rogelio's reputation on Osa, and the Avina group is likely to enhance it.

I already mentioned the campaign against Ston Forestal. I'd like now to give brief sketches of some of the other persons and organizations – in addition to the Fundacion Neotropica – that were involved in that mostly successful struggle.

Helena van den Hombergh is the author of *Guerreros del Golfo Dulce: Industria Forestal y Conflicto en la Peninsula de Osa, Costa Rica* (1999). This is a book for wider circulation based on her doctoral thesis at the University of Amsterdam in the Netherlands. The work was supported by the Netherlands Foundation to Promote Tropical Research. Earlier, van den Hombergh had published two books: *Gender, Environment and Development* (1993), and *Gender and Land Use: Diversity in Environmental Practices* (co-edited, 1997).

*Guerreros* attempts to be fair to all parties, including the “heavies” of the story, Stone Container Corporation and its Costa Rican subsidiary Ston Forestal; but Van den Hombergh comes across as unabashedly sympathetic with the anti-Ston activists, some of whom had strong Marxist-environmentalist backgrounds. She is particularly sympathetic toward Maria del Mar Cordero – who, along with activist companions Oscar Fallas and Javier Bustamante, died (and may possibly have been assassinated) just a few days after the (partial) victory over Ston. Here is her account:

The next day [December 3, 1994], after meeting with a few groups, members of AECO [the Asociacion Ecologista Costarricense], local activists, and I went to a waterfall to swim. AECO members Maria del Mar Cordero, Oscar Fallas, David Maradiaga and I jumped in the water. After a short time, I was afraid I was going to get sunburned, so I moved to the bank of the river; but Maria and Oscar were tireless. Oscar climbed higher and higher on the slippery rocks while fighting against the force of the water. Maria followed him, but not before having

played a game with the little girls who had come with us; she carried them on her back from one side of the river to the other as though she were a turtle. From the river bank I watched, but grew fearful; I was afraid they would fall. But no; not that day.

They did “fall” three days later, when a fire destroyed their house. On December 7, Oscar and Maria died, together with Javier Bustamante, another AECO activist (my translation; p. 22).

Max Koberg – manager of Ston Forestal and its chief spokesperson, but also a member of the Costa Rica Legislative Assembly – spoke out repeatedly for Ston’s interests, not only in the Assembly but in public meetings, for example, in debates with the activists in Osa (pp. 87, 260-261, and 268).

Rene Castro (I know little more about him) became the environmental minister, shortly thereafter, under the new (Liberation Party) Figueres Olsen administration. It was he who oversaw the satisfy-everyone solution – something uniquely Costa Rican. It allowed Ston Forestal to move its plant across the Golfo Dulce to the town of Golfito (p. 87).

Professor Gerardo Budowski, later a well known Costa Rican environmental scientist and peace activist, took up the cause of Ston; he spoke out in favor of tree plantations in the name of economic development in the blighted Southwest of Costa Rica (pp. 212-13).

It was, however, the scientist Heinz Hartmann, of the Universite Blaise Pascal in France, who produced the definitive study of the ecology of the Golfo Dulce (1994) that turned the tide against Ston. Hartmann's study convinced many that the gulf had all the characteristics of a fiord – a tropical fiord, of which there are said to be only four in the entire world. The gulf has a deep interior pool, with a depth greater than 200 meters, and an exterior pool near its mouth with a depth no greater than 70 meters. Such a topography produces a reduced water circulation, and guarantees that pollution problems will only be exacerbated over the years. Any pollution from a mill at the head of the gulf would be disastrous (p. 228).

The campaign against Ston Forestal (which is now a Costa Rican company rather than a subsidiary, and now provides wood for pencils in a plant on the mainland side of the Golfo Dulce), as well as the middlingly successful efforts of the Fundacion Neotropica, are now part of the past.

We next turn to Mario Boza's sidekick in the founding of the national park and SINAC systems, Alvaro Ugalde. He faces the future and he *might* turn out to be Osa's Janzen-like savior, though that is by no means assured.

Wallace's *Quetzal* has maybe 20 references to Ugalde in the index, some of them giving a very personal view of a voluble talker, an enthusiastic defender of the Costa Rica parks system but also a defender of nature more generally, as well as a tough opponent in a confrontation. In 2002 at Sirena, with Jose Rogelio doing the introduction, I met

Ugalde and can confirm some of these impressions, just on the basis of a five minute conversation. I have also heard more about him, in my visits, and one can check the website of his foundation, CRUSA (Costa Rica-USA) to add detail.

In 2004 I heard more about Ugalde as the administrator of ACOSA, Osa Conservation Area – and it was not all good. But there have been positive changes. For example, park guards were in evidence at Sirena during our 2004 student trip, and they almost kept our guide, Aider, from fishing. Some of what I heard was about Ugalde’s fundraising efforts for Corcovado and the corridor. In addition to the added guards and patrols, a much-needed new research facility is being built at Sirena as well; or at least they were bringing in materials and preparing them, so that actual construction could start soon. (I guessed that the building would be finished when our student group arrived in January 2005, but it didn't happen.) Ugalde had already won much praise for his earlier efforts, alongside Boza, in building the park system.

An Internet source provides the following interview (see [www.eco-index.org/new/record/2004/january.cfm](http://www.eco-index.org/new/record/2004/january.cfm)):

*Interview with:* Alvaro Ugalde, Director of the Osa Conservation Area, National System of Conservation Areas, Ministry of the Environment and Energy, Costa Rica.

Date: December, 2003

Interviewed by: Katiana Murillo

Known as one of the architects of Costa Rica's system of protected areas, Alvaro Ugalde has twice been director of the country's National Parks Service, a post he held for a total of 14 years. He moved on from the government to administrative positions with the UN Development Programme, and later the Costa Rica-United States Foundation (CRUSA). Last February, Ugalde returned to government service to take charge of the Osa Conservation Area – known by its Spanish acronym, ACOSA – in the country's southern Pacific corner.

The nucleus of ACOSA is Corcovado National Park, which covers a third of the Osa Peninsula and is home to such endangered animals as the jaguar and scarlet macaw. Together with the contiguous Golfo Dulce Forest Reserve and Piedras Blancas National Park, on the other side of the gulf, Corcovado protects the last significant expanse of rainforest on the Pacific coast of Mesoamerica. Ugalde, one of the founders of Costa Rica's famous national parks system, was instrumental in Corcovado's creation in 1975. Since leaving the helm of the Parks Service, he has collaborated with various conservation projects, among them the Osa Biological Corridor: an effort to reestablish a forested connection between Corcovado and Piedras Blancas National Parks, and to promote sustainable development in the area's communities. We spoke with Alvaro Ugalde about the challenges he faces as director of ACOSA, and the future of the biodiversity in the Osa Peninsula and nearby wilderness areas.

Question: Why is Corcovado National Park so important to Costa Rica?

Ugalde: Fifty percent of the country's biodiversity is found there – which is some two percent of the world's total biodiversity. In biological terms, it is an exceptional area – it has high endemism and is a meeting point for species from North and South America. The creation of Corcovado was Costa Rica's response to a movement to save the world's rainforests during the 1970s. The park is the magnet that draws everything else to the area. Without Corcovado, the macaws and other remarkable animals would disappear, and with them, the direct economic benefits that the park provides the local economy.

Q: What are the principal threats to the park?

Ugalde: Out of ignorance, we created a park that is too small. At the time, we thought it was gigantic. What the years have proven, though, is that Corcovado is very small in terms of the area required by the biodiversity it contains, especially when we talk about critical species such as the jaguar, peccary, and harpy eagle. The isolation of Corcovado from other tracts of healthy forest exacerbates this problem. In the past, we erroneously assumed that the Golfo Dulce Forest Reserve was going to be well administered. But it was pillaged, and the pastures that were created broke the forested connection between Corcovado and Piedras Blancas National Park. The fragmentation of the reserve together with an increase in hunting became the greatest threats to the Osa Peninsula's biodiversity. The government had also drastically cut protection of the area in recent years.

Q: How viable is the proposal to establish the Osa Biological Corridor?

Ugalde: For me, the most important issue isn't what has been damaged, but what is going to be done from here on. Because repairing a biological reserve is theoretically easy. You leave nature in peace, you pull the cows out of a pasture, and in 10 years, you have the beginnings of a forest; and in 20 years, you have a forest. The challenge is that no species disappear, because it would be possible to have an Osa with good forest cover, but without fauna, you would have what is called an "empty forest." The task of restoring the Golfo Dulce Forest Reserve is an enormous one, and it requires that people be willing and capable of making it happen. I'm speaking about all the players:

government, land owners, etc. If we can agree on the means, the reserve will be restored, but hopefully it will be done with jaguars. They are a banner species for the Osa, and also one of its most endangered (a population of less than 100, according to studies) If we can't stop the hunting, those 100 jaguars won't last long.

People's mentalities have changed. They want to conserve, but they also want to live, and the challenge is to find ways for them to improve their lives while conserving. I would say that there is quite a bit of forest, and that it holds a lot of fauna. What needs to be done is to put a halt to hunting, and put into practice the programs that will restore and maintain the forest. We already know what's needed: payment for environmental services, private reserves, and ecotourism.

This is the main premise: we first need to put a stop to hunting in the park, which has been one of the measures we've taken since I arrived in this position in February 2003. Hunting reflects a lack of opportunities for local people, but it is also an indication that the park lacks proper management. I'm talking about stabilizing (wildlife) populations within the park first, then continuing the struggle in surrounding areas.

For that part, we need optimism, education, work with local people, and money to pay for services, or buy forests from people who don't want to conserve them. It also requires the completion of a land-use plan for the forest reserve, so as to determine how future funding can best be spent. We also need to straighten out the land tenure situation, because a lot of people still don't have titles for their property. The thing is, even though nature is key to the Osa's economy, there are sectors that don't receive any economic benefits from conservation and ecotourism. This is the big challenge: how to democratize the tourist dollar in the Osa Peninsula, to reach a point where more people are earning something, and taking better care of nature.

Q: What kind of relationship do local communities have with the park?

Ugalde: I think that now the communities are proud of Corcovado. The wounds of resentment made by the park's creation 30 years ago have healed. I feel that the people of Osa are open to the general concept of conservation. Are there lots of disagreements? Of course. Do people not trust government? Sometimes, but not only in the Osa, but in other areas as well.

For communities on the agricultural frontier that are struggling to meet their own basic needs, it is difficult to forgive the failures of past governments – the abandonment and broken promises. Nevertheless, there is a general consensus that the Osa has to be taken care of, and that the best way to save it is through tourism. Today, nobody cuts down a patch of forest to plant rice and beans on the steep slopes of the Osa. It is understood that the peninsula is extremely fragile, and that we have to learn to exploit it without altering it too much.

Q: Do you think that in order to preserve a protected area's biodiversity, it is more important to train and educate nearby communities, or is it better to invest directly in the protected area?

Ugalde: We have to do both things. The key is to balance the investment. In the beginning, we invested more inside the area, because the goal was to get the park functioning, so that private investment could follow in its surroundings, and that's what has happened.

However, you can't say that economic improvement in Osa alone is going to save the species; it has to go hand-in-hand with more efficient management of the protected areas, with education and better incomes for the families living around those areas. For me, investing in the capacity of the communities is essential. But people resent it when organizations show up, talk, make promises, and families in rural areas end up as poor as they were before. Without a doubt, there needs to be a high level of investment in the communities, more than there is now.

Ensuring that people become educated and that money reaches their pockets can't be achieved from one day to the next. We've been working for 30 years, and things are still moving slowly. But a well-protected park is a guarantee for the communities while they learn to use their resources in a more sustainable manner, such as through tourism.

Mechanisms for payment of environmental services would be more effective if they were more stable, more long-term, and they reached more people, such as indigenous communities, for example. Things aren't so simple, though, because there are individuals who want to log, and the Ministry of the Environment and Energy is incapable of controlling illegal logging. I think that it would be difficult to help local people rise out of poverty without paying them for environmental services, because not everyone is ready to become involved in ecotourism.

Q: How can we achieve a balance between sustainable and unsustainable activities taking place on the peninsula?

Ugalde: That isn't an easy question to answer. ACOSA is, on the whole, a region with limited services. If I say that everything we are doing is sustainable, but the dollars aren't reaching the poor majority, then we're not pulling it off. Osa has the potential to become an economically and ecologically self-sufficient region. There are misguided projects, though, and we need to see how we can re-direct

this wave of development projects that don't respect the environment, or the people, because the temptation to trample the environment in the name of employment is very great. We want tourism to come to Osa as much as the investors do, but what we don't want is for it to be turned into a degraded, artificial place.

In other Pacific Coast areas, such as Dominical, there are environmental problems related to tourism projects. There's a lack of management and coordination between the municipality and the environment ministry and abuses by investors who have built on steep slopes of the coastal mountain range. This is dangerous, and tends to be environmentally unsustainable. There have been plenty of accusations, but few prosecutions. The judiciary's interpretation of environmental infractions and how they should be punished remains very weak, with little importance given to environmental infractions. This is also a big problem in Osa.

Still, small projects are the predominant trend in the area's tourism, and Osa has a lot of potential for ecotourism development. If there is a little more coordination between the municipalities, the environment ministry, and the tourism institute, it is possible.

Q: What is the strategy for attaining the sustainability of Osa's protected areas?

Ugalde: We're working on two levels: The Osa Conservation Area is raising its own funds, and the National System of Conservation Areas is trying to raise funds on a national level for the payment of environmental services. It depends on

whether the government manages to raise water and electricity rates in order to invest part of the funds in ecosystem maintenance.

We're betting that the country will go ahead with a payment for hydrological service, the bulk of which should go to protected areas, as well as payment for water pollution, and the installation of a mechanism by which the tourism industry pays for the services of biodiversity and scenic beauty. None of this is being charged for now. We believe that a portion of water revenues should go to support the maintenance of wildlands. I think that this will start within a matter of months. It would be a sustainability tax. We are always going to need water, whereas tourism fluctuates more.

We need greater fundraising efficiency than the Legislative Assembly has granted us through the forestry tax and protected area entrance fees. We also need to be more efficient in our use of funds, and the development of a capacity for ACOSA to raise its own funds. This is the focus of our campaign for \$30 million to create a heritage fund, \$10 million of which would go toward establishing heritage fund with the goal of improving protection of Osa's parks and reserves, \$10 million of which would be used to settle debts with the owners of land within Piedras Blancas National Park, and \$10 million of which would be used to pay for environmental services and for encouraging ecological easements and private reserves.

This won't resolve everything. The campaign could fulfill just a small part of ACOSA's needs, which will be billions over the years, but we are hoping to

generate funds through the payment of services, admission fees for the areas, and through a change in mentality – the Osa's hotels and other tourism activities also need to contribute much more to conservation.

(End of interview)

So the struggle to save Corcovado National Park, as well as its buffer zone and the corridor linking it to Piedras Blancas National Park, is ongoing. But as I found out in 2006, Ugalde had decided to resign as head of ACOSA.

#### *4. My Efforts in Osa*

At last I come to my home-away-from home in Costa Rica, the Osa Peninsula and the ongoing efforts – or lack thereof – of the good people there to deal with sustainability issues. Most of the people I have come to know there have at least some interest in protecting Corcovado National Park -- if not its surrounding buffer zone. My only contributions to the effort, so far, have been to bring groups of about twenty North American students there for two weeks every January. (We did try to form a group, Amigos de Corcovado, to raise money to help out. But it later got transformed into no more than a student group to do a reforestation project in the buffer zone; and finally the USA foundation was dissolved in 2005 because Ugalde's CRUSA and other groups were already doing everything we had hoped to accomplish.)

January 1998: When I first arrived in Osa -- my wife and I had been invited by Cesar Cuello to see firsthand the wonders of the peninsula where he was then working -- I had no idea of doing anything to help out there. It was supposed to be just the beginning of a tourist trip through Costa Rica -- an ecotourist trip, we hoped and expected, but no more than that. We had hosted Cesar in the USA several times, and he was reciprocating in his adopted country. We did end up seeing a number of sights throughout the country, including Arenal Volcano with its touristy Tabacon lodge and hot springs (we stayed at a place we found to be much better, Arenal Paraiso, where we enjoyed twenty minutes of fiery lava flow at one o'clock in the morning) and nearby La Fortuna waterfall; Lake Arenal and the beautiful Arenal Botanical Gardens alongside it; a nice Corobici restaurant next to the river of that name flowing down from Lake Arenal; and Jaco beach, to let us experience Costa Rica's beaches. But nothing prepared us for the wonders of Sirena

Biological Research Station in the middle of Corcovado National Park on Osa, and no memory of the country stayed with us longer than the memories of hundreds of Scarlet Macaws flying over our heads, the Howler Monkeys outside our tent early in the morning and late into the evening, and previously unimaginable birds and flowering plants and the forest that is Corcovado. We had, we thought, very nearly killed ourselves on the hike getting there from the Los Patos station, but the paradise that is the Sirena station more than made up for it.

We did the hike (it was grueling for us) in the company of guides from the Tropical Youth Center of the Fundacion Neotropica. We escaped by small bush pilot plane to Puerto Jimenez, while the guides -- and Cesar -- did the hot and dangerous hike out along the Pacific Ocean to the other entrance to the park at Carate. The whole adventure introduced us to the TYC staff, with whom Cesar was working closely, as well as to the supporting agency for all of them, the Neotropica Foundation. But in just a few short days, and with little to tell to us what they were trying to do beyond Cesar's explanations in our long rental car rides to and from Osa, we had no idea of the urgent needs of the poor people on Osa. We were just marveling at Corcovado's wonders, briefly experienced, which is what happens to most tourists who manage -- usually with similar difficulty -- to get there.

In Puerto Jimenez, we were able to see a little bit of the hot and dusty town, to eat at Carolina's restaurant which we quickly discovered to be the favored haunt for other mostly gringo tourists heading into the park, and to learn how generally isolated the town

is, in spite of its small airport and ferry run across the Golfo Dulce to the more with-it town of Golfito. I admit that our impressions weren't generally good, that day, and we definitely didn't feel any strong need to help anyone there.

With Cesar, in our long rides through much of the Pacific slope side of Costa Rica as far north as the Rio Corobici, conversations led to talk about beginning to bring undergraduate students to experience Costa Rica's forests (and efforts to save them), in future years. But for me, that idea was supposed to have a different payoff. I wanted to establish graduate student research links, with a focus on environmental policy, and the undergraduate program -- supported by the dynamic Study Abroad program at the University of Delaware -- was supposed to do no more than provide me a regular home base in Costa Rica. I still had no idea of trying to do anything, myself, to help in save-the-forest efforts.

In this chapter, I try to explain how that inauspicious beginning led to my getting actively involved in rainforest protection efforts, not only on the Osa Peninsula but, to a lesser extent, in other parts of Costa Rica as well.

In 1999 I led my first group of eight undergraduate students to Costa Rica, where we spent more than two weeks on Osa and specifically at the Tropical Youth Center. We were joined there by another group, five graduate students from the University of Delaware's Center for Energy and Environmental Policy plus one more undergrad from

my environmental ethics seminar. They were in Costa Rica only ten days, but most of that time they spent with us on Osa, including our hike to Sirena.

While the whole group, undergrads and grad students, were there, we made what would turn out to be the first of our visits to local communities. The community we visited on that occasion is called Rancho Quemado, and it's a story in itself; among other things, that visit taught me -- as well as the students -- much about the level of poverty and desperation among the people who live on Osa.

The very name of the town is significant. It means "burned community center." When the logging companies first came to Osa, in the 1960s, they tried to expel settlers from the land they wanted to clearcut. They were successful here, in the sense that a fair number of homes were built, plus a rude community center building. But the men of the town kept returning to the forest, which they saw as their birthright (at least their squatters' right), for hunting among other things. In retaliation, the loggers came one night and burned the *rancho*, and the name stuck: Rancho Quemado.

The community is fairly extensive in acreage (or hectareage), and aside from a rebuilt community center, a school, a church, a few stores, and a soccer field, it is mostly small farms. At the time we first visited there, the farms were barely above the subsistence level, though there had been a proposal to grow cash crops -- and large tracts had been leased or purchased by Ston Forestal to grow melina trees, plantation style.

The cash crops were a proposal of the Boscosa (*bosques de Osa*) project of the Fundacion Neotropica. At least some of the farmers would grow *palmito*, a species of palm tree used commonly in Costa Rica for hearts of palm, ordinary enough but enough of a delicacy to be profitable. Unfortunately the trees that were planted turned out to be sterile. And the road to any conceivable market was long and arduous, not to mention that there were few trucks that could be used for shipping.

So subsistence farming continued to be the norm, along with a wait for Ston to start harvesting melina. (Our guides told us that that would actually be a disaster, because clearcutting would leave large patches of what used to be native-tree jungle a wasteland.) Our group would return the next year to find that a significant percentage of the young men were leaving Rancho Quemado in search of jobs a long way off. Still later, when we passed through the community on our way back to the Tropical Youth Center, we could see that there were, finally, some efforts underway to turn the village into a tourist attraction -- though the roads in and out, from either west or east, continued to be long and treacherous. And what my students saw would not seem very promising as an attraction for tourists.

In 2002 we didn't go back to Rancho Quemado but instead visited a man named Antonio's farm in the town of Banegas -- on the way toward Quemado from the TYC but off on a side road. (We returned there again in 2004.) At some point we saw workers putting up electric poles, but at the time there was no electricity and no telephone service to Banegas. Antonio's farm was as different from those in Quemado as it would be

possible to imagine. He had two horses and about a dozen cows, one of which he would occasionally slaughter for meat to sell to neighbors, including relatives on nearby farms; there were chickens and pigs and a Scarlet Macaw, more or less a pet but flying free, that had set up a family with a male (at that moment the male had left); he had every type of fruit and vegetable native to the area growing in about a hectare-size garden; his house, built almost exclusively with his own hands, was two-story; and Antonio had piped water from the mountainside, more than a kilometer, so that the family always had fresh water. Antonio's wife was as industrious as he was, and they had a teenage daughter, equally impressive, who was agonizing over whether or not to go off to high school -- almost unheard of in that area. In short, Antonio's farm was totally self-sufficient, including a small local market for meat or other produce if the need came, as close as I could imagine to being the near total opposite of all but one or two farms in Rancho Quemado. And neither Antonio nor his son, who helped out but also worked on other farms in the area, was likely to feel a need to move elsewhere. Not only no need but no desire; one of the students asked, and Antonio, in a translation by one of our guides, said he would never consider moving.

This came to be our pattern over the years. We always visit Puerto Jimenez and La Palma, the two biggest towns on the peninsula (in round numbers, a little over 2,000 and 1,000, respectively), and by 2005 we had visited quite a few families: right around the TYC (many family members worked there) and in the corridor area linking Rincon to Chacarita (the service station on the Interamerican Highway), as well as La Gamba near the entrance to Piedras Blancas National Park (the mainland end of the proposed

biological corridor to protect Osa's big cats and other large animal species), and Drake Bay.

We have never gotten to the rich tourist hotels -- for example, Lapa Rios -- south of Jimenez on the road to Carate, the southern entrance to Corcovado; and all we have ever seen of Drake is to have lunch with local families, never visiting the rich tourist hotels Drake is famous for. Once one of our students discovered that her mother was vacationing in Drake, at the classy Aguila de Osa, and she visited her there; and once, in 2001, the United States Ambassador to Costa Rica, Christopher Dodd -- also vacationing in Drake -- was asked to make a stop at the TYC, where the students got to meet him and his entourage.

So generally our contacts are with ordinary local people, not rich (or middle class) tourists. And the closest we have ever come to loggers was a chance meeting some students had in a local bar; though once I did get into a heated discussion with a family on the local public bus to Jimenez who staunchly defended their right to sell trees.

If there is a failing in my program, it's that students one year don't know what students from previous years have experienced; but I don't know how to solve that problem.

Educators at the TYC (often our guides) do give the students one lecture on the socio-economic situation on Osa. But that is classroom teaching, not experiential learning. The facts presented (based on a limited sociological survey in the late 1990s) include: a

population of about 12,000, the largest number living in and around Jimenez and La Palma; a stratified hierarchy of farmers, ranging from an income above \$4,000 a year, through a middle level between \$2,000 and \$4,000, to a day laborer (or unemployed) would-be farmer gaining less than \$2,000, often less than \$1,000; almost no social life except soccer (girls usually just watch) and an occasional dance (they say *discoteca*) in Jimenez or La Palma; schooling through the legal sixth grade, though many kids drop out to help on the farm after the fifth grade, and few -- especially few girls -- go to high schools in La Palma or Jimenez. Obviously in this situation there are few chances for girls to marry anyone other than neighboring farm boys. And, finally, because the peninsula is split between two cantons, all official business must be conducted in either Golfito, on the other side of the Golfo Dulce, or in Ciudad Cortez, near Palmar Norte on the Interamerican Highway two or even three hours away.

In the early days of the Tropical Youth Center, there was an environmental education program, involving both weekend visits by kids to the center and visits by educators to the 20 or so community schools, including the high school in Jimenez. But by the time of our January 2003 trip this program had been seriously cut back. When it was still operating at full strength, our students were impressed with the evidence they saw at the center, though they never actually experienced either a weekend youth program or lessons in the small local schools. (It's summer vacation time for Costa Rican kids when we're there.)

In 1999 with my first group of students, the first shock was the beauty of the site and the grounds at the Tropical Youth Center. My wife and I had been there only briefly, late at night before the hike to Sirena, and overnight afterward, before leaving with Cesar right after breakfast. We had seen nothing of the new cabins, rancho (outdoors meeting area), dining area, new administration building. And we had learned nothing about the history of the place. It was originally the headquarters of the Canadian lumber company that was going to clearcut Corcovado before the park lands were expropriated by the Costa Rica government -- for something on the order of \$250K. The managers had laid out the terrain, including site pads in a pentagon arrangement with connecting walks, a water purification system with a small dam upstream in the creek. The road coming in had been the rough runway for small planes to land. There were pieces of heavy lumbering equipment left behind. And someone -- possibly the lumber company -- had begun a small reforestation project behind the complex, which provides a nice short hike through the tertiary forest.

There is a story about how the site passed into the hands of the government, along with the expropriation, then into the hands of the Fundacion Neotropica and its Boscosa project to help the locals learn how to reforest and otherwise do beneficial things (it failed miserably), then to become the Tropical Youth Center of the Fundacion Neotropica (ever after to be identified by the locals with Boscosa). I actually know little about these various transfers of management or ownership. But the actual management of the operation, when I started going there, was in the hands of Jose Rogelio Vargas, and he seemed to me to be doing a great job.

The mission of the TYC had also changed, to become primarily environmental education for local young people, including visiting environmental educators going to the small one room schools that dot the Osa Peninsula's rural areas. The educators also visited the local high school in Puerto Jimenez, and invited young people to come to the TYC for weekend workshops. (Over several years, I would watch this once-promising venture fall on hard times: educators not welcomed in the schools, a breakdown of relations with the high school in Jimenez, and so on.)

The second shock was the local people around the TYC. Many of them worked there, so you might expect generally good relations. But at the surface level, my students and I experienced nothing but smiles and waves and a congenial reception, not only in the immediate neighborhood but all the way through Puerto Escondido to La Palma and further on to Puerto Jimenez.

The students probably didn't, though almost from the beginning I felt an undercurrent of resistance, and later I would find that some neighbors -- including two families living right next door (especially the male heads of those families) -- were defiantly hostile; one man, in particular, took great pleasure in hunting small game around the place, and we could often hear his rifle shots. We could also hear, not too far away, the sound of chain saws as some locals persisted in felling trees, probably illegally. It was attitudes like these that the TYC hoped to change by way of educating the young people in more environment-friendly behaviors.

In 2000, we were lucky to get an expert talk by Ministry of Environment administrators on how the locals cheat on the forest management plan, enlarging their cultivated acreage row by tree row, and how tourists (like us) do as much damage to Corcovado as we do to preserve it. Our group joined with another University of Delaware group -- led by entomologist Doug Tallamy -- in the hike to Sirena; one memorable event was that the entomology students happened to see a spectacular site at the mouth of the Sirena River: a large school of sharks, feasting at high tide on fish swimming in the river toward the ocean. so, roaming This was also, because some students and I had injured ourselves either on the hike in or on hikes around Sirena, the first boat trip out of Sirena to Drake Bay, with magnificent views including sharks, though adventuresome females still chose to dive into the Pacific Ocean. My daughter Angela (one of the students that year, but who had to get back to her classes at Rice University in Houston) and I took a flight from Puerto Jimenez to San Jose, with really good view of terrain below all the way to airport at Alajuela. I rejoined the group at Manuel Antonio, with my wife, who had wonderful birding experiences there -- more than 25 *new* birds while lolling around the Cabinas Espadilla pool! That continued in Monteverde, with the fabled Coki as guide, including our "assured" quetzals but also dozens of emerald toucanets when, the next day, we horned in on another of Coki's groups. Back in San Jose at the end of the month, we also added a side trip -- because we had extra money and the students could go for half price - to the Teleferico ride into the canopy, an educational experience in terms of lore about the layers up to the top, at the other side of Braulio Carillo. That day there also happened to be a large pack of coatis, 30 or so, around the grounds at the gift shop and restaurant

there. This too was a memorable experience, as many tourists say, but we could certainly second the motion. This was the only one of my groups to go to Poas Volcano and actually see the crater.

In 2001, we added northwest Costa Rica to our itinerary, centered in the town of Liberia and the Hotel Boyeros at the main intersection, with its swimming pool surrounded by mango trees. It was also our first visit to Santa Rosa National Park, where we learned about Dan Janzen's efforts to add on Guanacaste National Park to create the "largest natural tropical biology laboratory in the world." We visited the mini-Yellowstone at the foot of Rincon de la Vieja Volcano, and the students tried to climb to the crater. They wouldn't let me go, too old, and that year they didn't reach the crater -- though later groups of students would. Several students chose not to climb to the crater, and instead joined me for a strenuous hike to a beautiful 70-foot waterfall with a pool to swim in at the bottom.

By 2002, our itinerary had become settled, so that year and 2003 followed the same pattern. To give some idea of what the students and I do on Osa each year, I have chosen to use material from my journal for January 2004. (The students also do a journal.)

I begin the account with the itinerary handed out to our students by Quira Expeditions, our guide group. I add a few modifications and comments, but what follows is based on Quira's itinerary for January 2004.

Friday January 2: We arrived in Costa Rica and were picked up at the airport in Alajuela by Alberto and Aider of Quira Expeditions, in a hired microbus, and taken next door to the very North American Hampton Inn. We ate dinner all together at the Rosti Pollos restaurant, next door to the Hampton. Many students went out to bars in Alajuela.

Saturday January 3: We started early on the long trip south to the Osa Peninsula, with stops along the way at mega superstore in Cartago; at *paramo* above tree line near Cerro de la Muerte (short lecture by Alberto); and for lunch at the beautiful restaurant Mirador Vista del Valle, surrounded on every side by flowers, including orchids -- which was as beautiful as ever but had no view because of the clouds. We didn't arrive at the Tropical Center (formerly Tropical Youth Center) until 7:30 PM, but were welcomed with dinner and a few comments about expectations (few were spelled out this year, except by me). Guides Alberto and Aider led the way to a local bar in the evening; the first of many such trips for a good many of the students.

Sunday January 4: Presentation on dangerous and annoying critters of the tropical rainforest, given by Pablo, a young biologist hired to do the presentations this year; then our first hike, on the community trail, to a waterfall, with educational "labs" along the

way; lunch, followed by student presentations on what they had learned; an evening presentation on the natural history of Osa.

Monday January 5: Introduction by Pablo to the social history of CR and Osa, then visit to Don Antonio's incredibly self-sufficient farm in Banegas. (I chose to go into Puerto Jimenez with Luisa, the new director of TC; see below.) A few tips on Spanish in the afternoon. Video "Creatures of the Black Lagoon" -- National Geographic type presentation of Corcovado National Park -- in the evening.

Tuesday January 6: Trip to La Gamba community, beginning with hike to Avellan waterfall (see below), then lunch with community leaders, including history of the community and Fundacion Neotropica's work there.

Wednesday January 7: Morning trip to Playa Blanca, on the Golfo Dulce near La Palma, where students experienced the mangrove forest, then went swimming in the gulf; the afternoon exercise was cooking on traditional wood burning stoves with local host wives (all TC employees), and resulting main dishes or desserts were taken back to the TC for others to share.

Thursday January 8: In the morning there were research projects in the form of visits to two biological corridor farms. In the afternoon there was an introduction to local crafts by Manuel and Guissell Bianco. (For special reasons, I include the last name of this family; see below.)

Friday January 9: All day trip to Puerto Jimenez, going by public bus, returning in a rickety bus hired by Quira; the students had bad luck trying to get cash at the only bank in town, and they mostly just hung out and had lunch, then swam in the gulf.

Saturday January 10: Presentations of research results from the two corridor farms in the morning. In the afternoon there was a meeting with a few Avina project leaders (see next chapter), followed by soccer game with the locals, where our students did surprisingly well. The evening provided a wild treat: Latin dance lessons at TC, then off to what was billed as a “snow storm” dance (frequent blasts of soap bubbles) at a bar in La Palma -- including incredibly loud music, lots of interactions with Ticos, men for the women students, women for the men.

Sunday January 11: We left the TC for Merlyn Oviedo’s Danta Corcovado lodge in Guadalupe outside La Palma. (I include Merlyn's last name because he advertises internationally for his lodge.) Only a small group did the planned hike around the nearby recovering forest, with lots of tree lessons by Alberto. Many went into La Palma or back to Playa Blanca in the afternoon. In the evening Merlyn provided an outdoor barbecue, Tico style.

Monday January 12: We did a long and (for me) difficult hike (good practice for the following day) to the Guaymi indigenous reservation that the government established, as an add-on to Corcovado, a few years after the creation of the park; after a talk by the

leader of the community, there was much purchasing of indigenous artifacts, followed by a simple lunch prepared by the extremely shy women of the community. Back at Danta Corcovado, we had a delicious soup of leftovers from the previous night's barbecue, followed by instructions about the Los Patos to Sirena hike through Corcovado to come the next day, and early to bed.

Tuesday January 13: Finally, the big hike to Sirena, arriving at 4:00 PM after starting at 6:00 AM with a ride to the entrance of the park on a wagon pulled by a tractor. Nozomi Okubo (a Japanese student in the Center for Energy and Environmental Policy program at the University of Delaware, and one of two graduate students who accompanied us that year) had cut her foot swimming in the gulf the previous Wednesday, so she went with me by boat to Sirena from Jimenez. Much grousing at the end of the hike, though all denied it was hard.

Wednesday January 14: The first hike at Sirena is nominally to swim in the Rio Claro, but it's usually the first opportunity to see lots of wildlife; however, this year it was something of a disaster because many of the students had awakened miserable because of little sleep in their rustic quarters. Most spent the afternoon just getting used to the big front porch of the lodge, from which many animals can be spotted, and to the place in general. There was a soccer game with park employees, after which some went to the beach for a beautiful Pacific sunset. Aider led a night hike to the beach to try to see jaguars (they didn't) and crocodiles (they did, with eyes glowing in the dark -- also a couple of sharks).

Thursday January 15: This time the hike, about 5 kilometers on the Espavel trail, got a much better reaction from the students, and again they saw crocodiles in and on the bank of the Rio Sirena. What-they-had-learned talk in an auditorium after dinner, then parlor and card games, storytelling, etc.

Friday January 16: Now we were off to Drake Bay, by boat, after watching an incredible feat of unloading materials for a new research building under construction -- quite a task to get into the boats in the surf (I fell, getting totally wet), but it's a beautiful trip, this time including a school of dolphins. We had a delicious fish lunch at boatman Emiliano's house; then went by taxi back to the TC to pack to leave the next morning.

I should add something here about what a taxi means on Osa. Most commonly it is a large pickup truck, with seats -- and sometimes a cover -- in the back. The students love their experiences in Osa's taxis almost as much as any other part of the trip.

End of the Osa part of Quira's itinerary. I don't include the rest, for the second half of the trip in other parts of Costa Rica, but I can say this much. We go on up the Pacific slope of Costa Rica to compare and contrast different levels of forest protection in three different *areas de conservacion* (conservation areas) -- three of the SINAC conservation areas in Costa Rica: ACOSA (Osa), Mid Pacific (for us, centered on Manuel Antonio National Park), and Guanacaste.

Our first stop is Manuel Antonio, a tiny remnant of what was once "humid," not a tropical rainforest, now turned first into banana then African palm plantations. There the students experience the magnificent beaches that were somehow saved, but they also see what happens to large mammals -- especially monkeys -- as they are cut off from escape and lose their genetic diversity. They become almost like animals in a zoo, dependent on humans for survival. Monkeys, for example, eat bananas from the hands of tourists, or rob their lunches on the beach.

Next we travel -- stopping along the way to marvel at the dozens and dozens of crocodiles in the mouth of the Tarcoles River -- to Liberia in Guanacaste Province. There we visit Santa Rosa National Park -- and the students get a lecture on the SINAC system -- and look across the road at Guanacaste National Park (Janzen's addition that created the "largest tropical biology lab in the world"). Then it's Rincon de la Vieja National Park, including a climb to the crater of the volcano.

That's followed by a few days in Monteverde, the Quaker-founded forest preserve that never became part of the national park system. Sometimes the students also see the other preserves that have been added on, to make the total come close to equaling Corcovado in size. But most important they experience what a private preserve system, when supplemented by tourist attractions, can do -- that, so far, the national park system has not been able to accomplish. Monteverde is a town in which everyone works -- I repeat, *no one* is unemployed -- and everyone has a democratic say (the Quaker way) in keeping things that way. My students love the tourist attractions as much as the forest preserves, but the

way the town is set up that actually supports the forest, including new plantings and additions. Some people say I should start my group's trip here, to see the best first; but I think there is an advantage (including a natural geographical progression from south to north and back toward the Central Valley) that adds to the lessons the students learn, not by being preached at but *experientially*.

In 2005 I had the least interested of all groups I've had -- I'm talking about real interest in the forest and protecting it -- but even the least interested of my students can't help learning a great deal both about the different kinds of forests and the different levels of forest protections.

Back in 2004 I had decided to modify my yearly journal by doing a set of character sketches. The country is beautiful, an incredible bounty of genetic diversity -- about five percent of the entire world's biodiversity in a tiny isthmus with a fraction of one percent of the earth's land surface (as I said earlier) -- but the people also make it very attractive to visit.

In this section, where I am dealing with ordinary citizens, things can get a little touchy. They have no idea, when I visit them -- or even in some cases work with them -- that I would ever be writing about them in a journal, let alone a book. And, as I said, I suspect that they would prefer anonymity for themselves and their families if the book were to be published for just anyone to read in far-off countries. The locals are often shy even at

having their pictures taken (not the kids!), especially if the pictures might reveal something about the simplicity of their homes and lives.

On the other hand, it adds to the authenticity of the account for potential readers -- like the students, guides, or anyone else who might at one point have met some of the same people -- if I use real rather than made-up names. So my compromise is to *use first names only*, just as the students do in their journals. (The locals on Osa, if they ever read the students' journals, would often be surprised at the way the students render their names; I sometimes have to read a paper several times to be sure they are talking about the same people I know. I will try to do better than that!)

I begin my first-name sketches with a man who has been our guide for seven successive years in January and also in April 2003 for a birding trip -- and who has become a dear friend: known to the students only as Aider. (It's hard to believe the versions of that name that I get!)

I also know Aider's mother who was once the cook at the Tropical Youth Center of the Fundacion Neotropica -- the main place (as I said earlier) where we stay on the Osa Peninsula -- so I can start with the name Aider. It was supposed to be Haider, but Spanish drops the "h" in pronunciation and it got dropped as well in spelling. Where did Haider come from? Probably a poster or a name in the newspaper; a daughter was named Cirleigh, and from the various ways people pronounce her name, it was probably supposed to be Shirley -- maybe after Shirley Temple? Most names in Costa Rica have a

vague Spanish sound or even origin, but here on the frontier some of them seem even stranger to my gringo ears.

Aider himself is in many ways as strange as his name. Small and unassuming-looking in appearance, he is prodigious in his strength and abilities. As a guide in the forest, he is unparalleled; he was first introduced to my wife and me in January 1998 as being able to “*hear* the shadow of a grasshopper at thirty meters.” Once I was alone with him walking down a forest trail when, suddenly, to our right an anteater appeared. (In general they are among the more difficult animals to spot.) What he said to me was, “I just see them in my head and they appear.” Again, though he says he has yet to see the even more elusive jaguar, he is sure he has been watched by them several times. Still another time, when our bird watching group was in Costa Rica in April 2003, he was driving down the road at the maximum speed allowed when suddenly he pulled over. Over to the left and down the bank of a creek, he said, was a Tiger Heron -- a bird that is difficult to see because of its camouflage -- and as usual he was right.

Aider is more than a little bit a ladies man, but he is also a fiercely loyal family man. To see his three children, Oscar, Celia, and Aider Jr. greet him when he has been away on a guiding trip is a sight to behold. He loves to dance and I have seen him stay out much longer than his wife Rocio approves, but I am pretty sure he is completely faithful. (And that in an area where one well known local lady was said to have had five children by five different men; even within his family it seems clear that several of the siblings have different fathers.) Aider married Rocio when he was 22 and away from the forest to

study computers; Rocio was 16. The marriage has obvious rocky spots, but it is equally obviously more stable than many in the area.

One of the rocky spots in the marriage has been instability. I have visited with the family in five different homes, all rented and all poor even by local standards. One year Rocio opened up to me about her dissatisfaction over not having a home of their own after so many years. (A sign of their different attitudes, Rocio would have been happy for Aider to move to the city and work with her brother in a butcher shop.) But finally his guide work has paid off. The group, Quira Expeditions, that is now regularly guiding our students, is prospering, and Aider and Rocio were able to get a bank loan, to open a small snack shop nearby, and to continue their computer game room, where they also sell ice cream for local teenagers. They are also building a tourist information center for Quira on their property -- though with only a sign there (in addition to three others at strategic points along the road), tourists were already stopping for information. Later on, Aider would be employed as one of the additional park guards for Corcovado that Ugalde would be able to pay for with grant money.

Aider is also, without the official title, the de facto mayor of the town of La Palma (or at least the Playa Blanca part of it). Many of his extended family live there, and he represents the citizen association -- even in San Jose, eight hours away, when they have to present town improvement appeals to the national government. The town is small -- less than 1,000 people -- and their appeals almost always go unheeded. But he goes doggedly on.

I will end with this little story. Aider is almost never injured, even in falls from great heights, but one year he had one complaint, a sprained ankle. He had hurt it in an inter-family soccer game -- the Santamarias against their cousins, the Quinteros. Soccer is the national passion in Costa Rica as in many Latin countries, and Aider is the best player I have seen on the Osa Peninsula. When you watch him compete, even in a small pickup game, you would never know that this is the same kind, gentle, funny, all-competent man you thought you knew so well.

Later addition, 2006: Aider went to work for Corcovado National Park in 2005, and by 2006 he had become the manager of one of the park stations, El Tigre.

Now to our other guide in Quira Expeditions, Alberto. My wife and I had an intriguing introduction to Alberto in January 1998 on our first visit to Costa Rica and our first hike from the Los Patos entrance of Corcovado National Park to the Sirena Biological Research Station. (I have already talked some about that hike.) The first two kilometers are impossible; the next 7 or 8 were extremely difficult for the two of us; and both of us were carrying much too much baggage for our first visit to the tropical rainforest. Alberto had been the soul of kindness to us, staying back at the end of the line and explaining with infinite patience all the wondrous new things we were experiencing. Then more or less at the midpoint of the hike, we felt that we simply could go no further. The problem is that at that point there is no way out: four hours forward or four hours back, and you couldn't even get a helicopter rescue through the canopy. I have seldom in

my life experienced such kindness. Aider carried my wife's pack in front, his in back, and Alberto added our tent to his already overloaded guide's baggage -- while both sympathized and cajoled until we decided the only way to go was forward, suffering beyond belief all the way, while Alberto continued to hang back with us and encourage us in every kind way possible. My wife never forgot that kindness, and has always kept one of the warmest spots in her heart for Alberto.

Alberto lasted one more year with the Fundacion Neotropica's Tropical Youth Center, when he was let go for reasons only Jose Rogelio Vargas (previous chapter) could explain (but hasn't, at least to me). Then Alberto opened a very nice small nature bookstore, Madre Natura, right next to the University of Costa Rica. I visited him there many times -- to meet the same kindness and warm hospitality. I never left without a gift for my wife.

When we again came to Costa Rica in 2003, for a birding trip guided by Quira Expeditions, with whom Alberto was working as a founding member, we had limited, though still positive, contacts with him. In January 2004, with Quira guiding my students, I saw Alberto as more of a take-charge person. He was positively eloquent (and sometimes too longwinded for the students) on native trees -- his first love -- as well as on plants, including medicinal plants and the way they are used by indigenous peoples in Costa Rica.

Alberto is the youngest of several children, and an older brother is in the Costa Rican General Assembly as a member of the Libertarian Party. But the most interesting family item in 2004 was his involvement with a young woman named Jessica in La Palma; he told me on the way to Osa that he was likely to move to La Palma soon -- and one day I overheard him say that he very much wants to get married. Jessica is about a dozen years younger than Alberto, and once had a project going with Jose Rogelio's Avina group; but the students and I saw the two of them together a few times and they seem well suited to each other (and to have both families' blessing).

For the rest, Alberto seemed to have a good future with Quira, and he has many excellent ideas for projects for the group. He would also love to reopen Madre Natura, maybe this time at the San Jose airport if he could afford the space.

Later addition, 2006: Alberto is now working full time as a guide for a hotel in Puerto Jimenez, and he and Jessica are still a pair.

Luisa, my next sketch, was 2004's "manager of the month" for the renamed Tropical Center, formerly Tropical Youth Center. That has been the story since Jose Rogelio Vargas turned his attention elsewhere. I don't really know Luisa well -- we were only at the TC one week in 2004 -- but I managed to observe her with a certain attentiveness and I managed to go into Puerto Jimenez with her early in our stay while the students were elsewhere. And she was, on that occasion, very open about her life story.

Luisa had two degrees from the University of Costa Rica, one in biology and the other in administration. She said she would love to be a science administrator, and she told me that she had once worked for the Organization for Tropical Studies, the premier tropical biology research institution in Costa Rica (with links to dozens and dozens of universities in the USA and elsewhere, as I noted earlier). Luisa was young to be in the position she was (mid-twenties), and she would like to pursue further studies, maybe even a doctorate. Then go into the field she loves.

Luisa is rather typical of young professionals these days in Costa Rica. Well educated, still living with her family when she is not in Osa, and spending a lot of time on week ends at clubs; she particularly loves to dance. (So she said, and there was evidence of it during our stay.)

But the point of including Luisa here at all, aside from the fact that she is such an attractive and interesting person, is what her presence there says about the TC. She admitted to me that life there was lonely and “very hard” for her. I also saw signs of self doubt about her ability to manage the place. (I guessed in 2004 that it wouldn’t be too long before she moved on, but she was still there in 2005.) If she does eventually move on, she will have outlasted all of her predecessors as managers of the month.

I already mentioned Aider’s mother, whose name is Cristina. After a brief introduction at breakfast at the Tropical Youth Center after our ill-fated Sirena hike (see Alberto story), my first real introduction to Cristina was the next January, 1999, when I returned

with my first group of students. Cristina was the excellent cook for the center, but what stood out most for me was her friendliness toward me -- an attitude that seemed a little too friendly since we had barely met her the year before. Cristina confided a great deal in me, expressing concern for the future of her two youngest children, Diego and Pablo, and she complained about her meager wages as the center's cook. (She was a really superior Costa Rican cook -- the adjective being important because she sometimes unsuccessfully attempted non-Costa Rican dishes such as spaghetti.) She had grand ideas about upgrading her place at Playa Blanca, a half mile or so down the road from the restaurant of my next sketch, Leila, where Cristina occasionally helped out. She expressed a desire to come to the USA, even to work for our family and be paid under the table; but especially she wanted to build some tourist cabins and a small snack bar for visitors to the beach.

I discouraged Cristina from thinking about the USA as an illegal immigrant, but I did end up, the next January, giving her \$100 to help her fulfill her dreams. Her gratitude far exceeded the monetary value of the gift, and she went out of her way to send a gift back with me for my wife.

I have mentioned elsewhere Cristina's somewhat unusual family patterns and ways of naming her older children. (Neither is unusual for the people on Osa.) In 2004 I was able to watch Cristina's success with her youngest sons, getting them into high school -- though only far away and possibly by having them live with their long-gone father.

The most surprising thing for me was where she was then working. At least two or three years earlier she had lost her cook's job at the Tropical Youth Center, but in January 2003 I visited her where she had been working for over a year, at the home of a rich farmer in La Palma who was also opening a very nice lodge high on a hill with a view over the Golfo Dulce. In fact, the lodge was nearly complete when I visited her, and it looked as though Cristina might have stable employment for awhile. Instead, the next year I found her working in a new snack bar that Aider and his wife Rocio had opened within the year. This was surprising because, to my knowledge, Cristina never got along very well with Rocio. Rocio did, later, complain to me that Cristina insisted on working no more than eight hours a day, while, Rocio said, her workday there and at their game room and ice cream shop seemed endless.

I like Cristina a lot, and she is still always warm and friendly toward me. But I always had a suspicion that she was friendly toward anyone who would help her with what seems to be her life project now, Diego and Pablo.

I have to be very careful with this next sketch, but to me it says much about life on Osa. There, everyone seems to know everyone else, and this is particularly true around the small town of La Palma. And Leila is better known than most. Leila is a magnet for men, and I was drawn to her like all the males of the Western shore of the Golfo Dulce when I first visited her restaurant in January 1998. I said is, but in 2004 there was no Leila. Alas, the restaurant -- Taste of the Sea -- was now closed. And this sketch is about her absence rather than her presence in the community at that time.

Leila was described, to my wife and me, along the dusty road from Puerto Jimenez long before we got to the restaurant. She had had, we were told, four children by four different fathers. Leila, when we met her, was no beauty by Hollywood standards, but her charm drew everyone, especially men. I returned to the restaurant many times, and there were always men around -- supposedly for her excellent Costa Rican cooking, though they often seemed just to hang around, drink beer, and watch the TV that hung above the restaurant counter. Charming Leila, when we met her in 1998, had a baby, Hillary, who was equally charming and probably the most beautiful girl baby I had ever seen. She could have gone to Hollywood as a twenty-first century Shirley Temple. Monica came along later, and this story is about her and her siblings.

The last time I saw Leila, she told me, with the kind of determination I could see accompanied her charm, that she was going to join her brother in Texas. There, she was sure that she could make it as she felt she had not in Costa Rica. (This in spite of the success of her restaurant and the land she planted in rice that made her rich by local standards.) So she did go, and then wandered further to Toronto, Canada -- where, presumably, she is doing as well as ever.

In 2006 I was able to talk with her in Toronto, on Cristina's cell phone, and she was as amiable as ever. And she could speak English well.

The children? Hillary is now about ten years old and lives the life of a stepdaughter with her father and his wife and family in Jimenez. The others are scattered here and there, with fathers or their grandparents in the southern Costa Rica mini-metropolis of San Isidro de El General (or Perez Zeledon) and elsewhere. I once met Leila's parents in her restaurant when they were visiting, and they were as wonderfully outgoing as their princess of a daughter. But it seems to me now, with my North American perspective -- colored by what I know about childrearing -- that grandparents can never really substitute for parents (or at least a parent). And this was borne out by one story I heard in 2004. I asked how the children were managing with their mother away -- I think it was Cristina I asked -- and I was told that Hugo, the oldest, talked by telephone with Leila almost every day (or at least very frequently), and that he was "very sad." But such is life on Osa.

As I said, Leila was rich by Osa (or at least La Palma) standards. The general run of people make do the best they can. Celina and her family are a case in point; she had been assistant or head cook for probably four of the six years I had brought students to the Fundacion Neotropica's Tropical Center, but 2004 was the first time I -- or we, the students and myself -- had the opportunity to get to know her well. Or, better than just as a generally cheerful (and improving) cook, Costa Rican style. That's mainly because Quira had built into the program a chance for the students to learn how to do traditional cooking on an open wood burning stove. (Probably as noticeable as anything to them -- and I was with the group there -- was how much smoke drifted into their simple house, which is not on the electric grid and is only lighted by candles after 6:00 PM.) Not only could we watch her work on her own turf; we actually helped out with the chores and saw

where the vegetables grow in the family garden. Celina was cheerful in every way, even while telling everyone what to do and watching over them as they (we) did it. Her way with her husband, who also helped out (which surprised me), was similar: always cheerful, even funny, but also always in control.

I had had some idea, before, about the family makeup; but it's still not entirely clear to me. There is a daughter, but except for one fact, I know nothing about her, have never seen her, and don't know whether she ever comes around. I assume she is the oldest because her son, Keylor, who is being raised like a son in the family, was then fifteen. The oldest son, Efrain Jr., does work at the TC occasionally; and Celina very proudly pointed out that he has a very attractive plot of his own a short distance away. Izaak the second son, on the other hand, could not be more of a dutiful son, and he is a truly loyal guard and all round handyman around the TC. He too has been given a small plot of land, right across from the family farm. Izaak once replied, when I asked him about whether he had ever been to the big city, San Jose: "No, and I never want to go there."

Keylor is a story in himself. More than once, he has been my guide on the local trails, especially the main trail that ends up in a very nice waterfall that our students love to visit. He is almost as natural in the woods as Aider. And I had a long talk in 2004 with Aider, on the long ride south, about how he -- and others -- might help Keylor to become a guide. At that time, Keylor was spending all his December and January vacation time fishing, usually alone -- only occasionally doing so successfully. He doesn't like school, isn't good at it, and would surely be better off if he were able to spend the rest of his life

in the forest -- both on and off the trails there. Whether that will happen is an open question, and in 2006 Keylor was back in school, and told me he was doing well.

Manuel Bianco and family are a little better off. I use the last name here for two reasons. The family is well known in the area, and there could even be an international market for Manuel's work, as I will spell out below. He is the local artisan and has lectured to our students and shown them how to do simple crafts from my very first group in 1999. Showing the students how to do crafts has mostly meant that Manuel would carve an animal figure and get it close to ready for painting, so that the students (and I) could sand, put the final touches on, and paint. In 2004, instead, he and one of his daughters, Carmen, just showed us how to string natural beans to make a necklace -- much easier and less interesting than before.

But the main point of the exercise is to teach the students how a self-taught skill like carving can be turned into a career that allows Manuel to support his family. Also how he has spread the word about this to other artisans on the Osa Peninsula. The important thing, in each case, is to use only natural materials. As one example, Manuel uses only wood from fallen trees. (Some environmentalists say he shouldn't do even that; that fallen trees ought to be left where they fall; but such environmental educators as Aider and Alberto have never had a problem with what Manuel does.) And the story is the same for people who practice other arts and crafts.

Manuel is an interesting story in other ways. He and his family run the community public telephone -- the only phone in the neighborhood of dozens of square kilometers. People often ride up on horseback to use the phone. The phone also helps pay the family bills, which include an advanced education in far off Heredia for Manuel Jr. -- though he also supports himself by ambulance work (most recently, in 2006 after graduation, at a hospital in Alajuela). The oldest daughter, Guissell, has yet to go off to art school (see her separate story in the next chapter), but all the older children -- Manuel Jr., Guissell, Carmen, and Ana have gone to high school, rare enough in this area. Another daughter, Jessenia, and the youngest, a girl (whose name I forget), will surely follow in their footsteps.

Just as our group of students were leaving in 2004, I stopped for a last visit with the family, and Manuel proudly showed me large new electric tools that he has been able to buy, which will make his work much easier. In addition to his wood work, he was building his own studio and (with the help of a bank loan) totally refinishing their modest house. Clearly craft work was paying the bills for this family. Even the wife, Berenice, had decided to raise pigs to do her part. (Manuel and Guissell were not too sure about that project because the pig pen would be too close to the house -- and in 2006 the pigs were gone.)

Brett Matulis, my assistant in the 2004 group -- who had come with my 2002 group and has on his own led later student trips with Quira's help (he deserves a story on his own, and I will tell that story later) -- worked out an arrangement for Manuel, Guissell,

Carmen, and the craftspeople in the area with whom Manuel has been the leader, to export craft works to our University of Delaware town of Newark. Before coming, Brett had inquired with the woman who runs a local import shop about whether she would be interested in Costa Rican work, and he had found her to be interested enough to pursue things. He had sent digital pictures of some of the work; the craft shopkeeper was interested; and a small export/import business might be underway. Another way for Manuel (and two daughters) to help support the family -- and for others on Osa to do the same for their families.

(I said earlier but will repeat that I will save my sketch of the oldest daughter, Guissell, for the next chapter.)

My next story is about a family at the other end of what is hoped to be an Osa biological corridor. Lesly runs a family tourist business, a waterfall and trails, near the town of La Gamba on the mainland near Piedras Blancas Natural Park – the eastern terminus of the proposed corridor. I will be rather brief about this one. The waterfalls are beautiful; the trail to get there is passably difficult if not beautiful; and the family also has a reforested plot and what seems to be a kind of classroom and open auditorium. The family members are warm and friendly and treated us well in 2004.

The most interesting part, however, is Lesly himself, an insistent pusher of the project who put all sorts of pressure on individual members of our student group, as well as on me personally, to bring other tourists here. That would be okay, and entrepreneurship is

certainly needed in the area. But we had come to visit the community of La Gamba -- as poor a community as we have seen in our visits here -- and Lesly went to great lengths to insist that his family project was not part of La Gamba, even though the town is only a short distance away. When I asked him about another waterfall that our student group had visited the year before, he claimed not even to know that there was such a place. (I later had a chance to check with Jose Rogelio, our leader on the trip to La Gamba in 2003, and he verified that the other waterfall was on the property and under the management of another family.)

When we later visited with the leaders of the La Gamba community and enjoyed a lunch prepared by the wives in the town's community center, we found them to be almost unbelievably upbeat in spite of repeated serious setbacks over the town's short history of 25 years or so. This should contrast with other places we visited, where over half of the families had moved away -- and in particular it made a sharp contrast with the "us first" attitude of Lesly. La Gamba is named after the buttress support system of large trees in the area, and it is entirely appropriate when attached to the people of La Gamba as we got to know them (two years in a row) at least slightly.

*Reflections?* Does any good come from my student trips -- anything good that will help improve the lives of the people on Osa? (Note that I haven't included any horror stories; for a hint of those, see the *Guerreros* sketches in the previous chapter.) Well, the first thing I should say is that the people on Osa, more every year, offer a warm *pura vida*

welcome to me and the students. They appreciate my interest in coming back year after year, and they at least hope that they are helping naïve students get to learn more about what life is really like on the Osa Peninsula. What follows is one success story.

Brett Matulis (I promised a sketch of him) is an amazing young man in many ways, but especially -- in this context -- in terms of his devotion to Costa Rica and to helping the people he has met there. Brett, as I mentioned, made his first trip to CR with my group in January 2002. What made him stand out then was that, when the rest of the group went snorkeling off Cano Island, he managed to find the money to go deep sea diving. (He stood out in other ways as well, but that is one pole of a nice contrasting set.) Almost as soon as we got back to Delaware, Brett and three others who had made the trip came to see me about setting up an official student group to raise money for the poor people of Osa. Naturally I was delighted; the group -- they called it Amigos de Costa Rica-- was duly formed and registered with the university; and they raised around \$700 in one semester. The next school year saw less success, but Brett hung in there and we met several times to talk about new and different fund raising possibilities. When he asked if he could come along in 2004 as my official Study Abroad assistant, I was delighted. We only got 16 students, and Study Abroad requires 18 for a no-fee assistant; but Quira was willing to subsidize him, and later he managed to get \$1,000 from a special Alumni Association fund. The Quira part was because he had, entirely on his own, by now led not one but two student trips to Costa Rica, with them as guides. And he was likely to keep doing this even after he had graduated from the University of Delaware. (He graduated in 2004.) As mentioned in the characterization of Manuel Bianco, Brett had

gotten in touch with a craft importing shop in Newark before the 2004 trip. There he had me help him with negotiations with Manuel, in Spanish, to set up a small export business, as I mentioned. Finally, Brett wanted Amigos to continue and recruited new leaders from the 2004 group with a specific proposal he thought would attract more interest back home. He wanted Amigos to buy a small tract of land that had been turned into farmland but that abuts a virgin forest, to reforest it with native trees (never to be cut), and to raise money for one tree to be planted at a time. In his naïve way, he said “People will want to come and visit their tree!” That may not happen, but students and others are likely to be happy to do their small part to reforest a part of Costa Rica, if only a tiny one. Later in our trips we have a chance to see the Children’s Eternal Rainforest in Monteverde, which started with a simple effort like Brett’s.

One last comment about Brett. When he came on his first trip with my student group, he was a computer engineering major. After graduating and working a couple of years, he hopes to enter a graduate program in environmental policy. But the important thing, in this regard, is that my students come from a great variety of majors. Only a few have come from my philosophy department, a few from wildlife management and similar environmental programs, but the majority come from majors all over campus, from business to psychology, from English to sociology or communications. Experiential learning in terms of saving Costa Rica's forests can educate students with an amazing array of future careers.

Quite a few of the environmentalist students who have studied with me have been graduate students from my second department, the Center for Energy and Environmental Policy, and one would expect them to be eager. Here again, however, there is something special: they come away impressed with experiential learning and local activism.

I will be talking next about optimism for the future, but even in our limited efforts up to the present, change may be visible on Osa. Corcovado National Park, according to Alvaro Ugalde, is still threatened, and this is even truer of the buffer zone that contains the hoped-for corridor that could save Corcovado. But along with setbacks and much poverty, there is already reason for hope. And the future could be even brighter.

### *5. What Does the Future Hold?*

What I have concluded is that what my role on the Osa Peninsula amounts to is to push one pole – the local development pole – of the sustainable development dyad. It's not that I think saving the rainforest is unimportant. I just think that won't happen, or won't happen in time, unless something is done, and quickly, to make sure that the local people on Osa don't see forest-damaging behavior on their part as necessary to survival. It would help if they felt the same way about the buffer zone around the virgin forest. And it would be even better if they could find a way to meld a positive attitude toward forest protection with their own efforts to make a decent living for themselves and their families. In the last section we saw glimmerings of that, even now. But will that continue into the future, possibly even increase? That's the focus of what follows.

I begin it with the group of "young entrepreneurs" that Jose Rogelio Vargas has gathered together, under the auspices of the Avina Foundation. See: José Rogelio Vargas, Asociación de Emprendedores para el Desarrollo Responsable [association of entrepreneurs for sustainable development] -- [jrovargas@racsa.co.cr](mailto:jrovargas@racsa.co.cr) -- under the website,

www.avina.com. There (in Spanish) the mission of the association is spelled out as involving "the development of sustainable productive options, pursuing a business vision in which both men and women will benefit, along with their communities and the environment that supports them -- including efforts to improve the environmental quality of the communities by means of the businesses undertaken by the members of the group -- where a secondary goal is to summarize the results of the project and spread the word about its successes."

The project is now in a second stage, but what I report on here is a few of the outstanding ecotourism businesses that have been developed so far, with an interesting aside on one of them. I then conclude with a follow-up on one of the projects described in the previous chapter.

In this chapter, unlike the previous one, I use last as well as first names, principally because the individuals I profile here have begun to advertise internationally; that is, they have established websites to invite foreigners to come to Costa Rica, to Osa, and to their establishments.

I begin with Merlyn Oviedo's Danta Corcovado Lodge (La Danta Eco-Lodge) in the poor district of Guadalupe outside La Palma (it can be found on [www.soldeosa.com](http://www.soldeosa.com) using the tab, "norte").

The lodge is only part of the story. Merlyn's father, Juvenal, has reforested a hectare with about 25 species of trees. (Unfortunately, in some people's opinion, he did not plant only native species.) I followed him through the plantation, where he lovingly pointed out every tree species (most of which were unfamiliar to me because he used local Costa Rican names), and it would be necessary to have the experience firsthand to appreciate it. Unfortunately, the visitor would also have to have a better command of Spanish than I do to catch all the nuances of Juvenal's rapid-fire account of what he has accomplished. He also showed me the *palmito* (hearts of palm) plantation he has also established (and harvests all by himself) as part of a cooperative in Chacarita on the Interamerican Highway for sale throughout Costa Rica.

The lodge itself, which Merlyn designed and built almost entirely by himself, is stunning. It was constructed, by hand, of the wood his father had planted -- not on his tree plantation but in the forest surrounding the lodge. Our student group could vouch for almost every aspect of this project; we stayed at the lodge again in 2005, more successfully even than the year before, and again in 2006.

Merlyn now has a *novia*, Laura Frey, an American who fits right in with the family and helps run the lodge.

It remains to be seen whether or not international advertising on the Internet will pay off, but I have heard indirectly that the lodge is successful and draws at least enough foreign travelers to make it a going concern.

A similar venture, Kobo Organic Farm (which also has a lodge), offers not only lodging but an unparalleled experience in the organic farming the title would suggest. (It is also advertised on [www.soldeosa.com](http://www.soldeosa.com), tab "norte".) Owner Alex Retana has guided our students through the whole farm, including cacao trees, but he also wants to teach local farmers the benefits of going organic.

Alex enjoys the support of his entire family, some of whom work with him in the lodge. But it is Alex himself who glows with the knowledge he has of organic farming -- all learned from books and experience. He shows our students -- and presumably other foreign visitors -- every step of the trail around the farm, but more importantly the rows and rows of crops that he grows organically. And he gladly demonstrates how he produces his organic fertilizers. This is what he wants to convince local farmers will be to their advantage if they too take up organic farming instead of using store-bought fertilizers and pesticides that do so much to damage the environment.

As the students and I walked Alex's trail, we saw a troop of White Face monkeys, as we had seen Squirrel Monkeys around Merlyn's lodge every day. And there is wildlife all around both lodges, adding to the natural feel of both places.

I should give Susana Matamoros -- the oldest member of the Avina group -- a separate story. She had been a large part of my students' experiences for several years -- until 2004. Except for the fact that she is a female in a macho culture, she was the de

facto leader of the environmental educators for as long as she worked for the Tropical Youth Center of the Fundacion Neotropica. Now she is simply one among the group of young entrepreneurs that Jose Rogelio has put together. Her project is a souvenir and organic plant shop along the road into Puerto Jimenez. It was finished and open in January 2005, and I stopped by but Susana wasn't there. Susana was also, at last report, in training to become one of the few female ecotourism guides in Costa Rica. She did come around a couple of times in 2004, and I met her two or three times as I visited local towns, but she had zero contact with our students even when she and they were both in the same room, in the Center's library.

Avina has included other interesting projects. For example, Elia Gonzalez preceded Susana as one of the few female guides in Costa Rica -- I heard from another guide from her home town of Drake Bay that she is an "excellent" guide, and "very agreeable." In the same rich end of the peninsula, Emilio Gonzalez (a cousin I think) does massages for tourists after their hikes into the forest. They may not advertise internationally, but by now they are probably well known among the rich tourists at Drake Bay hotels and lodges.

Not all of the proposed Avina projects have been success stories. Some of the failed projects include Katiana Becerra's proposal to start a school for Latin dance -- planned I think primarily for tourists, since most Ticos, male and female, seem to have a natural flair for it. Though that project failed, I have run into Katiana a number of times in Puerto Jimenez, where she is the day manager of a popular restaurant.

All in all, these Avina projects (including others not mentioned) are an interesting set, some more realistic than others -- and some genuine successes after just a couple of years. The Avina project promises much for the future of the Osa Peninsula -- so long without much hope for this kind of entrepreneurship instead of traditional farming. When I have probed, it turns out that most of the success stories involve help from parents and families, who seem to see that the future for these among their children does not lie in traditional Osa farming -- which is often damaging to the forest. In some cases, it was a struggle to get the parents to agree, but in the success stories, they came around.

I turn, finally, to Guissell Bianco, second child and oldest daughter in the Bianco family sketched earlier. Guissell deserves a separate entry from the rest of the family for several reasons. For almost all the time our groups have been going to Osa she has been the main person helping our students when they have tried to contact family and others back home. (This was less true when the Tropical Center got computers that the students could use; but that didn't last long when the telephone link to the community went down.) In a kind of communication dance -- Guissell still speaks no English and most of our students speak little or no Spanish -- the students manage to get through to parents and friends back home. And they always appreciate the pleasure Guissell gets from helping them to succeed.

Guissell also turned into something of a love interest for the men in my various groups. Almost every year she has taken a special interest in one tall, blond, gringo guy. She is

attractive, so naturally they reciprocate. I'm pretty sure one of them even managed to get a kiss one year, after Guissell showed up at the annual Latin dance that ends our stay at the Tropical Center. (When I met him on campus after we returned, he said he had had no further contact -- and he wasn't even sheepish about it!) 2004 -- the year I chose to feature here -- was the same, with another tall, blond gringo. And again Guissell showed up, first at supposed Latin dance lessons for the group, then on a trip to a wild local dance at a bar in La Palma; of course, sisters Carmen (who is much more shy) and Ana (a really good dancer for her then 14 years), and Manuel Jr. came along as well. Guissell mostly stayed outside -- the music (?) was deafening -- but naturally her favored gringo followed her outside while the rest of his buddies stayed inside.

I should, finally and most importantly, mention that Guissell has turned into something of an artist -- painting mostly landscapes or landscape-background animals in a primitive style. She also does the painting details on her father's carvings, especially of birds -- and the details are truly detailed if the subject is, for example, a hummingbird. Guissell would love to go off to art school in San Jose, but her father wants her to study business. More than once I have suggested to him that she could do both. Maybe she will one day -- even if she has to combine art school with business school. In my opinion she deserves the chance. In 2005, I found out that one exclusive gift and souvenir shop in Puerto Jimenez is the sole outlet for her paintings (in 2006 there was a second), and *they can't keep them in stock*, so fast do the tourists grab them up; so her signed paintings are turning up wherever tourists live who have visited Jimenez.

The details here are sketchy, as one would expect of promissory notes for the future. But for anyone who has been counting, here are half a dozen young people (most in their twenties) -- and they represent more than twice that number if I were to list those not mentioned -- who have (with help) launched themselves into very non-traditional careers on Osa. (Even if Guissell goes off to art school in San Jose, she will surely come back to Osa -- probably to her family or maybe to a family of her own -- to pursue her painting career.) Moreover, as I mentioned, Jose Rogelio has received a second grant to continue the work for another two years or so, with more young entrepreneurs.

If you add to these the hints in the previous chapter, on what is happening in Osa -- a guide company, a fancy lodge in La Palma, a craft exporting business, combined with a sort of Osa craft guild, two tourist waterfalls in one town, reforestation plots, and so on -- things might look very optimistic. In any case, the situation is a long way from ten years ago, in the early 1990s, when the only hope there was a life of grinding poverty eking out a living on small farms -- typically combined with threatening the buffer forest in a variety of ways (including hunting or poaching).

I am, moreover, impressed with the change in attitude, as families support their offspring -- including females -- in their search for new careers that will allow them to prosper while either doing nothing harmful to the forest or actually doing something positive to preserve it.

## 6. *Lessons for the World?*

Any lessons to be learned from the Costa Rican experience are likely to be mediated by international environmental non-governmental organizations (NGOs). Danesa, the Danish government's environmental ministry, has had a huge impact on the area of the Osa Peninsula where I have worked. At the Tropical (Youth) Center of the Fundacion Neotropica, the mark of Danesa's work is everywhere. When Danesa broke off with the Fundacion, its agents continued to work on many of the same projects throughout Costa Rica as before. Cesar Cuello (see above), after his own break with the Fundacion, continued to oversee these projects. But this tenuous connection did not last long, as the Danes moved on to work in other parts of the world. The scope of Danesa's work today – under the heading of environmental consulting – can be seen on their website ([www.mst.dk](http://www.mst.dk)). Did the Danes learn any lessons in Costa Rica that they might be carrying with them to these far-flung enterprises? That is the sort of question I deal with here.

Another NGO that was active with the Fundacion Neotropica is the Nature Conservancy. We saw earlier that they published *Parks in Peril*, which includes a chapter on Corcovado National Park (much of it based on work of Cuello). TNC (their usual acronym) is still active in Costa Rica, especially in work on biodiversity corridors. But Costa Rica is now only a very small part of their worldwide effort; see their website: [nature.org](http://nature.org). Under the heading, “Where We Work,” they list Asia Pacific (e.g., Indonesia); the Carribean; Central America (they mention the Maya Forest in Belize where it borders Guatemala, not Costa Rica); North America (chapters in all 50 states); and South America (including the Galapagos Islands).

Again, what might they have learned from their early Costa Rica efforts?

When it comes to Conservation International (see [www.conservation.org](http://www.conservation.org)) – also active in Costa Rica with the Mesoamerican Biological Corridor – the story is different. They have always worked in many parts of the world. Current locales listed under the heading, “Conservation Regions,” include South America (Brazil, the Guianas, the Andes); Asia-Pacific (where they start their list with Melanesia); and Africa (West, Central, and Southern Africa, as well as Madagascar) – in addition to Central America.

*Hotspots* gives several nods to Costa Rican initiatives in its chapter on the Mesoamerican hotspot, so presumably the authors think Costa Rica has something to teach other countries.

Presumably these and other environmental NGOs are following the path of tropical deforestation worldwide (among other threats to biodiversity). Data on timber production

can be seen online at [www.itto.or.jp](http://www.itto.or.jp). However, according to the International Tropical Timber Organization (ITTO), their offshoot cuts timber "sustainably": they say that, "The ITTA that eventually came into operation was no conventional commodity agreement. It was, in reality, as much an agreement for forest conservation and development as for trade. In effect, it preceded the concerns which featured in the 1987 Brundtland Report and at the Earth Summit in 1992 and its trade components were as much instruments for tropical forest conservation as ends in themselves."

Moreover, it is not only NGOs that have learned from Costa Rica. In my introduction, I mentioned another philosopher interested in Costa Rica, David Crocker, and how he makes a case for "insider-outsider cross-cultural communicators" -- and provides one example with strong Costa Rican links, sociologist Paula Palmer of the University of Colorado, who now runs Global Response ([www.globalresponse.org](http://www.globalresponse.org)) but who earlier spent well over a decade working in Costa Rica with, among others, indigenous peoples. Presumably she thinks she learned much in Costa Rica that helps her now with the Global Response network.

Earlier I referred to the book by Helena van den Hombergh, *Guerreros del Golfo Dulce* (1999). Talking about warriors might suggest that there must have been winners and losers in the campaign to stop Stone Container/Ston Forestal from building a chip mill on the northwestern corner of the Golfo Dulce, directly in the path of the proposed corridor linking Corcovado National Park with Piedras Blancas National Park. At least you might have thought that at least the parties fought to a draw. But that's not what happened. After a several-year campaign; after the intervention of Greenpeace and other

international NGOs along with some internationally-recognized scientists; after Costa Rica's national ombudsman had decided in favor of the environmentalists (including local activists); and after a law guaranteeing a healthy environment for all Costa Ricans -- after all of this (and more) you might assume that Ston would simply be declared the loser (whether its managers agreed or not). But that's not what happened. The process continued for a couple of years, and during that time Ston was provided with another plot of land across the Golfo Dulce in a less environmentally sensitive area. The company had to meet new environmental restrictions, but doing so allowed them to demonstrate how environmentally-friendly the company had become.

Many people concluded that "This is the Costa Rican way. No one should be declared a loser."

Under the heading, "The Conflict as a School for All," Van den Hombergh details at length how all the many parties involved in the campaign against Ston -- from international to local activists, from women's groups to local farmers, from international to national NGOs, from scientists to government officials in Costa Rica -- all these groups had learned how to deal with a campaign against a powerful multinational corporation. The effort was ongoing, but government functionaries had to learn how to implement the new legal requirements, including better environmental assessments. Even Ston learned, including how to deal with conflict within Costa Rican culture; and the company could now parade itself before the world as a "green" company. (See *Guerreros*, pp. 320-325.)

Of course not everyone was satisfied; indeed, it could be said that no party to the conflict was completely satisfied. But it was "the Tico way."

What lesson for the world do I draw from this? Clearly Costa Rican culture cannot be exported to other parts of the world. (See Christopher Baker's *Moon handbook*, 4th ed., pp. 88-89, on the uniqueness of Costa Rican culture.) But there is much to be said for a democratic process that attempts to be fair to all parties, even those otherwise considered the "heavies" in a conflict.

*7. A Role for Experiential Learning?*

I have chosen to give this final part of my essay another question for a title. Is the experiential-learning work I do in Costa Rica consistent with what academics, including academic philosophers, are expected to do? This kind of question has dogged me from the beginning of my philosophical career. Is activism a legitimate part of the professional life of a philosopher in an academic department in today's profession-dominated universities in the USA?

Many people – including a large percentage of professors generally and probably a larger percentage of academic philosophers – say no. I can be involved in activism, they say, but only as a citizen and not as a philosopher. The role of an academic philosopher is to *think*. Possibly someone somewhere might find the products of that thinking to be useful, maybe even useful in formulating better policies, say to save the rainforest. But it is still the case that the philosopher's role is to think, not to get involved in activist crusades or campaigns – even if the issues are as urgent as staving off global warming or slowing the loss of species in the tropics.

In this respect, I have an interesting story to tell. A onetime chair of my department at the University of Delaware, Don Harward, was one person who pressured me pretty hard to cut back on my activism -- not only with Common Cause (mentioned in the introduction) but with a local African American newspaper, with public speaking for the Delaware Humanities Forum, and with other organizations -- and to devote more time to professional journal publishing. But Don would go on to academic administration, and in

his last position before retiring as president of Bates College in Maine, he became a champion, not only on the local level, but nationally, of experiential learning ("service learning," Harvard sometimes prefers).

The same questions can be, and often are, raised about other kinds of academics, even about environmental scientists as ecological activists.

I have always brushed aside these claims as academic nitpicking. In doing so I have taken solace in recalling the progressive politicking of my philosophical idol, George Herbert Mead. He and his colleagues in the department that John Dewey put together at the University of Chicago in the late 1890s and early twentieth century were involved in all sorts of issues in the hurly-burly of Chicago in those days, and they saw this work as being just as philosophical as their teaching or their writing of philosophical books or articles. (See Feffer, 1993.)

While going my own way, I have not asked my philosopher colleagues to do what I do. Occasionally I have *invited* them to do so, especially if there are important issues to the solution of which I think they may have something to contribute. I have felt especially free to challenge my fellow philosophers of technology who are also environmental philosophers or environmental ethicists. In chapter 1, above, I referred to the work of Andrew Light. He is co-editor of, among many other books, *Environmental Pragmatism* (1996). Most of Light's work in environmental philosophy, according to his own web site (quoted earlier), has focused on "the failure of the discipline to fulfill its promise as a

guide to formulating better, more morally responsible environmental policies.” Identifying several theoretical debates in the field which have prevented it from aiding in the development of better policies, Light says he has argued that a pragmatist methodology is needed to transform environmental ethics into a more practical ethics, able to participate in the actual resolution of environmental problems. He has written about ethical issues in restoration ecology, but more important to me, he has been *actively involved* in that movement.

As I said earlier, I side with Light and those environmentalists calling themselves pragmatists against their critics. Baird Callicott challenges them – us – saying that we have set up “a false dichotomy between the classical activity of theory building . . . and the activities that they call for philosophers to take up instead.” This seems to me to have things backward; I think it’s Callicott who has set up a false dichotomy. John Dewey, for the most famous example in American Pragmatism, was a lifelong opponent of dichotomized thinking. (See *The Quest for Certainty*, 1929; but for that matter any of his works.)

I admit I have been as guilty as Light of challenging theoretical environmental philosophers to become activists on the major environmental issues that seem to be obviously implicated in their theories. On this point I respect Callicott’s irenic add-on: “In the very spirit of pluralism that the environmental pragmatists laud, it would be better to represent activities – such as popular value description and clarification and policy formation – as complementary to the more theoretical concerns of ‘traditional’ environmental philos-

ophers than as an alternative to them.” And I applauded Bryan Norton’s *Towards Unity among Environmentalists* (1994) when it came out. I believe strongly in the let-all-parties-win attitude of Ticos that we saw at the end of the *Guerreros* story.

However, it seems to me that Callicott betrays his own irenic hopes when he accuses pragmatists of implicitly “trying to discourage exploring the theoretical question . . . so that the old conventional answer to that question – only human beings [are morally considerable] – will prevail by default.” His failure, it seems to me (I say this modestly when I want to join him in irenicism), lies in limiting pragmatists to “popular value description and clarification and policy formation.” Those are not by any means the only things we pragmatists advocate; indeed, in Callicott’s formulation, these activities sound suspiciously like philosophical activists “advising” their fellow activists from some high ground of theory. Following Mead and Dewey (faithfully I hope), I am not calling for philosophers to describe or clarify values – even to help formulate policies from some “higher” ground – but for us to jump in together with other activists, experts and non-experts alike, to work out “on the ground” some practicable (and hopefully equitable) solution to the problem at hand. We should give up forever the idea that we are some sort of Platonic philosopher-kings with advice for the less enlightened to follow.

Complementarity and working together and respecting other people’s values (even other philosophers’ value systems) are important, yes. But it’s the urgency of the problems that counts for me. When my fellow philosophers say, “Yes, but we won’t solve those problems unless we can first be clear about what count as good or acceptable

solutions,” that’s when I object. Usually we don’t have the time – centuries? -- to wait for philosophers to come to agreement on theoretical issues. On the issue with which we are confronted here – the loss of biodiversity at alarming rates worldwide – if we wait we are likely to be too late. And the same is true for global warming and other urgent environmental issues.

Pragmatists are not the only kind of activist environmental philosophers. I need here also (as I did earlier) to mention Karen Warren and ecofeminism. In her introduction to the section she edited in Zimmerman (4<sup>th</sup> ed., p. 147), Warren says:

Ecofeminism has always been a grassroots political movement by pressing pragmatic concerns. These include issues of women’s and environmental health, to science, development, and technology, the treatment of animals, and peace, anti-nuclear, anti-militarism activism. The varieties of ecofeminist perspectives on the environment are properly seen as an attempt to take seriously such grassroots activism and political concerns by developing analyses of domination that explain, clarify, and guide that praxis.

And Warren (p. 148) quotes approvingly Noel Sturgeon’s characterization of ecofeminism as a social movement . . .

through which change is produced by numerous kinds of “action,” including that of the deployment of symbolic resources, shifts in identity construction, and the

production of both popular and scholarly knowledge – as well as direct action, civil disobedience, strikes, boycotts, demonstrations, lobbying, and other more traditionally recognized forms of political action.

Warren's own contribution to the part 2 she edited – "Ecofeminism and Social Justice" – is, I think, a brilliant summary of the range of ecofeminist writings, as well as one of the best summaries she has written of her own anti-dichotomies approach (pp. 252-279).

If I have any reservations about Warren's – and Sturgeon's and other ecofeminists' – commitment to activism, it would have to be if they make activism wait until anti-dichotomous thinking has replaced dichotomous thinking in contemporary society. It may well be the case that we can't ultimately address important environmental issues in an effective manner until people generally – and especially political and ideological leaders – come to see that misguided dichotomies are destroying and will continue to destroy both society and the environment so often falsely separated from it. But once again we often can't wait for some "ultimately"; just as one example, faced as we are with rapid species destruction, to wait is too late. So what I hope is that the ecofeminists will work simultaneously on both symbolic and real-world challenges.

Similarly, we can't always focus on such "big" issues as globalization. Important as they are, they are no more important than local issues such as that described in Van den

Hombergh's *Guerreros del Golfo Dulce*. Challenging globalization on a variety of fronts seems to me obviously important, but so is challenging a multinational corporation like Stone Container – especially in a small developing country such as Costa Rica.

In sum, I believe that the challenge of species loss in the tropics (along with similar problems such as global warming) is (are) so urgent that not only environmental philosophers should become pragmatic activists, but so should many more of my fellow philosophers of technology, along with many other philosophers of whatever stripe, and academics of all sorts.

In 1992 I published *Social Responsibility in Science, Technology, and Medicine*. That book was a call to science educators, medical school professors, media professionals, biotechnology experts, computer professionals, nuclear scientists and engineers, and ecologists -- in greater numbers than seemed to be doing so at the time -- to join with their activist colleagues in Computer Professionals for Social Responsibility, progressive activists in the Science, Technology, and Society education community, medical reformers, and a handful of ecologists-turned-environmental activists (among others) in efforts to solve some of the urgent social problems of our technological society. I even made a lame effort, in that book and a subsequent set of essays -- appealing to their sense of social responsibility -- to enlist fellow philosophers such as bioethicists or engineering ethicists or business ethicists to move beyond academic applied ethics to get involved in progressive activism on social issues.

When I wrote *Social Responsibility* in 1992, I had no idea how many of these professionals would respond -- or were already responding to other people's calls -- to get actively involved. The problem is that activism goes largely unheralded. Awards for applied ethics work -- or similar work of historians or sociologists of science, technology, and medicine -- go to academic stars, to professors who make outstanding contributions to professional journals. But I did quote one author of a book on reform politics -- Michael McCann, in *Taking Reform Seriously* (1986) -- to the effect that there are (unsung) "legions of intellectuals committed to progressive economic and social policy formulation."

What I was convinced of then, and remain convinced now, is that technically trained professionals, working alongside other public-spirited activists, *can* help to transform our technological culture in progressive ways. We can, together, actually *solve* some social problems -- however time-limited the solutions turn out to be, and however much progressive politics must always be a never-ending struggle.

Here I apply all of this to the specific problem of the loss of biodiversity and the protection of the tropical rainforests where so much of the Earth's diversity still resides. And I am encouraged by my former student, Brett Matulis (chapter 4), a former computer engineering major now turned environmental activist, including his effort to form a student group from all sorts of majors to help save Costa Rica's forests. I believe that everywhere, *given the opportunity provided by experiential learning*, we can expect similar student groups to spring up, not only to halt the loss of biodiversity or save the

rainforests, but also to deal with other urgent problems of our technological society. And their faculty mentors will learn as much as their students do. And together all of us can *do something* to make ours a better world.

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