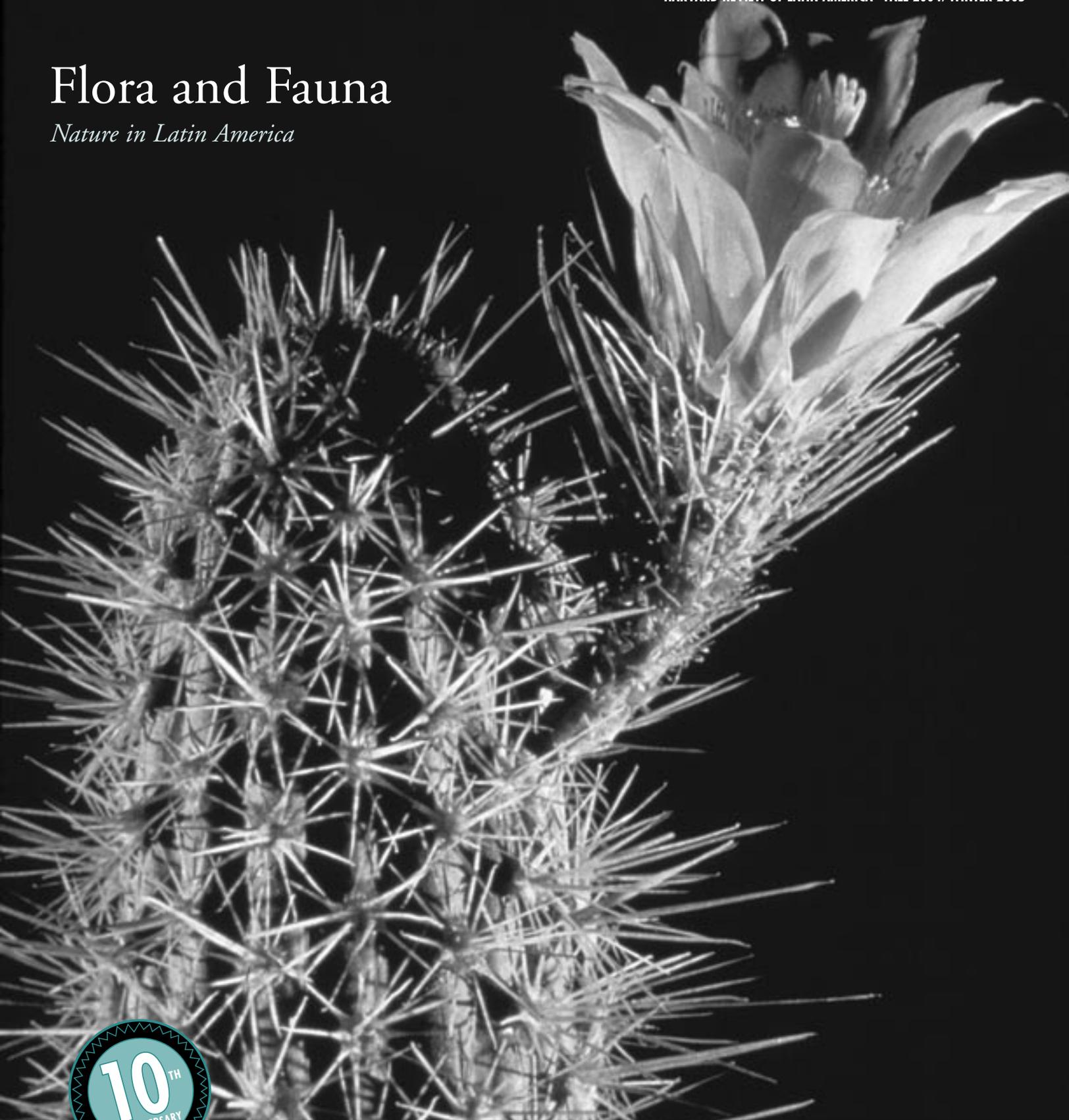


ReVista

HARVARD REVIEW OF LATIN AMERICA • FALL 2004/WINTER 2005

Flora and Fauna

Nature in Latin America



EDITOR'S LETTER

The blue New England sky shed a diffuse light through the leaves of the trees in the ample DRCLAS yard at 61 Kirkland. I was scurrying from the office, intent on going wherever I was going. Noel "Missy" Holbrook, a member of the DRCLAS executive committee and a biologist, was walking her dog in the yard, so I paused to talk.

It started as chitchat, what a beautiful day, what a beautiful yard. And then Missy commented to me that she brought her students to our yard and taught them about the ginkgo, ash and oak trees there. I had never thought of what type of trees inhabited the yard. I remembered that once I had squashed some smelly fruit: that was the ginkgo tree, a unique tree with no living relatives.

Suddenly, with just that short conversation, I was seeing our yard in a different light, a place to be taught and to be observed.

I'd been thinking about doing a *ReVista* issue on flora and fauna for a long time. As a matter of fact, I'd been collecting newspaper and magazines clips and story notes in a folder called "birds and the bees" for well over two years. Yet, I was surprised when I began to solicit and edited articles how the world of nature opened a multiplicity of perspectives into citizenry, health, globalization, conservation, history and international relations—and even political protest.

I found that the categories I'd created for the articles did not quite do them justice. Perhaps, because the stories deal with nature, their very themes are organic, linking back and forth across countries and disciplines.

I was no longer surprised when I received an e-mail from Connie Rinaldo, Librarian at Harvard's Museum of Comparative Zoology, with a quotation from Thomas Henry Huxley as part of its return address: "To a person uninstructed in natural history, his country or seaside stroll is a walk through a gallery filled with wonderful works of art, nine-tenths of which have their faces turned to the wall."

On reading that quote, I understood how much the choice of flora and fauna for the 10th anniversary issue of the David Rockefeller Center for Latin American Studies was more fitting than I had envisioned. I had selected the theme because of David Rockefeller's interest in entomology; instead, the theme taught me that nature reflects the DRCLAS mission: to increase knowledge of the cultures, economies, histories, environment, and contemporary affairs of Latin America, as well as to foster cooperation and understanding among the peoples of the Americas, and to contribute to democracy, social progress and sustainable development throughout the hemisphere.

As you read the pages of this *ReVista*, celebrating the 10th anniversary of DRCLAS, I hope the focus on flora and fauna will open up new connections and perspectives about Latin America for you, just as that conversation about trees in our yard now makes every stroll to work a different one for me.



ReVista

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The cactus flower on the cover of this
magazine is one of the extraordinary
Glass Flowers found in Harvard's
Museum of Natural History.



David Rockefeller demonstrates his beetle collection in Porbal, Arizona, in 1998.

The Natural World

A Personal Reminiscence

BY DAVID ROCKEFELLER

In the late spring of 1934, towards the end of my sophomore year at Harvard College, I received a letter from Dr. Frank E. Lutz, Entomology Curator at the American Museum of Natural History in New York City, inviting me to join a scientific expedition the museum was dispatching to the Grand Canyon of the Colorado in northern Arizona.

The expedition's primary focus that summer, Dr. Lutz informed me, would be to collect specimens of the phylum *Insecta* (or "bugs" as most people refer to them) in the canyon itself and the surrounding mountains to determine whether there was a correlation between their altitudinal and latitudinal variation, an important, and still unresolved scientific issue, at the time. (In the end, we were able to show that species of insects found at the bottom of the canyon along the river were also found in southern Mexico, and other species collected ten thousand feet higher in the San Francisco Peaks were indigenous to Alaska and parts of Canada).

The invitation surprised me. I was, after all, not yet nineteen years of age, and I did not consider myself a trained scientist. Nonetheless, I eagerly accepted the invitation, and in June of that year, as soon as exams ended, I set out with Paul Geier, one of my Eliot House suite mates, to join the other members of the expedition in Flagstaff, Arizona.

Many tend to think of "bugs" as bothersome, annoying or dangerous, and never take the time to look carefully around them and to appreciate the beauty and intricacy of the natural world; just think of the architectural audacity, engineering skill and dogged persistence of a spider weaving a web or the complex social life and cooperation of ants and bees.

Those remarkable qualities reflect the reason I have chosen this issue of *ReVista*, the *Harvard Review of Latin America*, celebrating the 10th anniversary of the David Rockefeller Center for Latin American Studies, to reflect on my own relationship to flora and

fauna, and most particularly beetles.

My relationship with "bugs" began years before the expedition invitation. Perhaps I should pause here to offer a bit more of an explanation as to why this invitation was so appealing to me, especially since many people find my lifelong and passionate interest in *Coleoptera* (or beetles) somewhat unusual, or even eccentric.

I first became interested in collecting and studying beetles through Howland Sperry, a teacher of mine at the Lincoln School of Teachers College in New York. Mr. Sperry spent the summer following my fifth grade year at the Eyrle, my parents' summer home, in Seal Harbor, Maine, tutoring my brother Winthrop and me. Mr. Sperry was interested in biology and got me started catching insects with a net. That same summer I participated in a nature-study class attended by other children my age, including Henry Ford II, who summered on Mount Desert Island, and became increasingly interested in the study of nature.

My parents wanted to encourage this burgeoning curiosity, and upon our return to New York that fall, arranged for me to visit the entomology department at the Museum of Natural History so that I could begin to identify the various specimens I had collected. Although I started out collecting all kinds of insects, I soon focused exclusively on beetles. Beetles had the advantage of having hard outer wings, called *elytra*, which make them easier to preserve than other insects. There are also more species of beetles in the world than of any other group of animal life—more than 250,000 species. I found myself being drawn deeper and deeper into this fascinating world.

My weekly visits to the Museum of Natural History soon brought me into contact with Dr. Lutz, who, in addition to curating the beetle collection, was writing *The Field Guide to Insects*, destined to become the standard text



David Rockefeller (right) pursuing nature with a classmate at camp in 1928.

in the field for many years. Dr. Lutz invited me spend the summers of 1928 and 1929 (at the ages of thirteen and fourteen) at the Station for the Study of Insects at Tuxedo

Park, New York, which I did.

By that time, I had become fairly proficient at identifying the various beetle specimens that I had begun to avidly collect wherever I went, for instance in Yellowstone Park in the summer of 1927, and most memorably, during a trip up the Nile River in Egypt with my parents in the Spring of 1929, where I was able to secure a number of scarabs among the ruins of Memphis and the City of the Dead. Most often, however, I would hang a sheet in front of my bedroom window at the Pocantico Estate, place a lamp behind it, and watch thousands of insects flutter towards the source of illumination. Within a half hour I would have dozens of beetles to identify and add to my growing collection.

Thus, by the time I entered Harvard in September of 1932, I had a fairly detailed knowledge of at least one branch of science—entomology.

ON THE DAVID ROCKEFELLER COLLECTION OF COLEOPTERA (BEETLES)

On a warm August 30 in Roslyn, NY in the year 1922, a brave seven-year-old David Rockefeller picked up an inch long brown beetle with fearsome pinching mandibles and plunged it into a jar to bring home. That specimen of *Parandra brunneus* would become the first of some 90,000 beetles in the Rockefeller collection of Coleoptera, today housed in hundreds of specially-made, airtight, hardwood boxes kept in the wall of cabinets at his residence in Pocantico Hills.

I have seen the collection many times, and consulted the excellent technical library kept close at hand, in visits to Mr. Rockefeller. My former graduate student, beetle expert Geoff Morse, has also spent innumerable hours cataloging the collection in a database that will be online, with high resolution images of every species, when it arrives one day at its permanent home in the Museum of Comparative Zoology at Harvard.

David Rockefeller knows beetles. On our first meeting at Harvard in 1998 (we were introduced by his daughter Eileen, whom I first met as a Vermont neighbor some 20 years earlier), I walked with David through the exhibit of beetles just opened in the Harvard Museum of Natural History, and his breadth of familiarity with the taxonomy of the many hundreds of specimens on display was astonishing, if not unpredictable. Sixty-six years earlier, young David received an A as a freshman at Harvard (the only A grade the young economics concentrator at Harvard would earn, he likes to say) in the graduate level entomology course taught by one of my predecessors, Frank Carpenter (a course I now offer, see pp. 6-10). President Lowell first brought David Rockefeller to the MCZ in his last year of office, and the two enjoyed lunch with the expansive MCZ director, Dr. Thomas Barbour. The “Eateria” founded by Barbour was a lunch venue in his MCZ office that occasionally featured

fresh terrapin brought up from tanks in the MCZ basement, and the list of attendees over the *Eateria* history from 1932-1946 is a who’s who of science, letters and international affairs.

Over the 80-plus years since collecting that first beetle, David Rockefeller has continued to build his collection in the ways great collections are always built—personal effort, supporting the expeditions of others in return for a portion of the catch, and being always alert to the rare collections that come up for sale. David Rockefeller has particularly fond memories of participating in a now-famous expedition down into the Grand Canyon, studying the altitudinal zonation of plant and insect life that changes with the descent in ways that parallel the biotic changes with latitude from northern Arizona into southern Mexico. David sponsored many other expeditions, especially to Mexico, founded the Southwestern Research Station in the Chiricahua Mountains of Arizona, and supported entomologists in Brazil and elsewhere for collecting.

Constancy of interest is revealed in his collection. For example, on the very day he turned 16, a milestone for any young American boy, young David found time for collecting—at Pocantico Hills that day he captured eight species of leaf-beetles and two scarabs. David remained very much a beetle man during his World War II stint from 1943-1944 in North Africa during which he captured in Algeria some 131 beetle specimens representing 41 species. Allied success of course permitted an eventual inspection of the new grape crop at the Chateau Lascombes, in the Medoc on the 5th of July 1956, where David spied and seized the longhorned beetle *Caloclytus varius*. A later family trip to the Firestone rubber plantations in Liberia similarly resulted in a fine series of rhinoceros beetles, *Augosoma centaurus*. In short, a biography not captured in his

In fact, my entomological background enabled me to take a graduate level zoology course during my freshman year. And, while I struggled terribly trying to learn German (an eventually having to drop the course) and with a few of my other courses, I am proud to say I earned an A minus in zoology—the only A during my entire undergraduate career.

My interest in beetles also earned me a coveted invitation to lunch with the famous Dr. Thomas Barbour, the distinguished naturalist and director of Harvard's famous Museum of Comparative Zoology (MCZ). The invitation actually originated with Harvard's president, A. Lawrence Lowell, who had learned of my entomological interest from my parents. I was somewhat taken aback by the invitation, but dutifully appeared at the MCZ at the appointed time, and spent a somewhat nervous two hours in Barbour's beautiful, high-

ceilinged office listening to the discourse of these two famous and influential men, and confidently answering their questions. It was quite a harrowing lunch for a freshman, but, at least, in retrospect, I enjoyed it immensely.

In the years since graduating from Harvard in 1936, I have continued to add to my collection, which now number comprises more than 90,000 specimens, including nine thousand species, and, most importantly, four hundred types, which are the beetles from which the species itself have been scientifically described and classified. Like most collectors, I have learned to concentrate, and the most valuable specimens in my collection are from the families *Carabidae*, *Buprestidae*, *Cerambycidae*, and *Chrysomelidae*. My real favorites, however, are the *Scarabaeidae*, the family of dung-beetles and June beetles, which also includes the beautiful scarabs who were sacred to the

ancient Egyptians. I can understand why.

I have collected beetles in almost every part of the world, and continue to add to my collection on an almost weekly basis. In recent years, I have collected rare specimens in the Amazon basin in both Brazil and Venezuela, amidst the ruins of Mayan temples in the Yucatan, and high in the peaks of the Andes near Machu Pichu in Peru. It remains a wonderfully satisfying hobby, and through it I have learned a great deal about nature's underlying order and diversity, as well as the interconnectedness of all living things.

I am pleased that my collection will become part of the Museum of Comparative Zoology at Harvard in the future.

David Rockefeller is the founding benefactor of the David Rockefeller Center for Latin American Studies and Chair of the DRCLAS Advisory Committee.

memoirs is written in tiny script on the thousands of labeled beetles in the Rockefeller collection of beetles.

David Rockefeller has more than a dozen insect species named for him, based on previously unknown species that were first collected by him personally or on the expeditions he sponsored. One such beetle is the rare Mexican high altitude scarab *Diplotaxis rockefelleri* pictured above. These expeditions have resulted so far in the discovery of over 150 new species, represented by the scientifically important type specimens in his collections, though many more new species are likely to be discovered as international experts who visit the MCZ collections study the material.

With Geoff about a quarter through the database of his collection, the tally shows Rockefeller has personally collected at least 500 species (approximately 10% of the specimens) from 23 different countries (Algeria, Austria, Brazil, Ecuador, France, French West Indies, Greece, India, Israel, Italy, Kenya, Liberia, Mexico, Peru, South Africa, Spain, Tanzania, Trinidad & Tobago, Tunisia, the USA, Venezuela and Zimbabwe), in every decade since the 1920s. The Rockefeller collections very heavily favor five of the most diverse (and attractive) beetle families, the predatory ground beetles in the family *Carabidae*, the dung-beetles and June beetles in the family *Scarabaeidae*, the woodboring beetles in the families *Buprestidae* and *Cerambycidae* and the leaf-beetles in the *Chrysomelidae*, and total over 9,000 species in all.

On a recent visit to his farm in Maine, my wife Irina and I accompanied David as he directed clearing of several broken trees that were also blocking the view, when a large cerambycid beetle flew in and out over a 30 foot drop. David was fixed on the beetle, and it was certain that one of us would be going



Diplotaxis rockefelleri

over the brink for it, had I not realized in time that his collection already had this species of pine sawyer beetle, *Monochamus scutellatus*. In fact, the pine sawyer in the Rockefeller collection was obtained exactly 115 years earlier in Auburn, Maine on the 1st of September 1889 (this is not the oldest specimen in his collection, a distinction that belongs to the six-spotted tiger beetle, *Cicindela sexguttata*, collected from the same site in 1884).

David Rockefeller continues to build his important collection of beetles, with expeditions to tropical countries, often accompanied by Geoff Morse, in pursuit of this oldest of his interests. As a beetle collector, he is in good company with fellow beetle collectors Charles Darwin and Sir Alfred Russel Wallace, who together presented their independent conceptions of the theory of natural selection as an agent of evolution to the Linnaean Society in London. While their British collections are housed at Oxford University, Rockefeller's much larger collections will be the centerpiece of the mounting revolution in museum collections being led by the MCZ- high resolution digital images and data freely available online to the countries from which the specimens came. In keeping with the spirit of the DRCLAS, and globalization, this building of an international network of information on biodiversity strengthens every participant. David Rockefeller's extraordinary collection of beetles will serve as an influential, international model for the digital age of natural history collections, a contribution with elements of many of the scholarly, international and aesthetic enterprises with which the Rockefellers have been so long associated.

Brian D. Farrell is a Harvard Professor of Biology and Curator in Entomology.



Nature can be a window on the world. Brian Farrell and Julio Pantoja reflect on two opposite aspects of the cycle of nature: an Encyclopedia of Life and a reflection on death.

From Agronomics to International Relations

Building an Online Encyclopedia of Life in the Dominican Republic

BY BRIAN D. FARRELL

TWO STRANGE-LOOKING BLACK-AND-white butterflies found themselves swept up in nets one warm morning in March this year in the eastern Dominican Republic, far from chilly Cambridge. A group of Harvard undergraduates and their Dominican counterparts alongside Dominican and U.S. entomologists, including myself, made the capture in an overgrown field as part of a survey of insect species that we perform periodically on this Caribbean island. These specimens would soon prove to be remarkable discoveries—not just the very first records for the Dominican Republic, but also the very first documentation of this particular species, the lime or checkered swallowtail (known technically as *Papilio demoleus*) in the Western Hemisphere! The lime swallowtails of the Old World tropics are swift-flying butterflies whose caterpillars defoliate young lime trees, oranges and other citrus crops throughout southeast Asia, India and neighboring regions. They can completely strip the leaves from young nursery trees and cause many millions of dollars in damage annually. This species therefore poses a possibly significant threat to citrus industries in the Dominican Republic. The already

Students look over butterfly specimens collected in their fieldwork in the Dominican Republic.

broad and growing Old World distribution of the lime swallowtail also strongly suggests the possibility that it might flutter quickly and dangerously throughout the Caribbean to Florida and the rest of the Americas, potentially playing havoc with regional citrus crops.

Dominican entomologist Kelvin Guerrero acted quickly, e-mailing digital photos of the butterflies to colleague Andrei Sourakov in Florida. Within hours of the butterflies' capture, a reply was received by cellphone: a snap identification of these specimens as lime swallowtails. Later, the identification was confirmed by butterfly expert Rod Eastwood at Harvard's Museum of Comparative Zoology (MCZ) and John Rawlins at the Carnegie Museum of Natural History in Pittsburgh.

That first cell phone call to Guerrero rang in a gas station parking lot as we all waited while the field vehicles fueled up for the day's foray into the National Park, Parque del Este. Excited conversation led to formulation of the first report (to be published in the *American Entomologist* December 2004 issue). At day's end, we returned to our field laboratory base at the Punta Cana Center for Sustainable Tourism and Biodiversity (PCSB), supported by the non-profit organization Fundación Ecológico Punta

Cana (founded by Grupo Punta Cana, the developer of the community associated with the Punta Cana Hotel).

Some two dozen of us had crowded into the insect collection room at the Punta Cana lab earlier that same morning to learn techniques for collecting and preparing insect specimens from Dominican experts Guerrero, Denia Veloz and Litay Ramos.

Together with Dominican students, Harvard students learn that moths and beetles are attracted to ultraviolet blacklights at night; they learn to use specialized nets for collecting, and they even use a commercial orchard fogger that applies biodegradable insecticides to tree canopies, a technique that yields the first glimpses into canopy insect diversity anywhere in the Caribbean (including many species unknown to science).

Over the next seven days, the students would eagerly listen to Dominican and U.S. scientists discuss their entomological research in seminars, and would learn from Dominican students how to use the latest digital technology for capturing high resolution, computer-assisted images of insect specimens. These techniques, developed at the MCZ, are revolutionizing identification of economically and ecologically important insect species, as well as access to the valuable information that limits progress in

FLORA AND FAUNA

biodiversity studies in Latin America and elsewhere.

We were on hand to record this butterfly invasion of the New World because of the Harvard course OEB 156 (Tropical Insect Systematics) that brings undergraduate and graduate students to Latin America to learn field and lab techniques for documenting insects. Cambridge in the early spring, when the buds are barely open on the trees, has far fewer insect-yielding habitats than the tropical Dominican Republic. I relate these events to show how an exercise with educational and service components can spur discoveries of unexpected impact. In September 2004, acting on the strength of our report, the U. S. Department of Agriculture and its Dominican counterpart agency, the Departamento de Sanidad Vegetal de la Secretaría

founder Louis Agassiz with the important early Cuban biologist Don Felipe Poey y Eloy. However, I could not anticipate the effect of service learning opportunities on always-industrious Harvard students.

In the first weeks of class, armed with a bibliography provided by a Dominican colleague, the students rush to the MCZ's Ernst Mayr library and produce digital versions of the rare scientific articles, if any exist at all, for a given species in the often old, scarce journals—impossible to get in the very countries where their subjects occur. Such literature, especially combined with images of each species, is key to distinguishing species that could be invasive or endemic, known or unknown, important carriers of disease or innocuous look-alikes. We bring the cache of digitalized literature on a CD to our

of our educational programs by producing Spanish-language posters using the images in our database. A nascent poster series includes high-resolution photographs of butterflies and moths, dragonflies, ground beetles, leaf beetles and weevils, ants, palms, mountain plants, and plants in common families. All aim to provide the public with names and faces for familiar flora and fauna in the local environment, and all have the logos of the participating institutions and the URL for the website for further information: <<http://insects.oeb.harvard.edu/Caribbean>>. We hope to distribute these posters to elementary schools, beginning next year, and they form the core of a traveling exhibit beginning circulation this year in the Dominican Republic and New York.

The database and website we began



Closeups of beetles

de Estado de Agricultura flew experts in to document the establishment of the butterfly in the agricultural Cibao valley which produce an annual crop worth over one billion pesos. Hopefully, this early warning will curtail damage in the DR, slowing the spread to Florida, where the value of annual citrus production exceeds 1.6 billion dollars.

I initiated the course field trip in spring 2002 with support from philanthropist and renowned labor mediator attorney Theodore Kheel, who built the PCSB labs and the nearby Punta Cana Hotel. With my prior experience in similar courses in Mexico and Costa Rica, I wished to bring Harvard students to the field in a region that MCZ scientists had explored in decades past, resulting in remarkably strong museum collections of specimens and literature. In an academic world increasingly attuned to international affairs, the very strength of MCZ scholarship on the Caribbean brings both professional obligation and educational opportunity—to help repatriate the information gathered over 150 years that began with the correspondence of MCZ

Dominican colleagues, and make it available for use in the field station by students from Dominican and foreign universities. Harvard students have now digitalized some 600 scientific papers totaling over 15,000 pages now available to Caribbean researchers on our website for downloading.

However, it's not only researchers who are interested in bugs and plants. Elementary and high school students are fascinated as well. While only a few of these Dominican children may actually become biologists, all will be members of the community that determines the future of the environment. Dominican student access to computers and the Internet has increased under the administration of Dominican President Leonel Fernández, who was brought up in New York and attuned to the impact of the cyberworld on education. Under the Fernández administration, the Secretary of State of the Environment and the Subsecretary of Biodiversity and Protected Areas and the Subsecretary of Wildlife are supportive of science education, research and conservation, and work with us in our effort to broaden the impact

with a Harvard course now has been much expanded, thanks to support from DRCLAS and a grant from the National Science Foundation (NSF). With NSF support, I used a sabbatical year 2002-2003 in the Dominican Republic to bring my MCZ assistants to transmit their expertise in digital technology to students from the Universidad Autónoma de Santo Domingo (UASD) the oldest university in the Western Hemisphere, founded in 1538. Additional support from DRCLAS and the Fundación Ecológico Punta Cana permitted establishing three digital imaging centers, respectively, at the Jardín Botánico Nacional, PCSB and the Museo Nacional de Historia Natural (MNHN, later moved to the UASD when the MNHN closed due to infrastructure problems). At the Jardín, UASD biology majors Josue Henríquez and Arlen Marmolejo document insects economically important to agriculture, horticulture, and forestry as well as to human health (such as the different dengue- vs. malaria-vectoring mosquito species). Josue and Arlen digitize specimens from older insect collections, and are engaged in documenting endemic as well

as invasive insect species on the highly biodiverse grounds of the Jardín and in other protected areas of scientific interest.

Through the high entrance gates of the Jardín Botánico Nacional, the brick and fossil coral cobblestone drive expands into the broad low plain of a central plaza flanked by tree-lined slopes capped by pink-washed educational and administrative buildings. The cobble plaza, shaded by tall palms, envelopes several enormous rectangular pools with emerging lotus flowers and papyrus and swimming koi. The pools also host a dozen species of blue, red or green dragonflies that patrol the perimeters in search of mosquitoes and other flying prey. Nestled among spreading samana trees, high off to one side, are the offices of JBN Director Milciades Mejia. The plaza drops

tion (a special program produces a single, fully-in-focus image from the array of focal layers) and data entry for the database. This assembly line production is finished by noon, when the generator is turned off (there is no consistent electricity available in the DR these days) and the students move on to other tasks after lunch. Once a month, a CD of data and images is express mailed to us at Harvard for posting on the website.

Back at the MCZ, The website is maintained by Piotr Nasrecki, MCZ resident research associate. Nasrecki also designed the Filemaker Pro-based Mantis software that we use for the database. The MCZ also backs up the database with an Oracle server that connects all MCZ departments to the international network implemented by the Global Biodiversity Information Facility (GBIF).

vard professor documenting the ants of the Caribbean, and Smithsonian-based USDA scientists Steve Lingafelter, Alex Konstantinov and Norman Woodley (a former Wilson graduate student), plus Kelvin Guerrero, all of whom focus on plant-feeding beetles (my own specialty). Other contributors include my own graduate student Sebastian Vélez from Puerto Rico (at the MCZ) and graduate students in other American and Latin American universities.

An informal consortium has formed (the Consortium for Biodiversity of the Caribbean, or CBC) comprised of the New York Botanical Gardens, the Smithsonian Institution, United States Dept. of Agriculture, the Carnegie Museum of Natural History, the MCZ, Jardín Botánico Nacional, Museo de Historia Natural, Fundación Ecologico



off through a glade towards the herbarium buildings, leading to a blacktop drive winding through the Jardín. From high, grassy, central knolls studded with tall, skinny guanito fan palms the drive plunges down through the jungle of a riparian cañada, with tall rainforest trees draped with pendulous vines and harbor calling tree frogs and palmchats. Early morning walks here often produce a startled limpkin, meter-tall, long-billed snail hunters that are unusually diurnal in Hispaniola.

At the far end of a palm and tree filled grassy meadow, a long, low white stucco building holds the national plant collections, overseen by a plant scientist named Francisco Jimenez, and our imaging station. Here Arlen and Josue begin work in the cool of each morning alongside botanist colleagues and choose from drawers of insect specimens brought from the MNHN or from the field. The insects of the day are given tiny barcode labels, very much like insect-sized versions of those used in supermarkets, and all are photographed (with as many as 20 different layers of focus) with a digital camera attached to a Leica microscope. The photos are then taken to the computers for image produc-

tion. Wrobel and Nasrecki are now turning the insect and plant data into digital maps for use by the Dominican conservation community. Such maps are useful for decision-making as they convey information on the distributions of threatened species. When park boundaries take such species distributions into account, they preserve areas of maximal scientific importance.

This network of expertise we have formed between the Dominican Republic and the United States brings together information from biological specimens in historical and new collections, representing threatened habitats requiring documentation. To date, we have some 20,000 specimens representing some 5,000 species, or a quarter of the projected total of 6,000 plants and 15,000 insects. Together, these insect and plant species represent the vast majority of the species of visible life-forms on the island of Hispaniola, and are food for most of the rest. We anticipate a flood of new specimens from John Rawlins and his Carnegie Museum colleagues Chen Young and Bob Davidson, with whom we take inventory of the montane insects of Hispaniola, as well as by E. O. Wilson, a Har-

Punta Cana, and Fundación Moscoso Puello for the study of biodiversity of the Caribbean. This consortium has grown into an enterprise that includes hands-on opportunities for students from both countries. We hope to foster comparable efforts in Cuba, Puerto Rico, Jamaica and more distant countries, and are providing complete documentation of our experience, including an illustrated guide to databasing and imaging available for download on the website.

What started as a spring break field trip thus may have a more general impact on knowledge of biodiversity in the Caribbean. It seems fitting that a first step towards fulfilling E. O. Wilson's vision of a free, online encyclopedia of life, organizing biological information from all sources, should be taken on the island where the Americas began.

Brian D. Farrell is a Professor of Biology and Curator in Entomology at Harvard University. He is married to Irina Ferreras de la Maza from Santo Domingo. Together with their children Gabriela and Diego, they enjoy exploring the Dominican mountains and shore with members of a very large clan of cousins and close friends.

The Nature of Nature

Life in Death

A PHOTO-REFLECTION BY JULIO PANTOJA

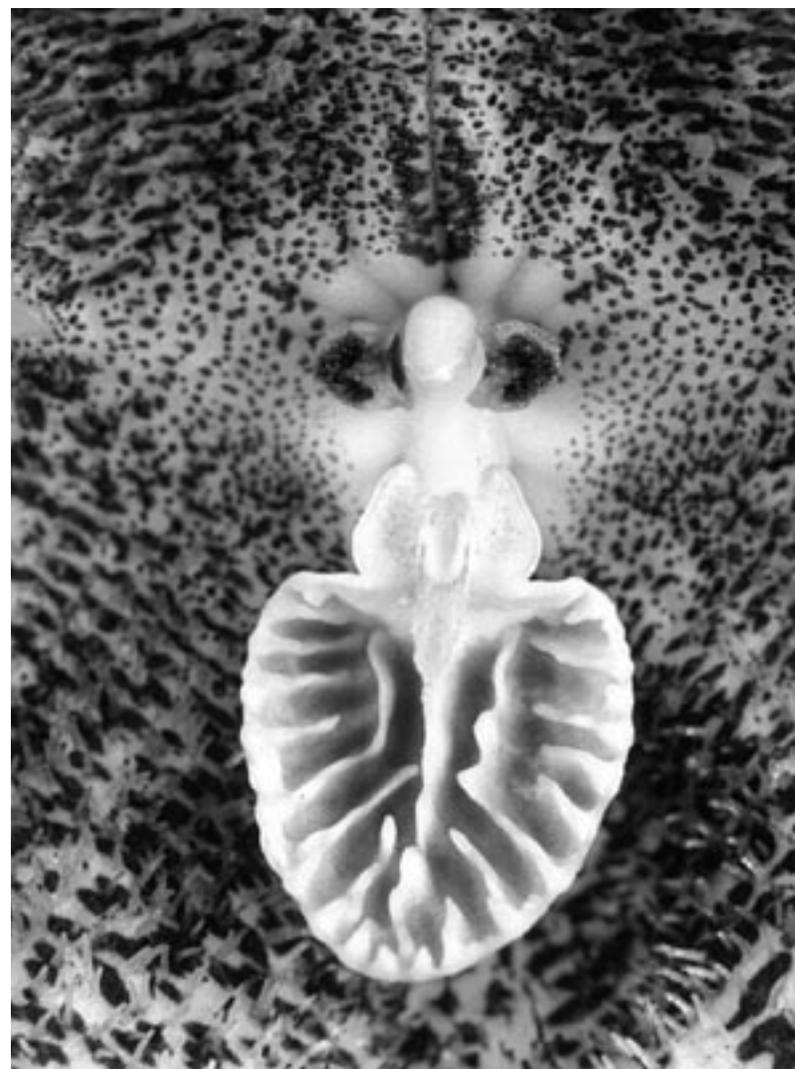
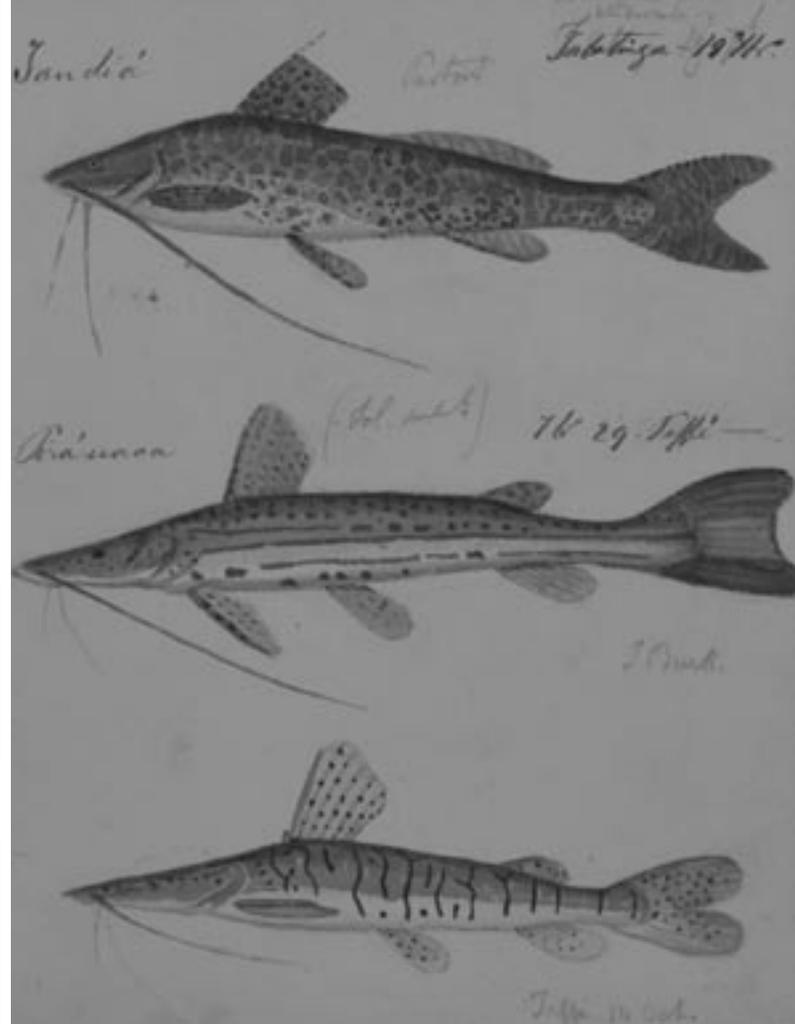
DURING A VACATION IN BRAZIL, WALKING along a beach, I saw these remains of fish. In their death, they took on a new life, a transformation that turned them into something else, that made the dead objects into living art forms.

I photographed the dead fish at sunrise and at sunset, without any subsequent computer manipulation. For me, they are a reminder of the constant cycle of life.

Julio Pantoja is an Argentine documentary photographer who specializes in Latin America. He has shown his work in Europe, the United States and Latin America. His work can be seen at <www.juliopantoja.com.ar> and <www.sudaca-photos.com>.







THE LENS OF THE PAST

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Digitalizing Nature p.17

The Glass Flowers p.18

The Herpetology of Cuba p.21

Photoessay by Jorge Mario Múnera p.22

One often thinks of nature as the lens to the immediate: a magnificent sunset, a spectacular flower. As this section demonstrates, nature is also a window to the past.

The Nature of Tropical Nature

Brazil Through the Eyes of William James

BY MARIA HELENA MACHADO

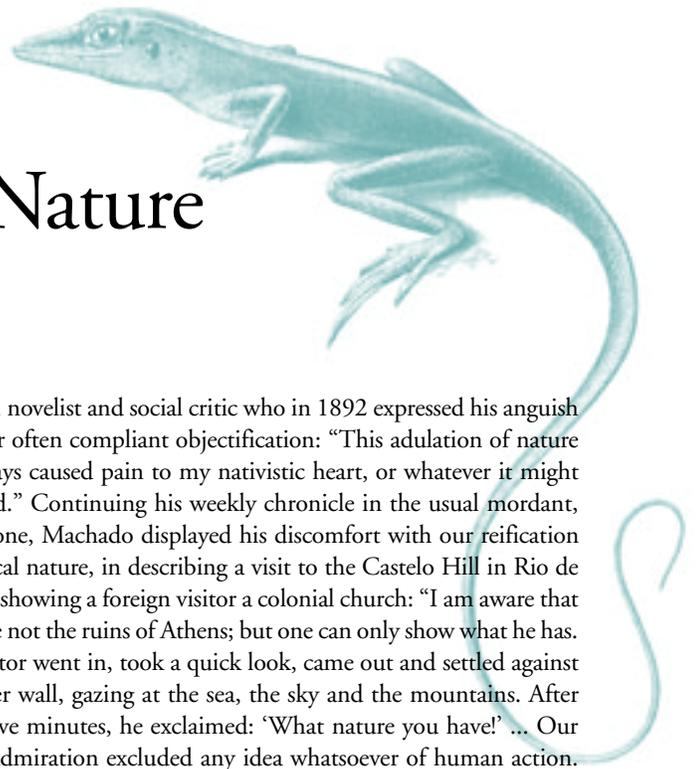
TO A BRAZILIAN, NOTHING SOUNDS MORE FAMILIAR THAN statements that Brazil has been blessed in terms of nature. Indeed, from our earliest childhood, we learn to identify our country through enthusiastic manifestations about the wonders of our geography, not to mention the flora and fauna whose extraordinary diversity and wealth comprise the treasures that God generously bestowed upon us (of course, while all other nations have had to work hard to amass wealth). Even Pedro Vaz de Caminha's inspired letter reporting the discovery of new lands to the King of Portugal in 1500, which described these lands in terms of Eden, seems to predict that our destiny was to be a part of nature. Nothing but nature.

Precociously announced in the early colonial period's "visions of Eden," this destiny became more fully established in 19th-century travel narratives, which recreated the discovery of new lands and reproduced the initial awe expressed by the early chroniclers in their descriptions of an earthly Paradise. In describing diverse species of monkeys, sloths, manatees, and other wonders of the animal kingdom (which in a sense included mention of naked savages), all allocated in an atemporal natural setting of tropical forests and rivers, 19th-century travel literature often identified Brazil in terms of its exotic flora and fauna, above and beyond any recognition of its social implications.

As a scholar interested in travel accounts written in this period, I find myself almost compelled to sympathize with the few luminous writers who in one way or another strayed away from the general tone, helping make our nature-prison less panoptic. For example, I cannot help identifying myself with a passage from the great Machado

de Assis, novelist and social critic who in 1892 expressed his anguish with our often compliant objectification: "This adulation of nature has always caused pain to my nativistic heart, or whatever it might be called." Continuing his weekly chronicle in the usual mordant, ironic tone, Machado displayed his discomfort with our reification as tropical nature, in describing a visit to the Castelo Hill in Rio de Janeiro, showing a foreign visitor a colonial church: "I am aware that these are not the ruins of Athens; but one can only show what he has. The visitor went in, took a quick look, came out and settled against the outer wall, gazing at the sea, the sky and the mountains. After about five minutes, he exclaimed: 'What nature you have!' ... Our guest's admiration excluded any idea whatsoever of human action. He didn't ask me when the fortresses were built, or the names of the ships anchored in the harbor. Nothing but nature" (cited in Flora Sussekind, *O Brasil não é longe daqui*, p. 267).

And what does this have to do with William James's journey to Brazil in 1865-66, as a member of the Thayer Expedition, which was led by Louis Agassiz, director of the Museum of Comparative Zoology and influential professor at Harvard's Lawrence School? Well, from the moment I set eyes on James' Brazilian papers, written when he was only 23 years old, I noticed something of an original spirit palpating. In spite of being part of a naturalist's journey, organized according to well-established patterns, James seemed to establish himself in a position of intellectual independence. His voice was different from those who only sought to produce a rationalizing, extractive, and dissociative understanding, suppressing functional and experiential relations between people, plants, and



animals, consolidating a descriptive paradigm that appropriated an apparently benign and totally abstract world, producing a naive and utopian vision of male, European authority (cf. Mary Pratt, *Imperial Eyes*). Unlike what one would expect from someone involved as a volunteer in a scientific collecting expedition, James engaged in a different kind of intellectual journey during the eight months of his sojourn in Brazil, spent mostly in Rio de Janeiro and in the Amazon. He scribbled letters to his family, wrote a brief (incomplete) narrative describing his trip to the Solimões River, maintained a journal, and sketched a series of drawings depicting scenes and people from the expedition, which express not only a critical consciousness but also a moral distance from the colonialist intellectual enterprise that guided the expedition. Because of this, although James's Brazilian writings are well known to all the scholars—including Ralph Barton Perry, Gerald Myers, Howard Feinstein, Kim Townsend, Louis Menand, Paul Jerome Croce, Daniel Bjork, and many others—who meticulously have studied this charismatic figure from the perspective of his intellectual biography and his place in the history of Harvard's consolidation as a modern university, these papers have yet to receive attention within the wider context of nineteenth-century travel literature. They stand out in terms of the special empathy that James displays in his observations on the tropical environment and the nonwhite populations that inhabited it. Among Latin Americanists, only Nancy Stepan dedicated some attention to James's papers in her recent book, *Picturing Tropical Nature*. Furthermore, I believe that an analysis informed by this perspective can offer a new fold to the well-known biography of the founder of Pragmatism.

Of course, James's Brazilian writings are not always, shall we say, illuminated by an empathetic and relativistic approach. James expresses many feelings and emotions in his letters and journal, beginning with his ambivalence in relation to the significance of the journey itself. He narrated moments of boredom and restlessness, revealing his desire to go home as soon as possible or his irritation with the lethargy and inefficiency of the natives, as one might expect from a young man facing such a journey. The trip was not only strenuous, endeavoring to cover little known areas of South America, but it separated James for the first time from a very absorbing family, placing him under the orders of Agassiz, who was prone to erratic and tempestuous decisions, changing travel plans spuriously and keeping his subordinates always at his beck and call.

In addition, James caught what he believed to be smallpox during the first months of his stay in Rio de Janeiro, with potentially dire consequences that deepened his indisposition towards the journey for months. Agassiz, however, claimed that James suffered from a more benign illness. He continued his schedule of social and scientific visits to surrounding plantations, leaving his student to face a serious health risk that left the young man temporarily blind.

On some occasions, James simply succumbed to the exotic, as for example in his frequently cited letter to Henry James, dispatched from the "Original Seat of the Garden of Eden," in which he employs images derived from a standard repertory of descriptions of tropical nature. "No words but only the savage inarticulate cries can express the gorgeous loveliness of the walk I have been taking", he wrote. "Houp la la! The bewildering profusion & confusion of the vegetation, the inexhaustible variety of its forms & tints (yet they tell us we are in the winter when much of its brilliancy is lost)



Above: William James, Louis Agassiz and other expedition members. Right: James took copious notes and illustrated them.

are *literally* such as you have never dreamt of. The brilliancy of the sky & the clouds, the effect of the atmosphere wh. gives their proportional distance to the diverse planes of the landscape make you admire the old Gal nature." Later in the same letter, James appeals decidedly to the exotic, characterizing his surroundings as "inextricable forests" and referring to the local inhabitants as a naturalized component of the landscape: "On my left up the hill there rises the wonderful, inextricable, impenetrable forest, on my right the hill plunges down into a carpet of vegetation wh. reaches to the hills beyond, wh. rise further back into the mountains. Down in the valley I see 3 or four thatched mud hovels of negroes, embosomed in their vivid patches of banana trees." These hyperbolic exclamations invite the reader to imagine a pristine, mysterious, and especially impenetrable landscape, quite consistent with conventional notions in the Northern Hemisphere regarding tropical nature.

This is how many of James's biographers imagined the journey, citing and analyzing this letter as an illustration of the kind of intellectual and emotional experience evoked by the lush and liberating world of tropical forests. Although James did not specify the exact location of this excursion, clearly it took place in the Tijuca Forest, only a few miles (not 20, as James supposed, but around 8, as established by the Agassiz couple in their *Journey in Brazil*) from the urban center of Rio de Janeiro, a pleasant location frequented by the upper crust of Rio's society on weekends for strolls and picnics. On that occasion, Agassiz's party stayed overnight at the Bennett Hotel, belonging to an Englishman and boasting modern amenities. Tijuca, of course, was and still is lovely, in spite of the high-class residential neighborhoods and shopping malls that



& far more picturesque than I expected. I have not yet seen a single snake wild here..." letter, Oct. 21, 1865), and finally that the tropical environment was not all that mysterious, but rather somewhat tedious and repetitive ("here all is monotonous, in life and in nature that you are rocked into a kind of sleep...", Dec. 9, 1865).

James is at his best when he shows that he is capable of empathizing with the local inhabitants, guides, fishermen, and others, the Indians, Blacks, and mestizoes who accompanied the collecting excursions, often as his only companions. In one of my favorite passages, James, obviously greatly inspired on that day, observed a conversation between his boatmen and a group of Indian women who conducted a canoes downstream on the Solimões River: "I marvelled, as I always do, at the quiet urbane polite tone of the conversation between my friends and the old lady. Is it race or is it circumstance that makes these people so refined and well bred? No gentleman of Europe has better manners and yet these are peasants" (William James Diary, 1865-66, Houghton Archives). This and other luminous passages written in a disinterested tone show how the young James dealt with the problematical concept of race informally by turning it on its head, showing signs of the charismatic and brilliant teacher that was to exert a special attraction over those who came to know him. In confronting the conventional, stereotyped repertory of tropical travel narratives, James exercised his peculiar skill of empathizing with the world that surrounded him, relativizing cultural codes in their own terms. For someone

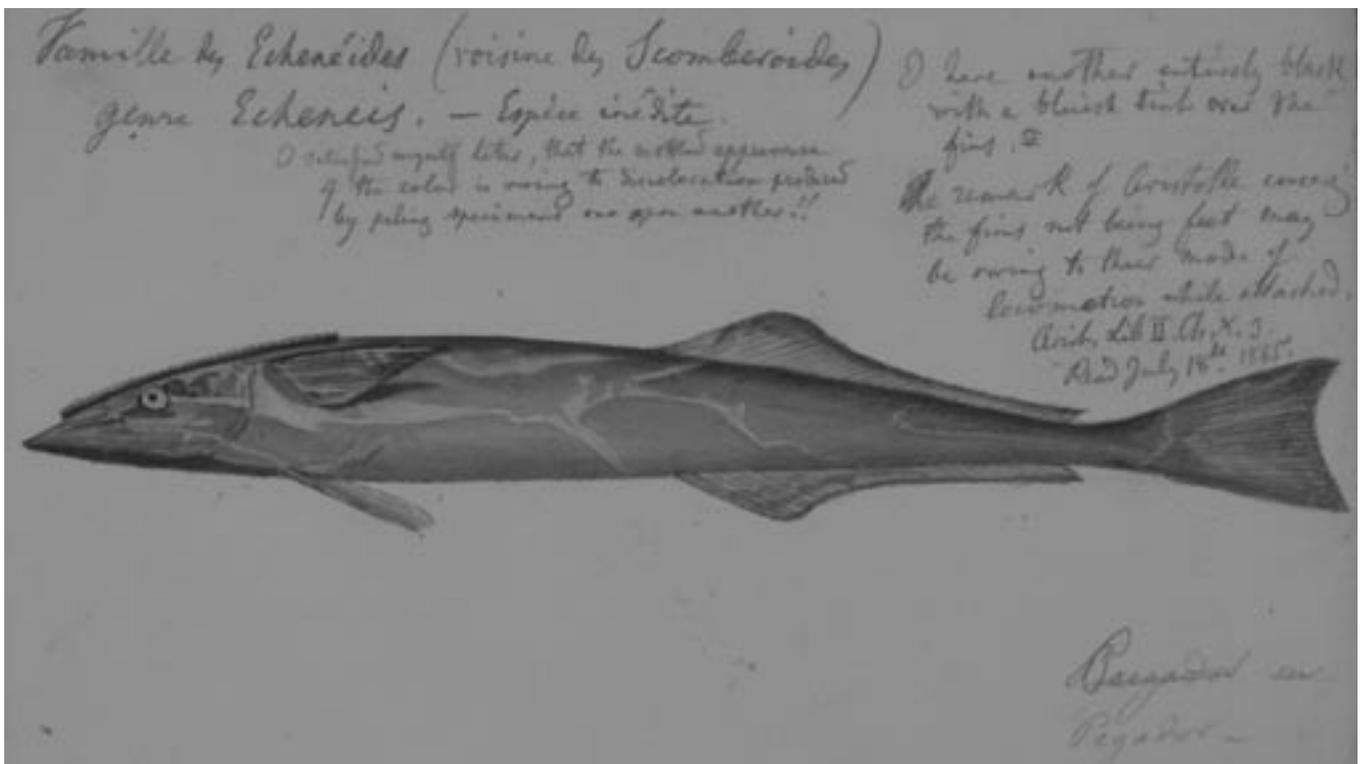
occupy the region. However, it hardly represented a tropical jungle experience, as James in fact was to experience in later months in the Amazon. From the vantage point of mid-19th century Rio de Janeiro, an excursion to the Tijuca Forest was little more than a polite social outing, not unlike an excursion that contemporary Bostonians or Cantabridgians might make to the shores of Walden Pond on a summer day!

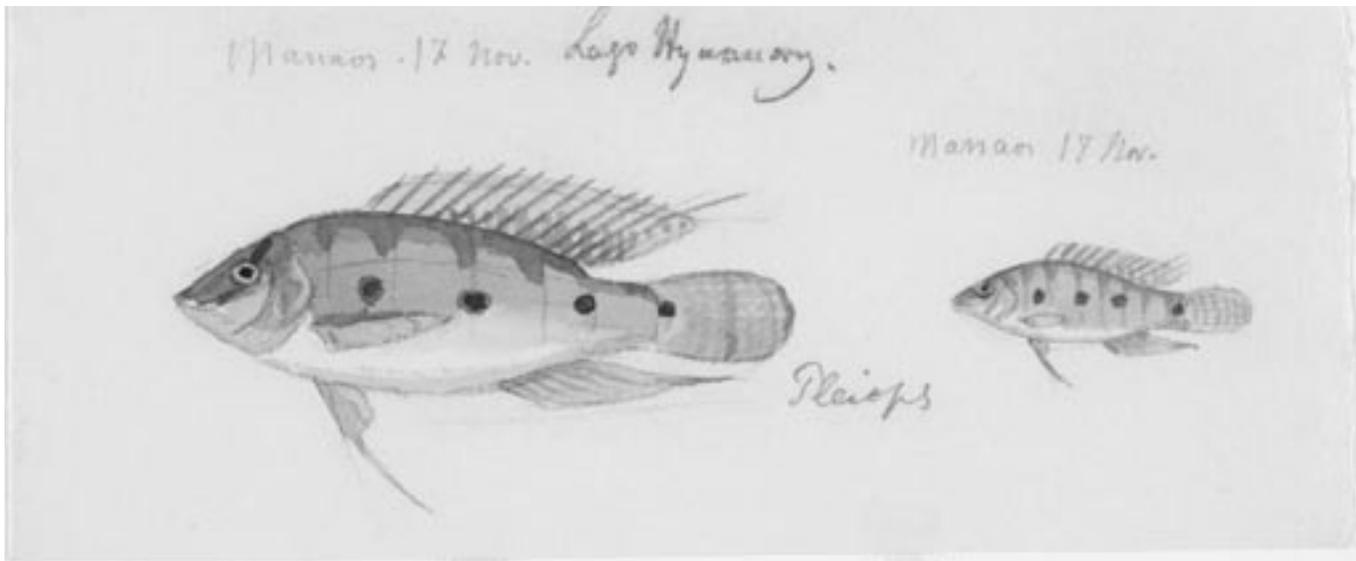
James can be surprising, though. One expects him to be conventional, with salutes to the exotic character of the natives and odes to a mysterious, atemporal, and asocial Nature, as a traveler who seeks to establish a secure emotional distance from his experience, fearing the risks of liberating the unconscious. But James takes risks and not only is he particularly perceptive in his demolition of the tropical nature myth, but also he is capable of empathizing with that which he describes, including the native populations. He invites his readers to discover that Rio de Janeiro had a European air to it ("The streets in town & shops remind you so much of Europe", in a letter dated April 21, 1865), that the Amazon was relatively civilized ("This expedition has been far less adventurous

like James, who had begun the trip with a terrible seasickness and who soon discovered "[i]f there is any thing I hate it is collecting" (letter dated Oct. 21, 1865), the journey to Brazil ended up being quite productive.

Revealing an unconventional and empathetic traveler, James's Brazilian papers have yet to be subjected to a theoretical inquiry that is more appropriate to the kind of experience he lived and the kind of account he produced. It is in this spirit that I am preparing a critical edition of this material. After all, amidst the suffering and deprivation that a tropical journey could cause in the mid-1860s, we find a distinctive approach in the first discovery of the other, the other who James, not without some effort, pleasantly came to appreciate.

Maria Helena Machado is a Professor of Latin American History, University of São Paulo. A 2003-2004 DRCLAS Visiting Scholar, she is currently preparing a critical edition of James' Brazilian papers. John Monteiro, 2003-2004 Visiting Professor in Harvard's Department of History, translated this article from Portuguese.





Digitalizing Nature

Preserving the Past

BY JUNE CAROLYN ERLICK

ART HISTORIANS, BIOLOGISTS, ANTHROPOLOGISTS, HISTORIANS of science, Latin Americanists and fish experts aren't known for frequent intersections in their academic life.

They will soon find a meeting place—at least a virtual one—in Harvard's Museum of Comparative Zoology's (MCZ) ambitious new project of digitalizing material from an 1865 expedition to Brazil.

The digitalization project, expected to take about a year, will put specimens, specimen records, correspondence, field notes, diaries, sketches, photographs and monographs on line. However, what is even more unusual, the museum is digitalizing more than a thousand fish watercolors, pencil drawings and landscape paintings. Digital tools are increasingly being used to disseminate information about the flora and fauna of Latin America, but the MCZ project is particularly interdisciplinary.

When Louis Agassiz, MCZ founder and director, set off for Brazil with his wife Elizabeth and a dozen assistants on a 15-month collecting expedition, he took along museum artist Jacques Burkhardt. Although the first fixed photographic image in the world had been taken about twenty years earlier, painting and drawing were still the standard way of documenting science.

Agassiz hoped that investigating the distribution of Amazonian freshwater fish species in Brazil would help him refute Charles Darwin's recently formed theory of evolution. The Thayer expedition, named after Boston banker Nathaniel Thayer, who financed the trip, did not prove what it set out to do, but it is still helping scientists—and other academics—to understand today's world.

Left and above: These fish are examples of Amazonian freshwater species, drawn by Jacques Burkhardt in 1865.

Connie Rinaldo, librarian at the MCZ Ernst Mayr Library, observes, "One of the major issues is that many of the fish have not been identified. These are very detailed images. Burkhardt drew the animals as soon as they were dead, or a little before. It's a rich collection of items that are difficult to access."

The images will soon be posted to the Internet with links to collection data for, and photographs of, the existing specimens (preserved fishes) that still reside in MCZ basement, along with other links to scans of original field notes from the expedition. Some of the notes and letters are written by William James, who went along with Agassiz while a Harvard undergraduate (see related article, p. 13)

Robert Young, in the library's Special Collections, has been cataloguing the images after conservation work is done at the Weissman Preservation Center and then sending them to Harvard's Digital Imaging Group to be digitalized as part of Harvard's Library Digital Initiative. The materials are entered into the database as thumbnail sketches, but will be available in higher resolution and size over the Internet to researchers applying for access. Previously, according to Rinaldo, the images could only be studied by coming to Cambridge or by a costly and risky process of sending them out to scientists. Demand from Brazil and other parts of Latin America, as well as from Europe, is consistent, she says.

Rinaldo hands the reporter a framed fish watercolor by Burkhardt. The intricate details of scales, eyes and fins are visible in intricate detail. Rinaldo smiles, "It's a digital print. You couldn't tell the difference, could you?"

June Carolyn Erlick is publications director at the David Rockefeller Center for Latin American Studies. She is also the author of Disappeared: A Journalist Silenced (Seal Press, 2004).

Flowers with Deep Latin American Roots Bloom in Cambridge

The Glass Flowers at the Harvard Museum of Natural History

BY ANN BARGER HANNUM

THE SPIKY JAWS OF THE *DIONAEA MUSCIPULA* (venus's-flytrap) leaves and the gaping, pouch-like bodies of the *Nepenthes sanguinea* (Pitcher Plant) conjure up childhood tales of carnivorous appetites within the plant kingdom. Then there are the dead ringers for insects among the various orchid species, which have adapted themselves conspicuously to seduce insects into the pollination cycle. These botanical curiosities as well as frilly ornamentals, elaborate fruit blossoms, and elegant grasses represent only a sampling of the more than 840 species of flowering plants in the Ware Collection of Blaschka Glass Models of Plants — best known, simply, as “The Glass Flowers.” Of the more than 4,300 models in the collection, over 3,000 detailed models of flowers and plant sections are on exhibit at the Harvard Museum of Natural History. To the delight of entomologists, precise models of numerous insects critical to the pollination process are also included among the thousands of emerging buds, showy and wilted blooms, hair-thin roots, and the dewy, leathery, and fleshy leaves of plants.

Commissioned in 1885 to be used as teaching tools in Harvard botany classes, these stunningly lifelike models were crafted meticulously by German artisan Leopold Blaschka and his son, Rudolf. Often referred to as an “artistic marvel in the field of science and a scientific marvel in the field of art,” the project took nearly half a century to complete. Since then the collection has been an indispensable educational reference for educators and students alike. For the non-scientists among the nearly 120,000 visitors to the exhibit annually, the models are an artistic wonder. The powdery appearance of pollen and the gritty texture of dirt clinging to tangles of roots are nearly “unbelievable” in their realism, visitors often remark. With an intriguing history that includes the apparent obsession of the artisans, the often colorful experiences related to the transport of the delicate models from Germany to Cambridge over the years, the acquisition of plants as reference specimens for the models, and the passion of those working to slow their deterioration, the collection has much to say about plants, people, and the intersection of the two.

Poet Marianne Moore begins her 1924 work, “Silence,” with “My father used to say, ‘Superior people never make long visits, have to be shown Longfellow’s grave or the glass flowers at Harvard.’” More recently, avant-garde Los Angeles photographer, Christopher Williams, featured 27 black and white photographs of the models in his show, “Angola to Vietnam*.” Each flower represented is native to a country listed in Amnesty International’s 1986 report



of countries that had practiced political disappearances as a means of political control. These sometimes highly abstract, occasionally blurred images were taken under the direction of Williams and are each labeled with the flower’s country of origin, archival number, and specific botanical details. “Like votive candles in a chapel, these straightforward images memorialize the disappeared, casting new light on the uses of representation as a means of witness,” states Edward Leffingwell in *Art in America*.

Art critic Arturo Silva notes of the exhibition that “These are not standard ‘beautiful’ flower photographs... Williams implicates whole worlds in his work: the world of universal knowledge denoted by the flower archive;

the worlds of myths and expectations concerning photography and ‘nature’ and beauty; and the world of political and social control that even ‘innocent’...glass flowers are a part of.” Among the 27 photographs within the show, 15 represent Latin American countries.

The Williams show reflects the extraordinary impact of The Glass Flowers collection, which has fueled imaginations by reminding us of the incalculable influence that many of these plants have had on the lives of peoples for millennia. About 16 percent of the flora represented in the collection are native to Latin America, with about 50 plants originating in Central America and 80 in South America, according to Susan Rossi-Wilcox, curatorial associate and administrator of The Glass Flowers collection. The countries represented are Mexico, Guatemala, Costa Rica, Brazil, Venezuela, Peru, Colombia, and Argentina. General areas on other labels are designated as “tropical America” and the Andes Mountains. In 1892, Rudolf Blaschka traveled to Jamaica to study certain plants, and planned to travel to Mexico a few years later to collect reference specimens, although the trip did not materialize. Many of the plants in the Glass Flowers collection, such as *Coffea arabica* (Coffee), normally associated with Latin American countries today, in fact, are native to other regions. Although Brazil and Colombia are now the world’s greatest producers of coffee, the plant originated in Abyssinia.

Among the specimens native to Latin America alone, the collection includes plants with their own captivating histories closely tied to the development of modern civilization. Beyond their prominence as primary food sources and ornamentation, these flowers and

Above: cactus flower*. Opposite page, from top right, clockwise: yucca, Matilija Poppy, Pride of California and Dahlia.



FLORA AND FAUNA

plants have played both symbolic and tangible roles since prehistory, with great social, medicinal, religious, political, and economic significance. They've served as monetary units and as inspiration for art; they celebrate birth and memorialize death; they seduce and cast spells. *Zea mays* (Corn), of tropical Mexican origin, and *Solanum tuberosum* (Potato), which originated in the Andes sometime between 5000 and 2000 B.C., are examples of plants in the collection that have historically had an enormous impact on Latin American countries and, eventually, have transformed the world.

One of the most technically accurate models among the economically important plants in the collection is that of *Theobroma cacao* — translated as “food of the gods” — (Cacao Tree) from which chocolate is derived. Perhaps the most universally popular culinary delight, chocolate has a vibrant and complex 3,000-year history spanning the rise of pre-Columbian Mesoamerican civilizations to the present. Originating in the Amazon Basin, cacao trees were first cultivated for their fruit and beans by the Maya and Aztec Indians. Throughout the centuries, chocolate figured prominently in colonialism, the slave trade and the rise and fall of political and religious powers within Latin American cultures and beyond, finally extending its religious, social, medical, economic and gastronomic importance worldwide. In some respects, the fact that it was available mainly to the elite and wealthy for many centuries also contributed to its broad influence. A crop with humble beginnings in ancient Mesoamerica is today the basis for a multibillion dollar industry worldwide. In a dramatic shift from the crop's early history, West Africa now produces more than 67 percent of the

world's crop. Among Latin American countries, only Brazil is one of its leading producers.

Such histories chronicling the ways in which flowers and plants have helped form civilizations are only a small part of the importance of — and continuing fascination with — The Glass Flowers collection. As digital images increasingly enhance classroom learning, the glass models remain the most technically accurate botanical teaching tools available, some hundred years after they were first created. And, for those who simply appreciate exceptional craftsmanship, the glass flowers are an example of some of the most exquisite and exacting artistry ever accomplished. *Say it with flowers?* These flowers speak for themselves.

Ann Barger Hannum, project manager and nonprofit consultant, was affiliated with Harvard for twelve years, most recently at the Harvard AIDS Institute. She thanks Susan Rossi-Wilcox; Donald H. Pfister, Asa Gray Professor of Systematic Botany and Director of the Harvard University Herbaria; John Smith, Assistant Director of Collections and Exhibitions at The Andy Warhol Museum; and Matthew Siegle, archivist at the David Zwirner Gallery in New York City.

The Glass Flowers collection is owned by the Botanical Museum-Harvard University Herbaria and is exhibited in the Harvard Museum of Natural History. HMNH is open to the public daily 9-5 (closed holidays). For more information go to: <http://www.peabody.harvard.edu/museum_botanical.html>.

ORCHID HERBARIUM OF OAKES AMES

Harvard's Orchid Herbarium of Oakes Ames (AMES) contains about 131,000 specimens, in addition to a library of about 5,000 books, reprints, and journals. The herbarium also houses a collection of 3,000 flowers in glycerine, 4,000 pickled specimens, and hundreds of line drawings supplement dried specimens in the main collection.

Oakes Ames, who held a variety of botanical teaching and administrative positions at Harvard until his death in 1950, started the herbarium. He became interested in horticulture as a child since his father had several greenhouses at the family home in North Easton, Massachusetts.

“[A]mong the plants purchased was a small collection of orchids,” which would be Ames's introduction to the plant family that would become his life's work (Mangelsdorf ix). The New York Botanical Garden's N.L. Britton furthered this interest in orchidology by suggesting to Ames that “the classification of the Orchidaceae was almost hopelessly confused” and that it would take “not only a brilliant taxonomist, but extensive financial support” to develop a proper organization of the family (Schultes 70).

Ames's work in with orchids led him to amass a large living collection, as well as an extensive orchid herbarium, with a library and collection of photographs and paintings (including paintings by his wife, Blanche Ames). The living collection was donated to the New York Botanical Garden and the herbarium and library are now part of the Harvard University Herbaria.

This herbarium is exceptionally rich in types, with some 6,000 holotypes and 4,000 isotypes represented, resulting from an active exchange program maintained throughout the years by the staff of the herbarium. An exceptional collection of types and drawings of types was received from both Rudolf Schlechter and Rudolf Mansfeld at the Berlin-Dahlem herbarium, the collections of which were largely destroyed during World War II. During 1985 and 1986 important collections, as determined by now retired Curator Leslie Garay, were photographed and a microfiche edition prepared and made available to the botanical community. Gustavo Romero is responsible for curation of the Orchid Herbarium.

Current research at AMES includes the orchids of Neotropical island-like, unique habitats, the systematics of subtribes Catasetinae, Cyrtopodiinae, Lycastinae (Bifrenaria alliance), and Zygopetalinae (Warrea and Zygopetalum alliances) for the orchid flora of the Venezuelan Guayana and surrounding countries (Brazil, Colombia, and Guyana) and several other Neotropical floras, as well as computerization of types and various herbarium card files.

The information above was provided by the Herbarium website: <<http://www.huh.harvard.edu/collections/oakes.htm>>.

—JCE



Above: *Gonatodes fuscus*, found
in Guantánamo, Cuba

Below: *Phyllobates limbatus* Cope, found
in Cienfuegos, Cuba

The Herpetology of Cuba

Bringing Old Books to Life

CUBA IS OFTEN ON OUR MINDS FOR GEOPOLITICAL REASONS, but the island nation has long fascinated students of flora and fauna.

The Society for the Study of Amphibians and Reptiles, an association of biologists from more than 60 countries, recently reprinted *The Herpetology of Cuba* by Thomas Barbour and Charles T. Ramsden, with an introduction by Rodolfo Ruibal.

Barbour (1884-1946) was Curator of Herpetology and Director of Harvard University's Museum of Comparative Zoology. He was a specialist in zoogeography and the herpetology of islands, particularly the West Indies. His colleague Ramsden, an entomologist and naturalist, studied first at Yale, then at the Universidad de la Habana, where he received his doctorate in lepidopteran systematics in 1917. Ramsden was a resident of Guantánamo, Cuba, and collected herpetological and ornithological specimens, mostly from eastern Cuba.

In his introduction to the well-illustrated facsimile reprint of the book, first published in 1919 in the *Memoirs of the Museum of Comparative Zoology*, and long out-of-print, Ruibal, a professor at the University of California, Riverside, places the book in historical context:

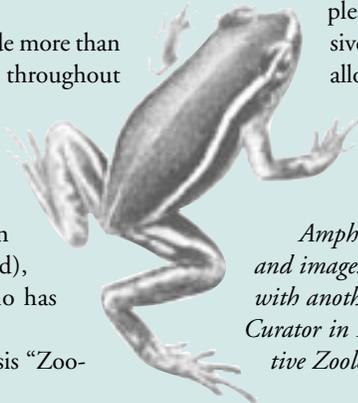
"Barbour first visited Cuba in 1908 and made more than 30 visits to the island. He traveled extensively throughout the country and resided for long periods at the Harvard gardens in Soledad, near Trinidad in southern Cuba. Barbour considered himself a Cuban 'by adoption' and derived great pleasure from his Cuban friends. He even described himself as 'aplatanado' (bananified), which is the Cuban term for a foreigner who has acquired Cuban characteristics.

"Barbour published his Harvard Ph.D. thesis "Zoo-

geography of the East Indies" in 1911 and the same year was appointed curator of reptiles and amphibians at the Museum of Comparative Zoology....He published over 200 papers in herpetology, as well as popular books such as 'The Naturalist at Large,' 'That Vanishing Eden,' and 'A Naturalist in Cuba.' Barbour's 'Reptiles and Amphibians, Their Habits and Adaptions' was published in 1926, with a revised edition in 1934. This well-illustrated book offered to the general public a concise presentation of the biology of reptiles and amphibians and an excellent bibliography on the subject. The last chapter of the book is a discussion on evolution. In it, the author praises Darwin and the 'Origin of Species,' acknowledges the function of isolation in speciation, and considers the origins of variation....

"Almost all of the species are illustrated in fifteen full page plates...A measure of Barbour's taxonomic competency is the fact that 66 of the 70 taxa listed in 'Herpetology in Cuba' in 1919 are still regarded as valid species or subspecies today....

"In summary, 'Herpetology of Cuba' is an excellent presentation of the taxonomy of Cuban reptiles and amphibians. The text not only illustrates Barbour's knowledge of fauna, but his pleasure in gathering and analyzing the data. His extensive field experience throughout the Cuban countryside allowed him to provide the Cuban common names for the species and to include distributional and ecological observations."



A special thanks to the Society for the Study of Amphibians and Reptiles for permission to reproduce text and images from the reprinted version of Herpetology of Cuba, with another special thanks to James Hanken, the present Curator in Herpetology and Director of the Museum of Comparative Zoology for suggesting the idea in the first place —JCE

The Tragic Saga of the Scorpion Flower

Twelve Portraits of the Dracula Orchid

A PHOTOESSAY BY JORGE MARIO MÚNERA

THE HISTORY OF THE MARVELOUS ORCHID ENCOMPASSES FATAL and little-known chapters of terrible tragedy dating back to Greek mythology. Back then, Orchis, the son of a nymph and a satyr, encountered the entourage of Dionysios, the son of Zeus and god of ecstatic celebration, in a forest. Suddenly infatuated with a priestess accompanying Dionysios, Orchis lost his head and tried to rape her. She defended herself and ordered wild beasts to kill him. However, as she gazed at the beautiful corpse lying at her feet, she repented her decision and asked the gods to return Orchis to life. The gods, moved by her plea, revived him and transformed him into an orchid flower.

In other cultures over the course of history, the orchid—a symbol of passionate love that is the symbol of aesthetic perfection—also is tied to bloody and brutal events. In southern Asia, orchid petals are the wrinkled dress of a vanquished goddess. In ancient Chinese paintings, serene brushstrokes depict orchids, plums, chrysanthemums and bamboo in silent contemplation of thousands of years of ruthless wars. In pre-Columbian cultures, the prized use of orchids for nutritive, medicinal and religious purposes transformed the orchid, along with other species, into an incentive for the devastating Spanish hordes. As of the latter part of the 19th century, however, the orchid's misfortune manifested itself with more ferocious intensity. The voracious desire of Victorian Europe for this flower set off an interminable chain of deaths, beginning with that of millions of different orchid species that perished as a result of the dismal condition of the journeys on the way to exile. The disappearance of so many species in the midst of hurricanes and shipwrecks is almost unimaginable, a parallel drama to the heartless slave trade, transversing these same waters, all victims of this cruel market.

Meanwhile, the Andean forests were looted and destroyed to satiate the fever for this exquisite love of the delicate flower. Entire jungles were torn down to obtain the orchids residing within their dense foliage, while others were destroyed by this new type of hunter so that their competitors could not get their hands on certain precious species, making the orchids more valuable for those who had obtained them first. In strange revenge, many of these men paid for the boldness of this mass abduction with their lives, without distinguishing whether their purpose was scientific, commercial or just an irrepressible whim. Almost all of these orchid hunters, caught in the chains of an irresistible and fatal attraction, ended their lives as cadavers among the orchids, in the midst of these exuberant forests that are still being destroyed in a systematic and fierce manner by cutting, cattle-herding, and the indiscriminate aerial bombing of chemical fumigation of extensive areas that are the home of endemic species.

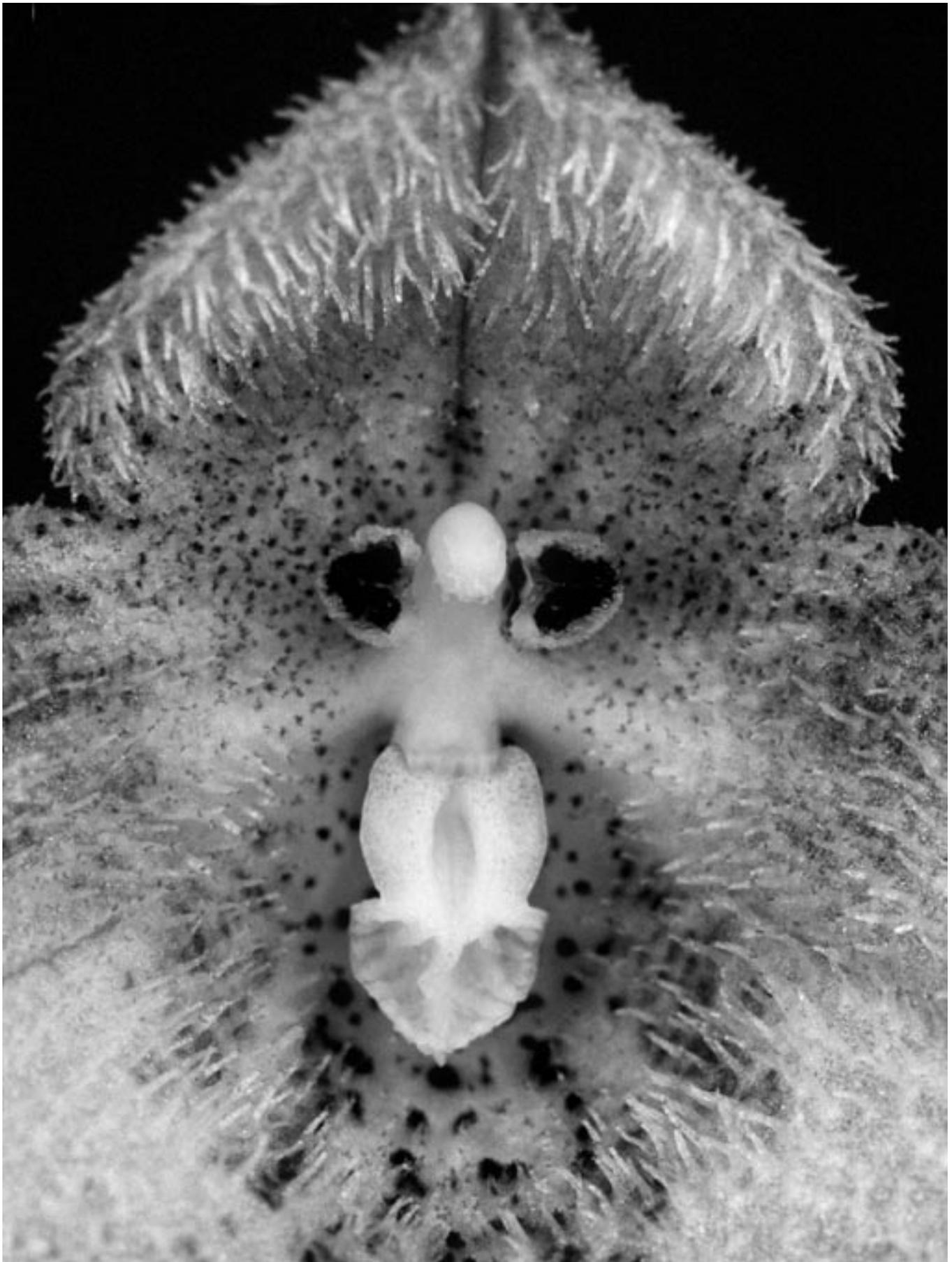
Colombia, the country that has the reputation for having the richest diversity of orchids in the world, also has abundant cases of deaths arising from the pursuit of this beautiful flower. Great figures in the history of botany and anonymous collectors arrived in these jungles, like hypnotized beings, following in a ominous

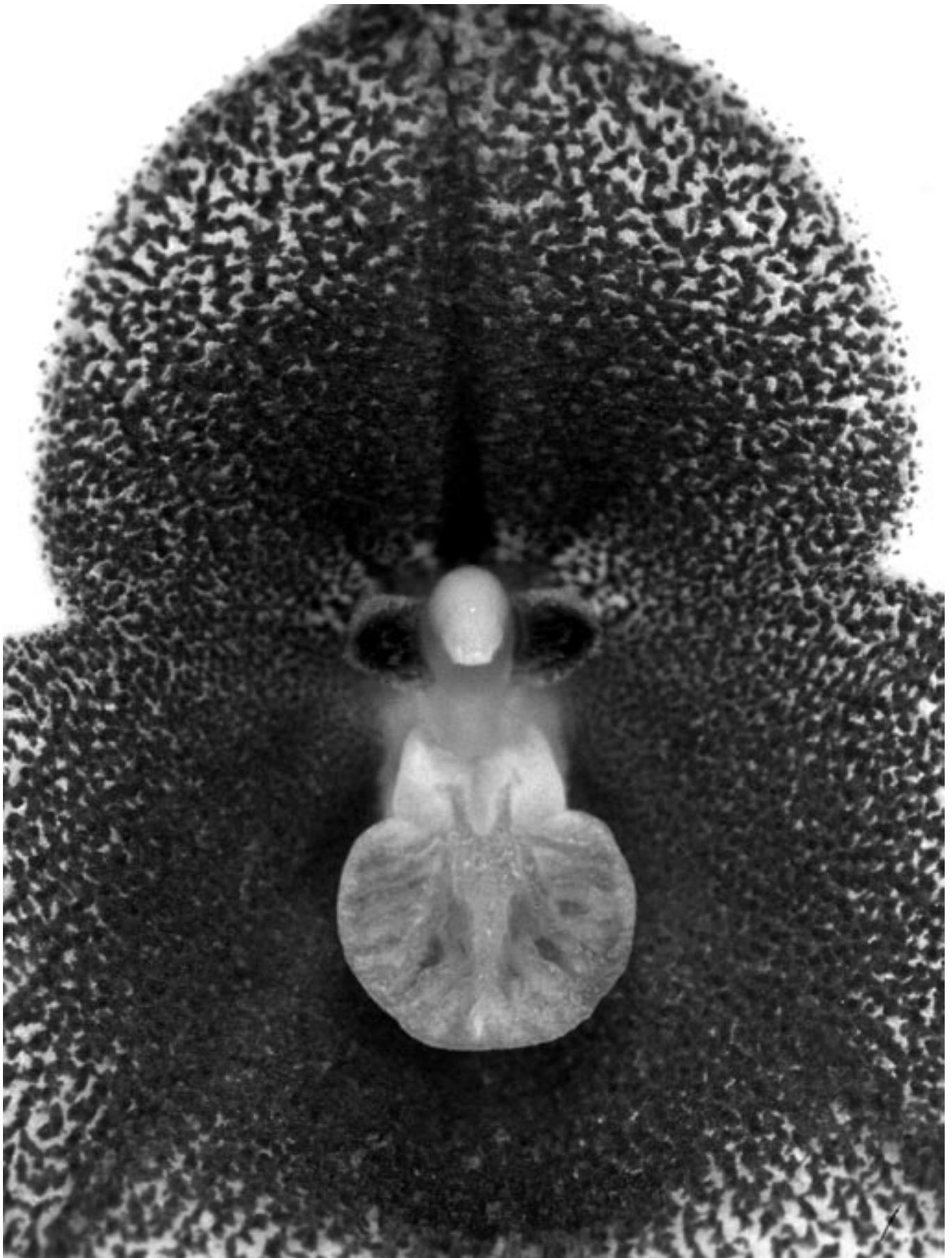
ritual: Aimé Bonpland, a French explorer and botanist who ended his life as an orchid hunter on the Uruguay-Brazil border; Victorian merchant William Arnold, who disappeared in the thunderous torrents of the Orinoco River; David Bowman, victim of dysentery in Bogotá; German consul Friederich Carl Lehmann in Popayan, also a miner and orchid specialist, killed on the Timbiquí River; Albert Millican, collector, painter, photographer and author of the book *Travels and Adventures of an Orchids Hunter*, whose bones rest since 1899 in the Victoria, Caldas, cemetery after a fierce knifing; and the famed Gustavo Wallis, who perished of yellow fever and malaria in the Andean mountain mists. The list goes on and on. They were not the only victims of this mortal fate; many of the herbaria, collected with great effort, perished in the violence of local conflicts and the European wars, starting with that of José Celestino Mutis, quickly removed from the violence of Bogotá in a rescue effort, but losing part of the material in the twists and turns of the flight. The fabulous herbarium of the celebrated orchid specialist Heinrich Gustav Reichenbach was practically burnt to the ground during World War I. Rudolf Schelchter's great herbarium in Germany was destroyed in 1943 by bombs. Many of the extensive series of engravings that José Celestino Mutis gave to Alexander von Humboldt, subsequently donated to the city of Berlin, were also destroyed in the bombing. Many of Europe's botanical gardens suffered the same fate.

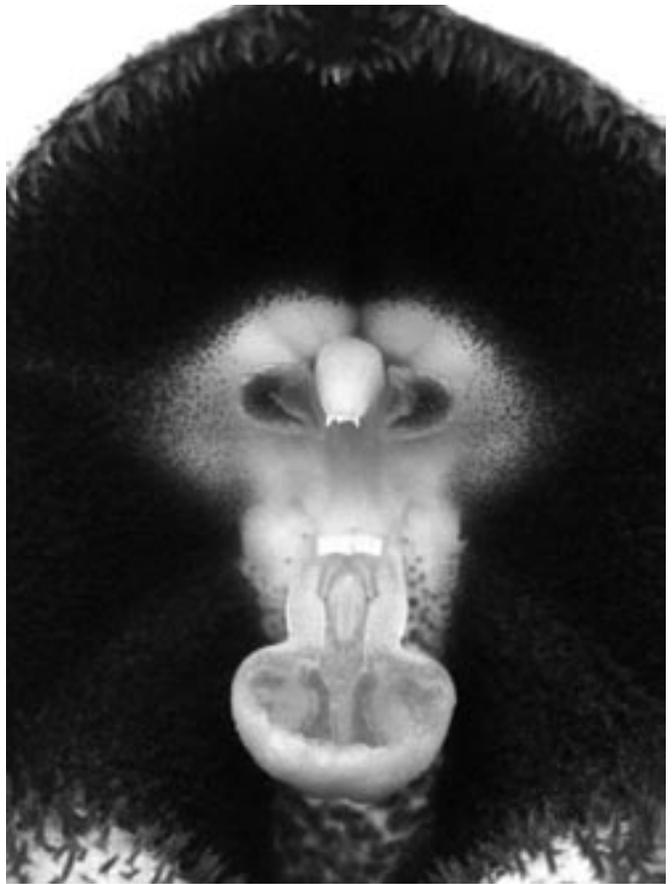
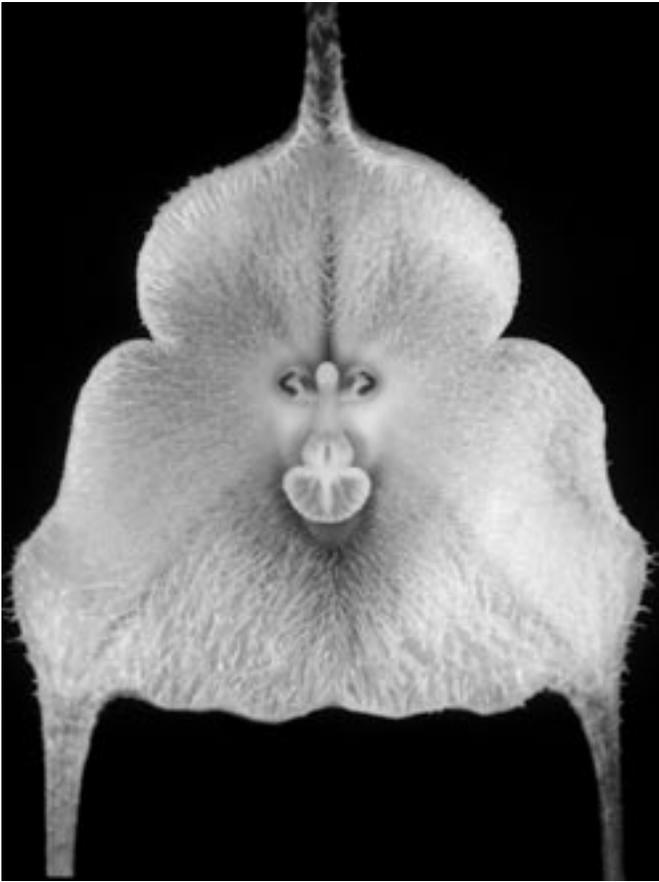
Around the middle of the 20th century, the difficult conditions of public order began to keep foreign botanists away from our jungles, and the search for orchids was left in the hands of Colombian collectors. With only a few exceptions, these Colombians have found themselves on the list of those who perished in the search for the exotic flower: José María Guevara, José María Serna, Evelio Segura, Bernardo Tascón, are just a few names among the many unnamed and unknown victims sacrificed in the tragic saga of the Scorpion Flower, a saga that began with the fate of Orchis in that mythical tale of long ago.

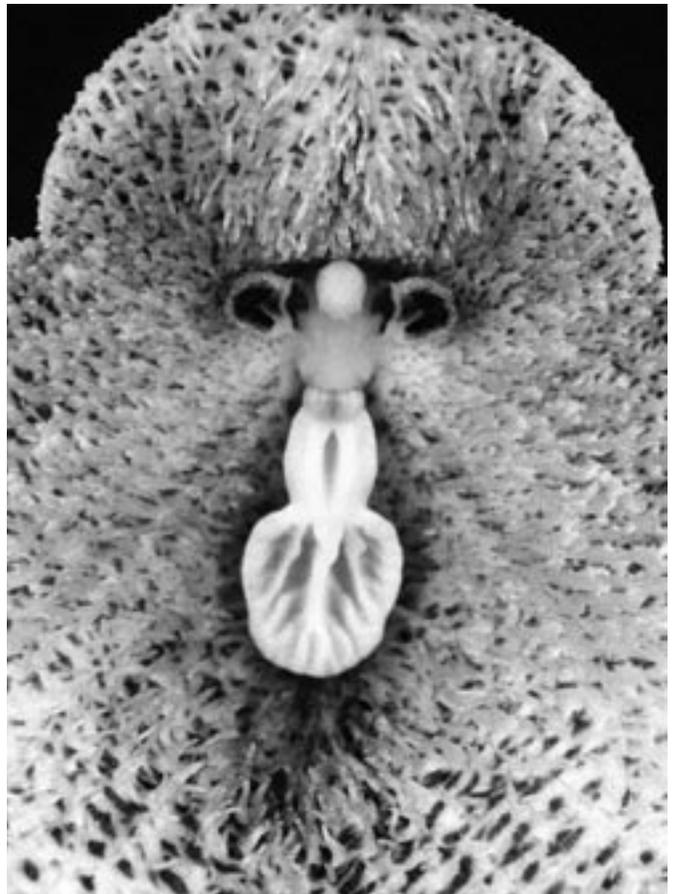
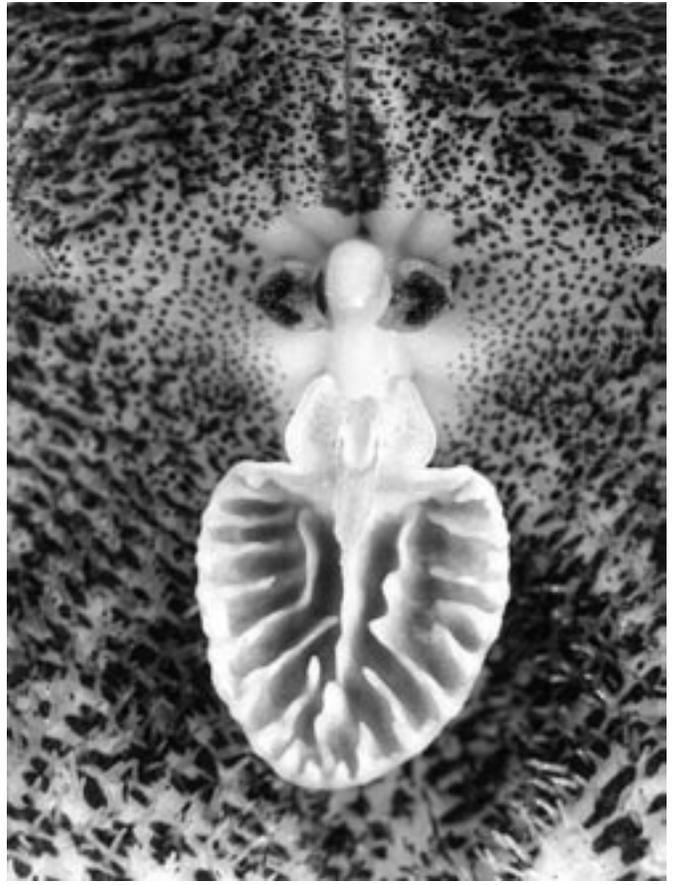
Colombian photographer Jorge Mario Múnera was the winner of the 2003 DRCLAS Latin American and Latino Art Forum. He earned first place in Colombia's National Photography in 1988. His work has been published in Orfebrería y Chamanismo, with text by anthropologist Gerardo Reichel Dolmatoff, as well as in Orquídeas Nativas de Colombia, volúmenes 1, 2, 3, 4 with texts by various authors; El tren y sus gentes, with texts by Belisario Betancur et al; Vista Suelta, which won the National Photography Prize; and El Corazón del Pan with text by Antonio Correa. Many of these books have been published by Sirga Publishing. Múnera is currently preparing editions of Memoria de Festejos Populares and La arena y los sueños. Contact: <jmmunera@etb.net.co>.

Orchids are an irresistible attraction, and Andean forests were looted and destroyed to satiate the fever for this delicate flower.









LA TRÁGICA SAGA DE LA FLOR DE ESCORPIÓN

Casi nadie sabe que en la historia de las maravillosas orquídeas existe un capítulo fatal de terribles tragedias de carne y hueso. Desde un principio, en la mitología griega, Orchis se encuentra en el bosque con el cortejo de Dionisios y pierde la cabeza por una de las mujeres que lo acompañan, intenta poseerla por la fuerza y ella, para defenderse, le ordena a las fieras el monte que lo maten pero, al ver el hermoso cadáver, ella se arrepiente de su orden y le implora a los dioses que le devuelvan la vida. Estos, conmovidos con su súplica, lo reviven transformándolo en orquídeas.

Asimismo en otras culturas la aparición de esta flor que es el símbolo del amor apasionado y de la perfección estética, está ligada a sucesos sangrientos y brutales: en el sur de Asia son sus pétalos el ajado vestido de una diosa vapuleada; en las pinturas de la antigua China las orquídeas, junto a los ciruelos, los crisantemos y el bambú, contemplan, desde serenas pinceladas, el transcurrir de milenios de despiadadas guerras. En las culturas precolombinas, su preciado uso alimenticio, medicinal y religioso las convierten, junto con otras especias, en acicate de la devastadora horda española. Pero es a partir del siglo XIX cuando su fatalidad se manifiesta con mas feroz intensidad. La voracidad que se desata en la Europa victoriana por esta flor acarreará una interminable cadena de muertes, empezando por la de millones de ejemplares de orquídeas muy diversas que perecieron por las téticas condiciones de los viajes rumbo al exilio. Es inimaginable la desaparición de tantas especies en medio de huracanes terribles y naufragios, en un drama paralelo al del comercio de los esclavos que surcaron las mismas aguas, todos presas de ese cruel mercado.

Mientras tanto, los bosques eran saqueados para saciar la fiebre de la exquisita afición. Selvas enteras fueron derribadas para apoderarse de las orquídeas que habitaban sus galerías y sus copas y, otro tanto fue depredado por este nuevo género de cazadores para que sus competidores no pudieran conseguir determinadas especies preciosas y quedaran solo en poder de alguno de ellos. En una extraña venganza, muchos de esos hombres pagaron con sus vidas la osadía de ese raptó masivo, sin discernir si su propósito eran científico, comercial o tan solo un irrefrenable capricho. Casi todos ellos, caídos en las redes de la irresistible y letal atracción, terminaron sus vidas siendo cadáveres entre orquídeas, en medio de estas exuberantes selvas que siguen siendo destruidas de forma encarnizada y sistemática por la tala, la ganadería, la fumigación química indiscriminada y los bombardeos de extensas áreas que son nicho de especies endémicas.

Colombia, país que tiene la fama de ser el mas rico en especies de orquídeas en el mundo, abunda también en casos de muertes surgidas en la persecución de esta bella flor. Grandes personajes de la historia de la botánica y anónimos recolectores llegaron a estas selvas, como hipnotizados, dando los pasos de un fatídico ritual. Pasaron por aquí Aimé Bonpland, quien terminó su vida de buscador de orquídeas en los límites de Uruguay y Brasil, muriendo dos veces seguidas, la primera de muerte natural y la otra, de varias puñaladas. William Arnold, comerciante victoriano, desaparecido

en los estruendosos raudales del Orinoco. Falkenberg, consumido por las fiebres y el delirio en las selvas de Panamá. David Bowman, fue víctima de una imparable disentería en Bogotá. Friederich Carl Lehmann, minero y orquideólogo, fue durante muchos años el cónsul de Alemania en Popayán, donde vivió buena parte de su vida hasta ser asesinado mientras recorría el río Timbiquí. Albert Millican, recolector, pintor, fotógrafo y autor del libro *Travels and Adventures of an Orchids Hunter*, cuyos huesos reposan desde 1899 en el cementerio de Victoria, Caldas, después de una feroz cuchillada. El renombrado Gustavo Wallis pereció de fiebre amarilla y malaria entre las brumas de las cimas andinas. Enders, uno de los mas grandes recolectores, murió tiroteado en una calle en Riohacha. Y no solo fueron ellos las víctimas de este sino mortal; también muchos de los herbarios que con gran esfuerzo colectaron, desaparecieron por la violencia de los conflictos locales y de las guerras europeas, empezando por el de José Celestino Mutis que fue sacado de afán de Bogotá, perdiéndose parte de su material en los recovecos de la huida. El fabuloso herbario de Reichenbach fue casi todo incinerado durante la Primera Guerra Mundial lo mismo que el gran herbario de Rudolf Schelchter, consumido por los bombardeos de 1943 en Alemania. También se perdieron,

La aparición de esta flor que es el símbolo del amor apasionado y de la perfección estética, está ligada a sucesos sangrientos y brutales.

por la misma causa, una gran serie de láminas que José Celestino Mutis le regaló a Humboldt y este donó a la ciudad de Berlín. La misma suerte corrieron muchos de los jardines botánicos de la Europa de ese entonces, en donde previamente sus encargados habían cocinado a centenares de miles de orquídeas tratándolas de adaptar a invernaderos que tenían todas las características de las cámaras de gas.

Hacia mediados del siglo XX las difíciles condiciones de orden público terminan alejando a los investigadores extranjeros de nuestras selvas por lo que a partir de esa fecha la búsqueda de orquídeas queda en manos de recolectores colombianos que, salvo contadas excepciones, han engrosado la lista de muertos en pos de la exótica flor: José María Guevara, José María Serna, Evelio Segura, Bernardo Tascón, son algunos nombres conocidos entre tantos desconocidos sacrificados en la trágica saga de la Flor de Escorpión.

Jorge Mario Múnera, fotógrafo colombiano. *1 Premio Nacional de Fotografía, 1988. Ganador de DRCLAS Art Forum 2003. Parte de su obra ha sido publicada en Orfebrería y Chamanismo, texto de Gerardo Reichel Dolmatoff. Orquídeas Nativas de Colombia, volúmenes 1,2,3, 4, textos de varios autores. El tren y sus gentes; texto de Belisario Betancur. Vidas Casanareñas, textos de varios autores Vista Suelta, Premio Nacional de Fotografía y, El Corazón del Pan con texto de Antonio Correa. Algunos de estos libros han sido realizados por Sirga Editor, su sello editorial. En la actualidad prepara la edición de Memoria de Festejos Populares y La arena y los sueños. Contacto: <jmmunera@etb.net.co>.*



CONSERVATION

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A Survey of Costa Rican Birds

Inside and Out

BY DOUGLAS CAUSEY

“PUT DOWN YOUR WEAPONS AND DON’T move!”

From the dense vegetation of the Costa Rican forest, five men dressed in camouflage uniforms and armed with carbines burst into view and ran across the road.

“Don’t move! We’ll be back to pick you up,” the team leader shouted to us. As quickly as they emerged, they vanished into the underbrush bordering the Río Cua-jiniquil, a small stream running northwest through Costa Rica’s Parque Nacional de Santa Rosa near the Nicaraguan border. Jeremiah Trimble, Curatorial Assistant in the Bird Department at Harvard’s Museum of Comparative Zoology, and I dropped our shotguns and well, we didn’t move. I was aghast. We had just begun working in Costa Rica, at the Área de Conservación,

Guanacaste (ACG), a complex of three national parks and associated reserves and protected areas under the administration of the country’s Ministerio del Ambiente y Energía. Under arrest by the authorities was not how I intended to start this project. We had come to the ACG in June 2001, at the invitation of Señor Róger Blanco, ACG Director of Scientific Research, to participate in a project designed to survey the parasites of all of the vertebrate animals found within the conservation area’s boundaries. In addition to administering Costa Rican national parks, the ACG and the other ten Áreas de Conservación in Costa Rica serve as the centers for research, public education, and conservation of the country’s biodiversity. In a long-standing tradition here, documenting and cataloging the complexity of the natural world is equally important as

research designed to understand the patterns and processes of biodiversity. So is work to conserve and protect the natural habitats. Daniel Brooks, University of Toronto, had begun an inventory of the parasitic organisms associated with vertebrate animals. However, he had not fully attempted the most difficult group—birds. They are by far more numerous than fish, reptiles, and mammals here, and they are difficult to capture. This is where I came into the picture. Dan and I have worked together for several decades—even co-authoring a book together. My current research emphasis on viral diseases in wild birds made it easy for me to accept the invitation to participate in the parasite inventory. Several avian viruses have become more prominent in public awareness than many others have in the past, in particular, West Nile Disease



Conservation crosses roads with citizenship. In learning to preserve our environment in Latin America and beyond, we face the challenges of nature in a modernizing world.

Virus and Influenza. These diseases are known as zoonotics, ones that originate in animals and “jump” to humans. (SARS is another zoonotic disease, for example, but it is thought to have originated in small Chinese carnivores, Palm Civets, rather than in birds.) What interests me particularly about avian zoonotic disease is understanding the evolution and ecology of virus-animal systems. I seek to discover how different types or viral strains have evolved with different host species of birds, and what role the environment—where the birds and virus live—has in generating new strains, and new combinations of viruses and susceptible hosts. In order to get the basic informa-

Left: Hormiguero ocelado (*Phaenostictus mcleannani*), Ocellated Antbird Right: “Mosquerito de Yelmo (*Lophotriccus pileatus*), Scale-crested Pygmy-tyrant”

tion about which strain and type of virus is found with which species of bird, and where and when, we catch birds and from them collect samples of body fluids that we later analyze in the laboratory. Some of our target viruses, such as Newcastle Disease Virus, are known already to occur in rainforest birds. This virus usually causes low-grade symptoms in infected birds, but under certain circumstances, the virus can mutate into a very virulent form and kill thousands of wild birds. When it jumps to domesticated birds, such as chickens and other poultry, the results can be economically devastating. We are screening for other viruses not currently known to occur in resident birds, such as West Nile Virus, but which are found in migratory species and thus inevitably are a threat to wildlife in Costa Rica and the rest of Latin America.

Emerging infectious diseases will have the most serious consequences in small isolated populations, and species with no history of infection. Many of the charismatic birds of Central and South America like the Quetzal, toucans, and parrots, fall into this category and are potentially very susceptible to diseases of this kind.

We usually catch birds with mist nets that are finely woven of very thin, nearly invisible nylon threads—once we even captured two Austrian entomologists who walked into our nets while looking for ground beetles. The nets, however, work well for only the small proportion of forest birds that forage within about two meters of the ground. The residents of the middle and upper canopy of the rainforest and high-flying birds—more than half of the total—are completely missed. We

FLORA AND FAUNA

had an additional problem as well. Most of the parasitic worms found in birds can only be recovered by dissection of a killed bird. That meant that we needed to collect birds with shotguns in addition to using nets. (All of the birds that were dissected by the parasitologists were made into scientific specimens that are now held in the Museum of Comparative Zoology at Harvard or in Costa Rica.)

“Have you seen anyone else? Who is firing at our wildlife? Who are you?”

The leader of the armed band of “guerillas” had returned with his men, and it was clear from their muddy uniforms and rapidly developing welts that they had not found it easy going through the underbrush.

“We are scientists working on birds...” As I started to explain what we were doing, I noticed that he was wearing an ACG insignia and had information brochures about the park in his shirt pocket. These were the park guards, not the National Police.

Alas, the memos describing our activities were still buried on someone’s desk; the park guards had spent the morning patrolling the park borders looking for poachers



Jeremiah Trimble at work in field laboratory in Santa Rosa, Costa Rica

and illegal fires. As a result, they’d missed the radio announcement of our activities; and I had neglected the basic courtesy of speaking with the people responsible for protection of the park before we started our work. Their relief in learning that we were

neither drug or weapons smugglers, nor adventurous but misguided tourists, was tempered by their unnecessary early morning jog through the Tropical Dry Forest. They would go to any lengths to protect the integrity of the national park, but false

BIRDING ON THE EDGE OF THE WORLD

The dirt road crossed the pass at about 15,000 feet and entered a wide treeless valley, without any sign of human presence. Flanked by jagged hills, the valley spread below the peaks of snow-capped mountains. Vegetation was sparse, rocks scattered everywhere. Patches of snow clung to the shady sides of the clumpy ichu grass. In this high puna area of the Peruvian sierra, we had come as birders, riding in a rattletrap Dodge van, searching for some of the world’s rarest birds in an area that seemed at the limit of survival possibility for any species of the animal kingdom.

Our objectives were the White-Bellied Cinclodes and the Diademed Sandpiper-Plover, both species resident only in high alpine bogs of the Andes. Found only in a few locations in central Peru, the Cinclodes is considered by one Lima-based ornithologist to have a surviving population of fewer than 30 individuals. Nevertheless, the Diademed Sandpiper-Plover, although more widely distributed from central Peru to southern Chile, has been described as “almost mythical.” The Cinclodes, a Peruvian endemic, i.e., a bird found in only one country, is one of 118 endemic species in Peru. Of all the countries in the world, only Brazil has more. By contrast, there are only six endemic bird species in the continental United States. The total number of bird species in Peru is approximately 1800, a figure exceeded only by Colombia among the world’s nations. Such numbers are constantly growing, however,

because new species are still being discovered.

This remarkable species diversity makes the mountains and jungles of South America a paradise for birders. Unfortunately, many of these species are confined to impossibly small areas, struggling against the imminence of extinction. Among the species on evolution’s chopping block are the two target birds that we sought.

In pursuit of these and other Andean birds, we were an expedition of four: driver, birding guide, and two paying customers, who had been charged the princely sum of \$80 apiece for a two-day trip, up from Lima on Saturday, back on Sunday, food and hotel included. We could hardly complain that the accommodations were primitive. They were, after all, the best that the town of San Pedro de Casta had had to offer. Moreover, our birding guide, Gregorio (Goyo) Ferro was competent and relentless in his search for target birds.

The road continued down a gentle slope, the valley floor being nearly as high as the pass we had crossed. The vegetation changed substantially as we descended, the scattered ichu at the pass giving way to a thick green carpet. It looked like a broad rich pasture, but when we stopped and walked about it turned out to be spongy underfoot. This was one of the Andean bogs that was home to our target birds. There were no trees, no bushes, just the green carpet stretching outward from rock ledges on the valley’s sides.

alarms caused by inconsiderate gringo *científicos* strained the limits of hospitality. After this, I notified the guards before we set out, and we avoided armed confrontations.

The success of Costa Rica's national park system is strengthened by the dedication and passion of the people who work there: the guards that protect the plant and animal life, the educators who teach local people about the natural history and biodiversity of their environment, and the technicians who assist in research activities like ours. The latter group are called parataxonomists, who are people recruited from nearby rural areas and who have been highly trained in scientific collecting, basic taxonomy, and specific research techniques. Much of the fieldwork and specimen collection associated with Costa Rica's national biodiversity inventory conducted by the Instituto Nacional de Biodiversidad (INBio) is done by parataxonomists. We were quite fortunate in having three very skilled parataxonomists working with us, Calixto Moraga, Petrona Rios, and Elda Araya. But our project presented some issues they had not experienced before, and one that I hadn't anticipated.

"Which word do you want me to use?"

Guano or...?" Calixto asked me as he was entering data into the computerized database on parasites and hosts maintained by Dan Brooks <<http://brooksweb.zoo.utoronto.ca/index.html>>. "There are many words to use, but what is the most appropriate for science?" he said, "Many people will be interested in our results and it is important to use the correct term, particularly for a word like this."

I agreed but had no answer. I also knew many synonyms of this word in Spanish, but most (all in my case) are not suitable for a scientific publication or this magazine. This was a problem of many dimensions. What goes into a bird from the front comes out of the bird in the rear, and it serves as convenient medium for detection of viruses, bacteria, eggs of parasitic worms, and the other subjects of our inventory. It also is a source of infectious disease carried by birds, and thus can be a concern for public health and domestic agriculture. Our inventory of avian parasites was useful at several levels, not only as an academic survey of biodiversity, but also as a tool for medical and veterinary science. Petrona and Elda supplied the term ("*heces*") and observed that

men are often useless in matters subtle and delicate.

With the help of the parataxonomists, volunteers, and students, we have documented more than 450 species of birds in northwestern Costa Rica, which is equivalent to the number of species breeding north of Mexico. From these, we have recovered thousands of species of parasites, most of which are unknown to science. As our knowledge of the diversity and complexity of life in tropical regions increases, and we know more about the members of the hidden world of parasitic organisms, we become better prepared in understanding the strength and fragility of our natural world. Empowering local people in gathering and interpreting this knowledge, as we are fortunately able to do at the ACG, facilitates this work and raises the environmental literacy of those most greatly affected by the state of the environment.

Douglas Causey is Senior Biologist of the Museum of Comparative Zoology and Affiliate of the Belfer Center for Science and International Affairs, Kennedy School of Government.

Goyo and Juvenal, the driver, set off in different directions, in search of the birds. I was not feeling peppy in the high altitude, so I stayed close to the van and occupied myself with birds that were more common but still new to me: an Andean Flicker with his raucous call, various Plain-Capped Ground-Tyrants, a pair of Andean Geese.

Goyo and Juvenal returned. No luck. It was getting late in the day, and menacing clouds had been rolling in, putting an end to the day's sunshine. We two customers were satisfied with the trip and ready to call it quits. Earlier we had seen other marvelous Peruvian endemics: a Great Inca-Finch, a Black-Necked Flicker, a rare and improbable White-Cheeked Cotinga. Goyo however didn't want to give up. We got into the van and found a side road that went over a low ridge and down into a lower valley bottom. Again we spread out and walked across a treeless plain: no luck again. We did see a pair of Gray-Breasted Seedsnipes, which I thought pretty exciting, but no Cinclodes. And no Diademed Sandpiper-Plover. We returned to the main road in the valley and headed for Casapalca and the highway back to Lima.

Still Goyo was not finished. A couple of miles down the valley, over another low ridge and to a lower valley floor, Juvenal pulled the van off the road and once again we set off across a spongy green carpet, jumping from tuft to tuft to keep our feet dry. The clouds were very dark now, and thunder clapped loud and close. I noted that we were in the center of a flat valley with no nearby high points that might divert a lightning strike. I was, however,

consoled to see that this valley was relatively small, the peaks close and very high above us.

Goyo saw it first, perhaps 100 yards ahead, moving past the tufts of grass, then motionless. We got the scope on it. It was an adult Diademed Sandpiper-Plover with its dark head giving emphasis to the white line just above eye level that extended completely around its head. It behaved like a Killdeer, its abundant North American relative, standing perfectly still for extended periods and then moving very fast to another point of standing still.

Goyo spotted another bird, sitting on a rock just ahead of us. A hummingbird? Indeed it was, although there wasn't a flower within miles. It was an Olivaceous Thornbill, and so tame that Goyo got to within 6 feet with his camera snapping away before the bird flew.

Goyo still wasn't done. We continued on. Seeing movement along a fence line some 200 yards in front of us, we aimed the telescope toward it. It was a White-Bellied Cinclodes, unmistakable because of its size and the whiteness of its breast and belly. We all got good looks at this rarest of birds. Goyo asked if we wanted to move in for a closer look but we respectfully declined. We were content. All the birds targeted for the trip had been spotted. As we made our way across the bog back to the van, hailstones started to fall on us.

Shane Hunt is Professor Emeritus of Economics at Boston University and a DRCLAS Affiliate. He has birded from Cambridge to Callao.

In Search of a Hummingbird

Preservation, Restoration, and Human Development

BY DAVID KRAMER

LIKE THE INTERIOR OF A SEALED ADOBE oven, the early morning air smothers us as we search in vain for the elusive Honduran Emerald hummingbird. Organ pipe cacti, acacia trees, and thorn scrub sit in chaotic patches, covered with epiphytes, dead branches, and bird nests—the entire mess sporadically adorned with red flowers. Our guides suddenly hunch, pointing to a nearby flower, cupping their ears to amplify the tickling buzz.

The Honduran Emerald (*Amazilia luciae*) holds promise for the local population to benefit from low-impact ecotourism, but the hummingbird's future is tenuous at best. Endemic to Honduras, its habitat is restricted to the Aguán River Valley, in an arid rain shadow on the southern side of Pico Bonito National Park. Its de facto island home shrinks every day—less than eight square miles at two separate sites—putting it near the top of the World Conservation Union's (IUCN) Red List as a critically endangered species. The next step is extinction.

I didn't expect a DRCLAS internship grant to put me on the trail of an elusive hummingbird. I wasn't alone in the search though. Alex, my Colombian brother-in-law, accompanies me to capture footage for a documentary film. Our mission is to compare the various organizations and landscapes we're visiting within the region—from Guatemala to Honduras to Belize. José Luis, an extension worker from FUPNAPIB, the Pico Bonito National Park Foundation, also accompanies us. Above all, we have some expert help in the form of local guides, former workers for the Standard Fruit Company.

As an intern for the Cambridge-based EcoLogic Development Fund, I'd already learned that nongovernmental entities are all that stand between conservation and destruction of biodiversity hotspots throughout Honduras because of government inaction and lack of funding. FUPNAPIB, one of many Central American conservation organizations funded by EcoLogic, strives to breach the gap. Sustainability and impact are exactly what I've been thinking about all summer—trying to

craft a simple and generally applicable system of indicators to measure impact across EcoLogic's beneficiary organizations in the broad areas of conservation, human livelihoods and institutional sustainability.

My mind is wandering toward the theoretical as we follow our guides. Suddenly, we spot the hummingbird. It is flying at high-speed, constantly reversing direction, zooming in and out of view as it bounces chaotically between flowers. Its chest and throat are a dull blue-green, but when it flashes its shiny green back feathers it is easy to see why the common name in Spanish is "Diamond Collar." But capturing its brilliance with our eyes is the easy part. The next challenge we face is trapping its image on film.

I stare at the tiny bird. I try to conceptualize the linkages between this one hum-

I didn't expect a DRCLAS internship grant with the Cambridge-based EcoLogic Development Fund to put me on the trail of an elusive hummingbird.

mingbird, one little feature of a complex mosaic of human-landscape interactions in and around a single national park, in one small corner of Central America.

This corner of the world's nearest town is a dusty outpost named Olanchito. Unlike the humid and hopping town of Ceiba that sits between the park's northern entrances and the Caribbean, Olanchito is relatively unknown to foreign tourists, as is its dry forest habitat.

FUPNAPIB has trained guides to lead the occasional tourist to this secluded spot, post signs and help construct park trails. Our two guides, Roque and Freddy, have chosen this work over the nearby banana and pineapple plantations despite not receiving paychecks for almost nine months. On the previous night's drive from Ceiba to Olanchito, Gerardo, the high-energy, supremely dedicated FUPNAPIB director, observed how grateful he is for EcoLogic's sensitivity to the fact that his foundation is absolutely dependent on outside funding, usually granted in short spurts for targeted projects rather than administrative overhead.

Meanwhile, his workers live from hand to mouth, eking out a daily existence. The government may soon pave Olanchito's pothole-laden dirt road, enabling better transport of produce and labor, but multiplying the direct pressures on the Emerald hummingbird's tiny habitat. It is a constant balancing act between nature and development.

Besides complaining about this short-term funding dependence, Gerardo is also furious at environmentalists who, in his view, don't always get the connection between livelihoods and conservation. He derides "preservationists" for idealizing nature and forgetting about human and economic development needs. But FUPNAPIB's most obvious mission—managing a national park—intersects preservation, restoration, and human development.

Now, however, all attention is focused on the tiny bird, rather than environmental philosophy. Roque and Freddy dive into the thorny scrub, and Alex scoots in after them, determined to film the bird that has brought us all here. The thorns scratch and tear at their skin, but they find a place to wait patiently for the Emerald. In the end, Alex does capture the bird on film, if only for a fleeting moment.

David Kramer is a master's candidate in public policy at Harvard's Kennedy School of Government, taught in Cali, Colombia for four years. He hopes to work in the region again, focusing on sustainable community development and biodiversity conservation. He dedicates this article to the memory of FUPBNAPID director Gerardo Rodríguez, who was killed in a tragic car accident in Honduras, just as this issue of ReVista was going to press.

Above: Searching for the hummingbird bottom: The Emerald Hummingbird finds direct pressure on its native habitat.



The Dilemma of Biodiversity Conservation

Agricultural Expansion in the Argentine Pampas

BY OTTO T. SOLBRIG

IN THE LAST TEN YEARS ARGENTINE agriculture has experienced the largest transformation in over a hundred years. Grain production in the pampas has doubled, and soybean production tripled. Exports of cereals and oil seeds have increased dramatically, and poultry and beef production and exports are also on the rise. Agriculture has sustained a failed state during the country's biggest financial and social crisis.

Armادillos, foxes, nutrias and capybaras still roam the pampas, Argentina's extensive grasslands. Their numbers have even increased with no till agriculture, a conservation technique that significantly reduces soil erosion and conserves soil moisture, but also lowers the costs of production. Avifauna, including Rheas, now find a friendly habitat in grazing fields. Yet large mammals such as pumas, and pampa deer survive only in a few enclaves. Little evidence exists regarding invertebrates, yet the soil fauna has greatly increased on account of no-till agriculture that has removed plowing, a major source of soil disturbance.

Evidence about the impact of agricultural transformation on fauna is still mixed and tentative. The original vegetation structure has of course been displaced by agriculture. Yet the native species are still there—as a study by Paul Lewis has shown—augmented by introduced weeds. These species exist in abandoned houselots, along highway rights of way, and adjacent to railroad tracks and embankments. Some evidence of reduction in species such as large mammals; however, there is also that most species are surviving. More important than species numbers are the ecological services they provide. So far, although further study is needed, there is no evidence of serious problems with decomposition or nutrient or water cycling.

One serious problem is the lack of natural reserves. A few private bird sanctuaries exist, but there is no sizable biological reserve other than the Parque de la Sierra Ventana, that is not representative of the flora and fauna of the region. The need of several large reserves to provide refuge for the native flora and fauna is very urgent.

The major change in the agricultural

production of in the pampas has made soybeans its principal crop. It would be useful to study in a systematic way the effect of soybean monocropping on biodiversity.

Since 1990, soybeans production has increased by 66 % worldwide (from 108 million tons in 1990 to 179 million in 2002). The United States, Brazil and Argentina, in that order, account for most of the increase (88%). In the United States, soybean cultivation has displaced maize, with little impact on native biodiversity (the prairie was displaced by agriculture 150 years ago). In Brazil, the expansion of soybean growing is concentrated in Goias and Mato Grosso, displacing the rich native biota of the savannas and the Amazonian forest. What impact has expansion of soybean growing had on biodiversity in the Argentine pampas?

At first blush it would look as if the pampas has a similar situation to that in the United States, since the bulk of the soybean growing has taken place in the former pampa grassland transformed by agriculture in the first half of the 20th century. As in the U.S., soybean growing has displaced maize as well as sunflowers. Yet a closer inspection reveals that the situation is more complex and that soybean growing has had some negative impact on pampa environment and the sustainability of Argentine agriculture.

A BRIEF HISTORICAL SURVEY OF PAMPEAN AGRICULTURE

Cattle raising and agriculture have been the principal economic activities in the Argentine pampas, vast grassland covering about 2000 square miles. Its native flora (Cabrera 1960) and fauna is not terribly abundant. Today only remnants of the native flora survive along railroads right of way, roadsides, and land not good for farming.

Agriculture in the pampas was always very dynamic. Labor was relatively short as was capital, but land was plentiful. Consequently a very extensive system of land use developed, that slowly became capitalized. In the colonial and early independence days, the principal activity was raising cattle on the open range, with agriculture restricted to

a belt around the city of Buenos Aires. In the second half of the 19th century, wheat growing for export developed and soon the pampas became one of Europe's breadbaskets. Meantime quality cattle raising for export to Great Britain and other parts of Europe became a lucrative activity alternating with wheat growing. This alternation was a very sustainable system of land use, as grazing restored the soil fertility that was lost during the years of agriculture. The 1930s world depression followed by World War II trade disruption and then by anti-rural policies in the first government of Perón that transferred resources from agriculture to industry, produced a serious depression in the rural sector in the late 1940s and early 1950s.

Starting in the 1970s, a concerted and very successful effort to revitalize agriculture adopted "green revolution" technologies such as the use of chemical fertilizers and pesticides, replacement of horses with tractors and introduction of high yielding varieties of wheat and maize. The new capital-intensive technologies required a greater level of knowledge than prior systems. They succeeded in increasing production and yields of the major crops of the time: wheat, corn, sorghum, and sunflowers. Yet the government persisted in taxing agricultural exports to keep internal food prices low. The 1970s and 1980s were a period of social unrest, and high inflation, and of a bewildering array of economic policies. Their effect on the rural sector was to slow down the rate of growth and to increase the indebtedness of farmers.

With the accession to the presidency of Carlos Menem in 1989, these policies were reversed. Agricultural regulation of agriculture was reduced significantly and exports taxes eliminated. This ushered into a period of enormous growth for pampean and Argentine agriculture in general. Production doubled in ten years, a very remarkable achievement. Leading this revival was the growing of soybeans, a new crop for the country.

A very minor crop in the 1960s and 70s, soybean growing expanded in the 1980's and



Argentine Tourism Ministry photos reflect traditional aspects of nature in the pampas, rather than its burgeoning soybean production.

especially in the 1990s when production and cultivated surface tripled. After the mid-1990s, two new developments increased the profitability of soybean growing. One was the introduction of no-till agriculture. The other was the introduction of genetically modified RR soybeans that meshed very well with no-till and further reduced the costs of production. Coupled with a very significant demand for this product and its high prices, soybeans became the crop of choice in Argentina (as well as in Brazil and the United States). The result has been a boom in agriculture that has supported the economy of the country during its worst recorded economic depression. Unfortunately it also has increased a tendency towards monocropping in the pampas that may not be altogether healthy.

THE CONFLICT BETWEEN AGRICULTURE AND CONSERVATION

Agriculture is the major transforming agent of natural landscapes. Other economic activities such as mining and urbanization have an even greater local impact, but they occupy only between 3 and 5% of the land surface of the world, while agriculture and animal grazing occupy about 40%. Yet humans need food to survive and with a growing population it is impossible to reduce the agricultural surface.

Over the centuries agriculture has not only transformed natural landscapes, it often has degraded them to the point where farming is no longer possible. Much of the formerly rich agricultural land of the Mediterranean basin is now abandoned wasteland, for example. Awareness of the possibility of ecological disasters drives the push for the development and adoption of sustainable conservation agricultural practices.

Crops remove nutrients from the soil, and continuous farming is not possible even in the richest lands without some nutrient restor-

ing practice. Fallow, a traditional technique, takes at least half to one third of the land out of production. Fertilizing with the use of animal manure and other sources of decomposing organic matter, has also been used to restore soil nutrients. A more recent practice is the use of commercial fertilizers such as guano or Chilean nitrates. The development of cheap ways of producing nitrates during WWII led to the commercial availability of chemical fertilizers now in widespread use worldwide in areas of intensive agriculture and has allowed monocropping.

The growing of the same crop year after year leads to the accumulation of that plant's diseases and pests. Crop rotation has been the time-honored way to reduce crop damage due to pests and diseases. The development of powerful chemical pesticides has allowed farmers to control plant pathogens thereby encouraging monocropping.

Yet the use of chemical fertilizers and pesticides has a number of negative secondary effects. Organic fertilizers such as manure are incorporated slowly into the soil. Excessive use is highly polluting, that seldom happens. Chemical fertilizers on the other hand are very soluble and any amount not used immediately by the plant tends to run-off into surface watercourses or into the water table contaminating water supplies in cities. Unforeseen effects are algal blooms and eutrofication of lakes and even the ocean. Today all the estuaries of rivers that irrigate farming areas show unmistakable effects of contamination from chemical fertilizers with negative effects on fish and aquatic plants.

Many Argentine farmers have adopted conservation practices, especially no-till agriculture that reduces soil erosion. For maximum effect, no-till requires crop rotation and the avoidance of plowing. No-till in Argentina is used primarily with soybeans. 60% of the agricultural surface in the

pampas is in no-till, a remarkable achievement. Yet only a third of farmers practice exclusively and continuously no-till and also carry out crop rotation. Without continuous no-till and crop rotation the benefits of this technology are diminished significantly. Because of cost considerations, Argentine farmers use little chemical fertilizer, tending to rely on the ability of the soybean to fix nitrogen from the air. But soybeans remove phosphorous from the soil that sooner or later will have to be restored to maintain soil fertility.

In other words, the picture is somewhat clouded regarding the environmental impact of the expansion of soybean growing in Argentina. On the one hand, Argentine farmers must be congratulated for having adopted conservation practices at a higher rate than most other countries including the United States. The reduced rate of use of chemical fertilizers and pesticides is also commendable. On the other hand less than half of the farmers are practicing conservation techniques, and the tendency to expanding agriculture into marginal areas and of monocropping soybeans is very worrisome.

There is little concrete information so far regarding negative effects of soybean monocropping, but the little there is indicates an increase in soil erosion and some contamination of water courses and aquifers. If we are to lessen the contradictions between agricultural production and nature conservation, we must study these questions with care.

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CITIZENSHIP

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Participation-based conservation efforts are expanding across Latin America. So are concerns about citizens' rights in the use of nature, ranging from medical purposes to water rights.

Nature and Citizenship

Can an international community provide long-term protection to Galapagos?

BY JOHANNAH E. BARRY AND RICHARD E. KNAB

TWO FIRST-TIME VISITORS TRAVELING TO THE GALAPAGOS archipelago begin their experience in exactly the same way. Two hours after departing mainland Ecuador, their plane descends towards the island of Baltra, home to a U.S. Navy facility during World War II, which appears from the plane as nothing more than a flat, rocky speck where a runway, a few roads and crumbling foundation lines are the only signs of any previous human activity. They deplane on the tarmac in front of a simple, one-story airport and are surprised, despite their pre-trip research, by the starkness of their surroundings. They file through the building and open their bags for quarantine inspectors who are on the lookout for any non-native animal, insect, or plant life. After paying their entrance fee to the Galapagos National Park Service, they look for the exit where two separate lines of buses are waiting. It is here that the experiences of our two travelers begin to diverge.

The first of the trekkers joins a group of international tourists, and climbs aboard a bus that makes a beeline to nearby Baltra Harbor. There, he is ferried to one of several glistening cruise ships and large private yachts anchored in the bay. His boat travels from island to island primarily at night, allowing its passengers to awake each morning to pristine landscapes only peripherally touched by humanity. Each day he is led by an expert naturalist guide along carefully marked paths and asks questions about the native and endemic biodiversity of the islands: blue and red footed boobies, frigate birds, dinosaur-like marine iguanas and their colorful terres-

trial counterparts, sea lions and fur seals, hammerhead sharks, rays, and Galapagos penguins, all of which he encounters at arms length. He learns that 95% of the original terrestrial species of Galapagos still remain, and hears stories of cutting edge conservation, such as Project Isabela, the largest ecosystem restoration project ever attempted anywhere in a protected area, and the first intentional liberation of a non-native species on Galapagos—*Rodolia cardinalis* (Australian ladybug)—to control an invasive insect species threatening native plant populations. A week later, he returns to Baltra, is shuttled to the airport and returns home with photos and stories of a unique, pristine environment, well-managed, carefully protected, and devoid of busy, man-made infrastructure.

The second traveler climbs aboard a different bus—this one filled with local residents and a handful of tourists. Passing by the turnoff to the dock, the bus speeds along a winding road to the Itabaca Canal. After a short ferry ride to the neighboring island of Santa Cruz, she boards another bus that travels 45 minutes up through the highlands where she is surprised by the prevalence of the non-native vegetation she sees along the way—cypress and fruit trees, ornamental plants, elephant grass— as well as the small farms so typical in rural areas of developing countries. As the bus begins to descend to the opposite coast, she catches her first glimpse of Puerto Ayora, a sprawling town of approximately 12,000 built on loose volcanic rocks. She checks her bag at a local hotel and walks the length of the town, passing by a wharf where artisanal fishermen clean their catch, while dozens of peli-



cans fight for scraps. She continues on, dodging speeding pickup truck taxis that pass by every few minutes, past the offices of the Galapagos National Park to the Van Straelen Visitor Center at the Charles Darwin Research Station. There she is guided through the corrals of the Station's highly-successful tortoise reproduction program by a staff member, who explains the sophisticated array of conservation research carried out by Station's international team of scientists. In the ensuing week, she makes several short trips to neighboring islands where she is amazed by the wildlife she encounters. But in the evening she listens to stories of violent conflicts involving local fishermen and National Park wardens, sparked by political maneuvering and disagreements over fishing limits on exotic marine species. She learns about illegal fishing of sea cucumbers and shark fins for Asian markets, and of the more than 600 alien plants, more than 300 invasive insects, and 30 invasive vertebrates that have become established in the islands to date. A week later she returns to Baltra and then the mainland, transformed by her exposure to Galapagos' physical and biological diversity, but wondering if this special place will be able to successfully come to terms with the complex social, political and environmental issues that threaten its conservation.

The first traveler's experience accurately depicts the appealing side of Galapagos and the success of conservation efforts to date. The second visit underscores the complex issues at play and the wide range of local and international stakeholders who must be involved in making this reality last over time.

ENVIRONMENTAL CITIZENSHIP: THE HUMAN FACE OF GALAPAGOS CONSERVATION

Galapagos is one of the last, best opportunities for successful conservation of an island ecosystem in its pre-human state. Native biota have been decimated in many island ecosystems (Hawaii, Guam, Mauritius, Palau, Australia and New Zealand, to name a few) by the dual impacts of human migration and accidental or deliberate introductions of plants and animals. Approximately 97% of the terrestrial part of the Galapagos archipelago has been under protective status since the Galapagos National Park was established in 1959, and 130,000 square kilometers of surrounding waters were designated as a marine reserve in 1998. This unprecedented level of protective status forms an excellent platform for a potentially successful management model among local residents, government and local and international conservation organizations, to protect native biodiversity in balance with a permanent human settlement.

Often referred to as "environmental citizenship," the literature makes frequent reference to such alliances, where informed citizens play a proactive role, in cooperation and collaboration with government and private organizations, in efforts to achieve environmental sustainability. In Galapagos, the potential for success along these lines is great, but the impediments are very real and complex.

The single greatest obstacle to lasting environmental conservation is the archipelago's rapidly growing human population and all that it entails. Galapagos experienced modest growth in the first half of the last century, but this changed drastically in the last 20

years as a result of significant expansion of the tourism industry beginning in the 1980s, a boom in fishing (much of it related to the illegal extraction of exotic species) in the 1990s, and ongoing migration resulting from the poor economic conditions on the Ecuadorian mainland. From 1982 to 2004, the resident population grew from about 6,200 to more than 20,000 people. Adding to this figure the 80,000 tourists that visit the archipelago each year, it is clear that Galapagos has felt the strain of a significant growth in human activity and the corollary expectations of infrastructure and services.

THE KEYS TO SUCCESSFUL ENVIRONMENTAL CITIZENSHIP IN GALAPAGOS

Galapagos will continue to have a human population. Although legislation is in place that imposes restrictions on work and migration to the Islands, people will continue to form an integral part of the fabric of Galapagos.

Therefore, citizens must develop a clear understanding of the extraordinary nature of their landscape; that Galapagos is not just another group of islands, but forms the backbone of what we know about living systems and provides the context in which man exists and develops on earth. While many residents of Galapagos feel a sense of stewardship, that percentage grows smaller and smaller as the influx from the mainland continues.

Although the influence of the key conservation organizations in Galapagos, the Charles Darwin Foundation and the Galapagos National Park Service, is being felt in both formal and non-formal education programs, the educational system in Galapagos requires a profound transformation. The Special Law for Galapagos allows for the tailoring of public education in ways that would fully integrate conservation values and environmental protection in the educational curriculum, but this aspect of the law has not been fully exploited. The educational system will best serve Galapagos when it builds awareness, attitudes, values and skills which will allow the resident population to serve as better stewards of the archipelago.

On the continent, Galapagos continues to be off the radar for most citizens and politicians. Young people of means travel to Disney World in Miami before they visit Galapagos. The industrial center of Guayaquil pays as much attention to the extractable resources of Galapagos as the aesthetic resources. While advocacy for Galapagos on the mainland often finds sympathetic press, this pro-conservation sentiment is not reflected in the implementation of existing laws and regulations.

The Special Law for Galapagos (1998) was a watershed piece of legislation, carefully crafted and well-informed by a group of representatives from the fishing cooperatives, Galapagos National Park Service, the Charles Darwin Foundation, local and international NGOs, the tourism industry and other involved stakeholders. This group achieved major concessions, including exclusion of commercial fishing within the reserve, local (Galapagos National Park Service) responsibility for management of the Marine Reserve, a workable framework for participatory management, and a protocol for residency status and migration control.

However, the Special Law is enforced erratically, and is not used to the extent that it could be used to benefit Galapagos. Most

notably, migration limits are ignored or skirted. At the same time, the law contains certain aspects that are contrary to the interests of conservation. One step that must be taken is a cessation of the subsidies that the government continues to provide those living on Galapagos. Eliminating those subsidies, which include reduced gas and electricity prices, reduced transportation costs, and increased "hardship" pay for public sector employees, would reveal the real cost of living in a remote archipelago. The effect of this powerful disincentive would likely reduce migration and encourage re-settlement elsewhere. The political and immediate economic fallout of such a bold stroke would not be eagerly contemplated by any savvy politician, but it would begin a process that may well be the key component to a truly sustainable human/wilderness equation.

Consideration must also be given to the logic of provincial status of Galapagos. The 2001 census, according to recent articles in Quito newspapers, indicates that only 23% of legal age residents in the Galapagos were born there. That fact has a deeply felt political consequence, as those voters wield a disproportional amount of power in the Ecuadorian National Congress. The provincial status accorded Galapagos, albeit under special legislation reflective of its park status, gives it the same number of congressmen as more populated provinces. It takes fewer votes to get elected and those votes belong to a relatively new population which does not have a long history in Galapagos or a long-term commitment to its conservation. Currently, the Galapagos vote reflects the voice of a small but now powerful fishing lobby. The voice of conservation is neither heard nor felt in this scenario.

Environmental citizenship also requires strong partnerships between government and strong local organizations. For more than 40 years, a unique partnership has existed between the Charles Darwin Foundation, an international, not-for-profit, conservation organization that operates the Charles Darwin Research Station in the Galapagos, and the Galapagos National Park Service, a governmental institution charged with the management of the terrestrial and marine areas of the archipelago. This partnership links the best available science with a highly-trained, and competent national organization that has a clear and focused mandate.

This is not to say that the system is impervious to political machinations. Since the Gutierrez administration took over in 2003, nine Park Directors have been appointed, reflecting the present politicization of the position. Contrast that with the tenure of Elicer Cruz, Park Director for six years (1996-2003) during four

Environmental citizenship requires strong partnerships between government and strong local organizations, as well as cooperation by the international community.

presidential administrations. The future of the Galapagos National Park depends on its biological integrity which, in turn, depends on a clearly defined, transparent management scheme focused squarely on the protection and restoration of Galapagos biodiversity. That management responsibility, which properly belongs to the Ecuadorian government, must remain stable and apolitical.

So too, successful conservation of the Galapagos requires the continued involvement of the international community: inter-



Park wardens express their concern over the recent politicization of the management of the Galapagos National Park.

national scientists, conservation organizations, aid agencies, private foundations, individual donors who support the work of the Charles Darwin Foundation and Galapagos National Park through private donations, and those who visit Galapagos. It is important to not overlook the impact of this last group. Forming the base of an industry worth an estimated \$180 million per year, visitors to Galapagos have the potential to significantly influence Galapagos conservation, in good ways or bad, by the type and quality of visitor experience they demand. They also represent a potentially powerful cadre of advocates for Galapagos conservation world-wide. In recent years the Darwin Network, an informal alliance of NGOs focused specifically on Galapagos conservation, has worked to regularize the participation of private donors (most of them moved to give by a visit to Galapagos) and aid agencies in various European countries and the U.S. Although more must be done to achieve greater coordination, donor involvement is becoming better targeted, more effective, and increasingly responsive to needs on the ground.

CONCLUSIONS

We return to the premise explicit in Ecuador's decision almost five decades ago to protect Galapagos: The biodiversity and interrelationships between endemic flora and fauna of the archipelago is intrinsically unique and valuable. The local population, the government and those international bodies and covenants which protect biodiversity must provide the highest degree of protection possible.

Galapagos continues to hold the promise of a balanced system;

a near pristine and isolated ecosystem alive with unique, endemic species, and a permanent home for a small, but highly engaged and aware population. Certainly, residents of Galapagos, citizens of Ecuador, and international friends and allies have fought for, and been given, a legislative framework that is essential for long-term conservation. But this is only part of the solution.

With the future of these irreplaceable islands at stake, will the government and local citizenry work together to create a comprehensive, participation-based management plan that may well be *the* management model for nature and human development? Will international aid agencies and foundations complement Ecuador's financial resources to fully institutionalize this model? Will the conservation community—researchers and NGOs—work according to a shared agenda that will provide the science and expertise most needed for Galapagos conservation? Will individuals, transformed by their visits to the archipelago, respond with much needed advocacy and financial support? Galapagos demands the best of all of us. While many questions remain to be answered, we believe that the future is bright for this small and extraordinary place.

Johannah E. Barry is President and founder of the Charles Darwin Foundation, Inc., a U.S.-based non profit that is dedicated to Galapagos conservation. Richard E. Knab, a former Peace Corps volunteer who has worked for years in Latin American development, is now CDF Director for Major Gifts. For more information, see <www.galapagos.org>.

Bioprospecting

Can pharmaceutical research give back?

BY CORI HAYDEN

IN 1998, AS THE ZAPATISTA UPRISING CONTINUED TO SIMMER IN the highlands of Chiapas, Mexico, two U.S. academic researchers began setting up a “bioprospecting” agreement there. With funds from the International Cooperative Biodiversity Groups ICBG, a U.S. government-sponsored drug discovery and conservation initiative, University of Georgia ethnobiologists Brent and Elois Ann Berlin began negotiations with Tzeltal and Tzotzil communities over a new form of biotech-mediated trade. Their goal was to send plants and microbes from these communities to a Welsh biotechnology firm, Molecular Nature, Inc., to research possible medical and industrial uses. In partnership with the venerable Mexican research institute, Ecosur, the Berlins established PROMAYA, a Chiapas-based nongovernmental organization that would distribute future benefits back to participating communities, in the form of a small portion of royalties from any resulting products.

This was precisely the kind of arrangement encouraged by the 1992 UN Convention on Biological Diversity. The multilateral accord has set in motion some powerful changes in the politics of drug discovery and natural products research, not just in Mexico but throughout the world. The CBD mandated that drug and biotechnology companies ensure some form of “equitable returns” for source nations and/or source communities, if they desire continued access to resources from biodiversity-rich climes, most of which are found in the nations of the Southern hemisphere. This benefit-sharing provision dramatically reversed the previous treatment of genetic resources and cultural knowledge as part of the “global commons,” and thus as free for the taking. For conservationists looking for a way to “make biodiversity pay for itself,” benefit-sharing promised to harness the (earning) power of corporate drug discovery by feeding these profits back into developing nations for such diverse purposes as biodiversity conservation, rural and indigenous community development, and scientific infrastructure-building. For many activists, benefit-sharing was a welcome nod in the direction of social justice, finally acknowledging the contribution of Southern nations and peoples to the production of pharmaceutical value.

But the post-1992 history of bioprospecting has not necessarily confirmed these senses of promise. The so-called “Maya ICBG” program barely got off the ground before it was brought to its knees by concerted opposition from a potent coalition of regional, national, and international actors decrying “biopiracy in Chiapas.” At stake was not just the volatile question of indigenous rights in what is, arguably, a war zone. Activists voiced concern about “inadequate” processes of consent, about the criteria through which participants would be included, about and the “meager” returns on offer. The broader conditions of political legitimacy for these kinds of exchanges, given the notable absence of a national law regulating bioprospecting contracts, were also called into question. Under heavy pressure, the sponsoring bodies in Mexico and the U.S. withdrew their support from the project, and the Maya ICBG was canceled in 2001.



Left: A Chiapas resident gathers medicinal plants by the side of the road. Right: Plants used for medicine grow wild.

The project's rather spectacular demise placed Mexico at the center of heated international debates over the very possibility of turning natural products drug discovery into a form of “equitable” exchange. It highlighted, in rather stark fashion, some of the primary questions haunting these collaborations in their many forms. How much, and in what currency (royalties, technology transfer, scientific training, community development projects?) should corporations pay for access to plants and local or traditional knowledge about their uses? To whom, precisely, should benefits be directed (national institutions, indigenous communities, academic researchers?), and on what basis? With “equitable returns” often offered at between one and three percent of resulting royalties, and with a projected 10 to 20 year lag time before a drug (and resulting royalties) will be produced, critics of bioprospecting in Mexico and internationally have argued that these contracts are simply a dressed-up version of the same old “bio-piracy,” a mere continuation of centuries of misappropriation of plants and traditional knowledge.

Without doubt, controversies over bioprospecting have offered vivid reminders that identifying and attributing the dominion of plants and knowledge is first and foremost a political project. In Mexico, post-Revolutionary nationalist stories have named medicinal plants — *la herbolaria Mexicana* — a distinctively mestizo, *national* legacy, while much detailed ethnobotanical work has



shown how well-traveled and cosmopolitan medicinal plants can be. At the same time, community claims over biological and cultural resources have become absolutely central to indigenous struggles over sovereignty and self-determination. These different under-

Controversies over bioprospecting have offered vivid reminders that identifying and attributing the dominion of plants and knowledge is first and foremost a political project.

standings, pitting national and community dominion against one another, now find their way into the very heart of bioprospecting politics and practice. The CBD puts forth conflicting notions of sovereignty: it essentially sets up nation-states and “communities” as competing claimants, thus threatening to irritate longstanding wounds in many national bodies politic. This is certainly the case in Mexico, where indigenous communities, led most visibly since 1994 by the Zapatistas in Chiapas, have been fighting an uphill battle for various forms of recognition from the state, including political and territorial sovereignty.

For many companies with a wary eye on the new ethic of “equitable returns,” the demise of the Maya ICBG is precisely the kind

of political “disaster” that they desperately hope to avoid as they confront the prospect of setting up benefit-sharing collaborations. Declaring themselves “daunted” by the prospect of negotiating benefit-sharing contracts with indigenous peoples, many companies, national biodiversity policy officials, and university researchers have stated a clear preference for screening resources considered “safely in the public domain.” In line with the CBD’s new alignment of rights over resources, this recourse to public resources means recourse to national resources.

In a separate ICBG project involving the University of Arizona, the drug company Wyeth Ayerst, and researchers from Mexico, Chile, and Argentina, participating Latin American scientists worked with a wide range of public, or at least, not-quite-community resources, in an effort to establish alternative strategies for linking resource extraction to benefit-sharing, which would not depend on extracting plants and knowledge from indigenous communities. These methods included working with medicinal plants sold in urban markets, weeds on the sides of the road and knowledge published in anthropologists’ articles, petri dishes in private university laboratories and vines growing in friends’ backyards.

Or consider the strategy pursued by the Institute of Biotechnology at Mexico’s National Autonomous University (UNAM) in their 1997 bioprospecting contract with the San Diego-based biotechnology company Diversa. This effort was designed to screen microbes on government protected lands; participating scientists and government officials hoped that working on federally protected biosphere reserves (and working with microbes rather than ostensibly more “culturally” entangled medicinal plants) would insulate them from the thorny question of community rights. Neither preventative effort proved to guarantee the long-term viability of these agreements.

The UNAM-Diversa project was hit by the same storm of public opposition that undid Maya ICBG, as Mexico City journalists, activists, and academics pointedly questioned the legitimacy of UNAM to broker access to national resources; for its part, the “Latin America ICBG” effort has been scaled down, particularly in Mexico, partly because of concerns about the political viability of prospecting in that country at all, and in part due to a lack of promising products from plant-based leads.

Indeed, these latter efforts to prospect in public reflect the general direction of bioprospecting in general. Major pharmaceutical companies and the ICBG program itself are moving away from working with plants (and their people, whoever they may be) altogether, favoring microbes from the ocean floor, data stored in bioinformatics databases and other “trouble-free” collecting sites. This shifts the kinds of political and ethical dilemmas we might identify in these contracts: not that “people” are being included badly— the argument that brought down the Maya ICBG project—, but that “people” are not being included at all.

Cori Hayden is Assistant Professor of Anthropology at the University of California-Berkeley and the author of When Nature Goes Public: The Making and Unmaking of Bioprospecting in Mexico (Princeton University Press, 2003).

El Tesoro de Volcán

Water-based community organizing in Costa Rica

BY LINDSEY MCCORMACK

CARLOS EITA AND HIS COUSIN LFONSO, RUGGED-LOOKING ranchers both, squat beside biologist Ruth Tiffer as she explains how to take samples from a streambed. Scooping a rock from the current, she points out the metropolis of algae and water insects that flourishes on its surface. The cousins pick off the critters with tweezers and store them in a vial of alcohol.

Somewhat bemused, I stand off to the side with my pen and notebook. I was invited to the town of Volcán, in southern Costa Rica, to learn about the efforts of the community to preserve their watershed; the early morning lesson in ecology is somewhat unexpected. The rest of the group—numbering seven, a mix of locals and visiting conservationists—ventures out enthusiastically into the river, nets, vials and tweezers in hand.

“The people of Volcán need to be able to monitor their own watershed,” explains Ruth, a tropical river ecologist who works out of the capital. “They have detailed first-hand knowledge of what’s been happening to the river, but no data to back it up. Scientific information helps to tell the river’s story.”

Carlos Beita, casting a net by a sunny pool, says the current carries only insects and polliwogs, not the large fish and otters of yesteryear. The river is not quite dead, but a shadow of its former self.

Anecdotal evidence that the Río Volcán has been losing its vitality echo local stories readily heard across Latin America of shrinking lakes and dwindling rivers. As in most tropical countries, urbanization, intensive agriculture and deforestation in Costa Rica are depleting what was once seen as a limitless commodity. Even the

lush southern region, with an average 13 feet of rainfall yearly, faces the specter of contamination and water scarcity.

That nature has an intrinsic productive value, such as the oxygen emitted by a forest or the water filtered by a marsh, is a key premise of the sustainable development school of thought. In Volcán, the embryonic group *Amigos del Río Volcán* links the well-being of local communities to the health and integrity of the Río Volcán. Today’s excursion reflects a strategy for charting their vision of the river’s value, beginning with a description of its sources, seasonal fluctuations and aquatic life.

Less than ten miles from Volcán, the vast, largely unexplored expanses of the Amistad-Talamanca conservation area provide a natural water production plant. Filtering through cloud forests of fantastic biodiversity, rainwater courses down the Talamanca massif in streams and small rivers, merges in the wide Valle del General and meanders through swampland out to the Pacific.

These lands are ideal for the cultivation of pineapple, which requires both abundant water and steady tropical sunshine. The Pineapple Development Corporation (Pindeco), a subsidiary of the Del Monte fruit company, has operated in the Valle del General since 1978. One of the most successful cases of the 1980s’ “alternative export” strategy, pineapple now ranks fourth among Costa Rica’s exports. Pindeco is the most important producer of pineapple in the country, and unquestionably the economic engine of the *zona sur*.

After clambering out of the river, we drive out to the plains that belong to Pindeco. Rows of stiff pineapple plants stretch off to the

Exploring the river: Marielos, Johnny and Ruth



horizon; their spiky, knee high sameness gives the landscape the look of a giant buzz-cut. Besides the shadow of a passing vulture, the acres are eerily still; not an insect, not a bird makes a sound.

Until recently, the impact of pineapple cultivation on local ecosystems faced a tacit code of silence. In the late nineties, concerns about the effects of chemicals on worker health and the environment crystallized in a citizens' action group, the "United Front Against Pindeco Pollution." Drawing nearly a hundred people from across the southern region, the Front eventually crumbled as members fearing for their jobs withdrew support. (Pindeco's San José office was unable to comment after a week's worth of phone calls for this article.)

In 1998, Pindeco obtained ISO 14001 certification in environmental management and has since made important reforms in its planting policies. Nonetheless, members of the *Amigos* continue to notice the damage caused by chemical runoff, extensive irrigation from the river during the dry season, and especially pineapple plantings in the highlands. It is not enough, I hear repeatedly throughout the day, for the company to adopt internal environmental standards; we need to have a say in the decisions that are going to affect the river.

Drawing lessons from the experiences of the Front, the *Amigos del Río de Volcán* focus their energies, not on confronting the company, but primarily on strengthening and uniting local communities. Marielos Solís, a young architect with family roots in the area, often spends her weekends making the four hour trek from the capital to Volcán, where she has been working as an ad hoc community organizer for more than a year.

"The challenge in this town," she says, "is to create a sense of will and self-reliance. People are so dependent on Pindeco; 90 percent of the town is employed by the company. We have to educate so that the people feel an ownership of the river, which is after all the real treasure of Volcán."

In the late afternoon, the group visits a tributary of the Volcán in the hills that border Amistad National Park. Splashing down mossy cliffs into a frothing, dangerous whirlpool, the waterfall is hypnotic to behold. However, Alfonso, Ruth and conservationist Johnny Rosales are most interested in the hills beyond, which have been completely denuded by cattle grazing. An animated discussion ensues on how to educate local farmers and ranchers on watershed protection. Perhaps Pindeco will donate seedlings for reforestation, Alfonso ventures; perhaps this opens up an opportunity for dialogue with the company, Johnny adds.

Back in town, the group stays up late discussing their next steps. As they joke and debate, the complexity of their situation becomes clear; seeking a more rational and democratic management of the river will draw the *Amigos* into the orbit of government ministries, transnational corporations and international NGOs. Negotiating the interests of these entities while maintaining the support of the community is a daunting task; but a certain stubborn love for the river, transcending its quantifiable value, seems sure to sustain them.

Lindsey McCormack graduated from Harvard College in 2003 with a degree in History and Literature and a Latin American Studies certificate from DRCLAS. She currently works as a speechwriter at the Arias Foundation for Peace and Human Progress in San José. Amigos del Río Volcán is looking for student volunteers. Contact: Marielos Solis <djsolis@rasca.co.cr>.

OTHER ARTICLES RELATED TO FLORA, FAUNA AND NATURE

All articles can be found on-line at <<http://drclas.fas.harvard.edu/publications>>.

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- *The Environment in Latin America*. Fall 1998.
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- "El Salvador Challenge: From Peace to Sustainable Development" by Theodore Panayotou.
- "The Environment: First Hand and Bi-national" by Erica Simmons.
- "The Urban Environment" by Jack Lueders-Booth and André Leroux.
- "Environment, Indians, and Oil" by Theodore MacDonald.
- "La Planada: A Facilitator of Sustainable Development" by Jorge I. Restrepo.
- "Ecology, Art and Home" by Valy Steverlynck.
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- "Environmental Ethics and Latin America" by Timothy C. Weiskel.
- "The Environment in Latin America: An Interdisciplinary Approach" by Jorge Morello..

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- "Reminiscences of the Botanical Garden at Central Soledad" by Richard A. Howard.

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- "Mexican Amphibians: A New Age of Discovery." By James Hanken. *Mexico in Transition*. Fall 2001.
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- "Journey of Remembrance: Children's Art Inspires Renewal." By Barbara Edwards and Moira Gannon, *The Children*, Winter 2004.
- "The Struggle of the Mapuche Peoples." By Guillaume Boccara, *Chile: A Changing Country*, Spring 2004.

You Can Dance to this Book!

Edited by Nicholas J. Cull and David Carrasco, *Alambrista and the U.S.-Mexico Border: Film, Music, and Stories of Undocumented Immigrants*, University of New Mexico Press, Albuquerque, NM; 2004, 225 pp.

A REVIEW BY CECILIA OWEN

Whether it's the traditional Mexican *corrido* that accompanies the birth of a baby girl in Michoacan, Mexico, or the "Okie-Dokie Shuffle" which underscores the diversity of cultures brought together within the migrant farmworker communities in California, the soundtrack that accompanies the recently released film *Alambrista: The Director's Cut* will keep you moving. The multi-media production that is *Alambrista and the US-Mexico Border; Film, Music and Stories of Undocumented Immigrants*, co-edited by Nicholas Cull, American Studies professor at the University of Leicester, and David Carrasco, historian of religion and anthropology at Harvard University, demands the attention of students, scholars, and activists alike. Thirty years after Robert Young, AB '49 released the original version of the film *Alambrista*, this new combination of film, book and soundtrack invites us view the re-release of *Alambrista: The Director's Cut*, explore the themes that intersect immigrant lives through a superb collection of essays, and dance a little along the way to the soundtrack by Dr. Loco & Sus Tiburones Del Norte.

Carrasco comments, "A group of experienced scholars and activists, largely but not exclusively Chicanos from different universities came together to create a new educational resource that would allow people to read, see and hear the stories of the *alambristas*." By bringing the original film back to life, these scholars intended "to heighten and stimulate dialogue in university classrooms and com-

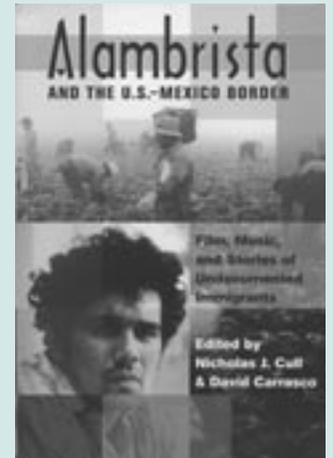
munity centers alike, in order to enlarge the public discourse on undocumented workers in arenas such as public policy and the creative arts," Carrasco adds. True to the collaborative spirit of this volume, the editors took the new version of the film *Alambrista: The Director's Cut* to immigrant communities for their feedback. Cull remarks, "(Farmworkers') overwhelming response to the film was to embrace it not as a window on the present situation but a piece of community history: a way of understanding their parents' experience...For the children of the people who lived through such conditions, it fills a silence."

Alambrista: The Director's Cut portrays Roberto's poignant journey of discovery and hardship in California in the 1970s. The viewer tastes both the sweetness of Roberto's tender friendships, as well as the bitterness of his unjust exploitation as an undocumented immigrant worker. The spirit of generosity and clever humor that defines the relationship between Roberto and his comrade Joe stands in contrast to the inhumane treatment of the Colorado *patron* who just wants to recruit enough "bodies" to pick the melons in fields where farm workers are striking to protest unfair working conditions. Roberto experiences the wonder of sudden immersion within a new cultural setting: his wide-eyed innocence prompts Joe to give him his first English lessons in ordering ham, eggs and coffee. Their risky adventures continue as they "cruise" in a Cadillac parked aboard a car carrier on a freight train bound for Stockton,

California. Their jovial friendship ends in tragedy, leaving Roberto to wander alone into the next town, right into the arms of a budding romance with Sharon, an Anglo waitress in the diner where he orders his first meal. Roberto and Sharon's intimacy and mutual dependence provide a temporary oasis of affection for them both. Roberto eventually crosses back over the border to Mexico, only to witness joy and sorrow simultaneously in seeing a Mexican woman giving birth to a future American citizen, an infant "with papers," just yards over the national boundary line.

This collection of essays presents the "marriage between the academic perspective and the experience of culture," according to Stanford University historian Albert Camarillo. Videotaped interviews follow the footage of *Alambrista; The Director's Cut*, providing students with essential information about the contemporary realities of immigration in the new millennium. In one interview, for example, Latino Studies scholar Nancy Mirabal highlights the contemporary roles of increasing numbers of undocumented women who emigrate from Mexico to the U.S. As Theresa Carrillo emphasizes in her article entitled, "Watching Over Greater Mexico: Recent Mexican Initiatives on Migration and the Alambristas of the New Millennium," the face of immigration thirty years after the making of the film *Alambrista* looks much different.

The book's essays also illuminate various aspects of the production of the film and soundtrack. Jose Cuellar, pro-



fessor of Raza Studies at San Francisco State University (aka Dr. Loco), provides us his "notes" on creating the original music for the film. Carrasco comments, "It's really Dr. Loco's music that makes a new version of the film. Dr. Loco's music tells the Alambrista story in a new way with new nuances and new power."

The complexities of Dr. Loco's musical creations are expressed in his description of the "Okie Dokie Shuffle," the "musical glue" overlaying the scenes where Joe and Roberto help a migrant "Okie" family get their broken-down station wagon moving again. Dr. Loco states, "This seemed to be the perfect film moment for a musical trans-culturation bringing together the *mojados* or 'wetbacks' and the gringos or 'okies'...to instrumentally represent the musical merging of the Anglo and Mexican American traditions along the US-Mexican border." When their car won't start up at the gas station, the "Okie" father jumps out of the car and gives the driver's side door a kick while Roberto turns the key in the ignition. As

the car responds and they drive away, the song plays:

You shuffle to the left
 You shuffle to the right
 You shuffle around with all of your might
 When nothing you do ever turns out right
 That's the Okie Dokie shuffle.

Alambrista and the US-Mexico Border; Film, Music and Stories of Undocumented Immigrants is already playing a major role in new collaborative efforts within the field of Latino Studies. For example, the newly formed Latino Studies Consortium, supported by DRCLAS and the Inter-Faculty Committee on Latino Studies at Harvard came together in response to the need for further collaboration in the area of Latino Studies. Tufts University anthropology professor Deborah Pacini Hernandez points out that faculty from both private and public institutions in the Boston area, met "to strengthen Latino scholarship within their institutions, get to know other Latino Studies faculty, and to create opportunities to con-

nect in meaningful ways with the larger Latino community."

Recognizing the *Alambrista* multimedia ensemble as a powerful tool to launch a new collaborative teaching initiative, the Consortium developed the project "A Book and a Film." Over the course of the Fall 2004 semester, students from participating universities will screen *Alambrista: The Director's Cut*, view the accompanying interviews prominent Latino Studies scholars, and read a selection of essays from *Alambrista and the US-Mexico Border*. In response to the range of discussion questions posed at the beginning of the book, students will interact with one another through the use of a virtual discussion board. In their virtual classroom, students will have the opportunity "to dialogue and respond to their peers who are of different socio-economic backgrounds, who are engaged in the pursuit of various educational degrees, and who possess varying levels of expertise within the field of Latino Studies," states Pacini. Students will also be able to gain feedback from participat-

ing faculty members across these institutions through these virtual discussions. For example, a Salem State masters degree candidate in education well-versed in Latino Studies with teaching experience, will have the chance to interact with Tufts undergraduate students entering their first Latino Studies course.

"In a political moment when Latin America is not part of the foreign policy debate and discussions of immigration issues have fallen by the wayside, this volume provides an opportunity for students to question this 'silence'" remarks Neida Jimenez, DRCLAS Program Manager and coordinator of the Latino Studies Consortium. "Though a pilot project at the moment, the "Book and a Film Project" also helps faculty using these multi-media tools to engage in a pedagogical discussion about what it means to teach Latino Studies," emphasizes Jimenez. "We know that music speaks to students; and stories move and stir the imagination: these too can be transformative tools." Within this new collaborative teaching project, students will

tackle the themes and questions raised by *Alambrista and the US-Mexico Border* in virtual conversation with one another; university faculty will have the chance to dialogue about pedagogical aspects of teaching Latino Studies, all with an eye towards sharing this learning with K-12 educators

The multi-media package thus becomes a point of departure for study in many different areas: the changing face of Mexican immigration to the US, the development of new pedagogies for Latino Studies, and the use of the creative arts, especially music and film, in the struggle to enact social change.

All proceeds from the sale of this multi-media package benefit children of migrant farmworkers.

Cecilia Owen is an MDiv student at Harvard Divinity School studying art as ministry for social change. She is the coordinator of the "Book and a Film" project of the Latino Studies Consortium. A longer version of this article can be found on <<http://drclas.fas.harvard.edu/publications>>.

Linguistic Pluralities

Doris Sommer, *Bilingual Aesthetics: A New Sentimental Education*, Duke University Press, Durham and London, 2004, 250 pages

A REVIEW BY DAN VAZQUEZ

After an exhausting game of soccer with a crew of Mexico City street children, Vicente, a young teenager of 13 said, "Vamonos a la verga." It was my third day with Casa Alianza, the international nonprofit organization where I worked with street youth for 10 months, and my Mexican slang, despite an effort to learn as much as possible, was not up to speed. I asked innocently, "?Que es una verga?" Vicente let out an unexplainable, long laugh. Finally, he

rephrased, "Vamonos a Casa Alianza."

Taking "verga" to mean Casa Alianza or institution, I decided to extend an invitation to Miguel, another member of the crew who expressed interest in seeing a doctor to treat a nasty infection on his arm and also a psychologist to address issues of parental physical abuse. Miguel did not accept my invitation; he simply looked at me strangely. I repeated, "Vamonos, pues. Vamonos a mi verga." My words repelled

Miguel. Vicente, witness to this interaction, laughed heartily. I stood confused. Miguel turned around and walked off. It was only later when I told a colleague about this exchange that he told me *verga* literally meant the tallest mast on the ship of a boat and that it doubled for "phallus" or "cock" in Mexican slang. He pointed out that Miguel would not have taken offense so easily if I had known him better because that kind of talk is usually reserved for members of the crew.



Reading Doris Sommer's monograph, a provocative argument which forges a connection between bilingual aesthetics and democratic practices, provided an interpretative framework to understand the dynamics of this linguistic faux pas—along with any other inter-linguistic encounters. She teaches us to cultivate a taste for the ironic, a sense of humor, about the collisions

was made or even how to make it when codes intersect out of one's control" i.e., linguistic misshaps are simply part of living in linguistically plural societies (20, 142).

She would further concede that "this common sense doesn't blunt the boldness of disconnect effects. Is it irritating or even frightening? Perhaps. The interesting question is what to do next" (142). According to the logic of

ground with moves on inclusion and exclusion that don't depend on power" (xiv).

Participants within bilingual games occupy positions which structure relations of power. Because of my identity as a relatively rich volunteer, my stumbling through street slang was taken as an offense. Miguel's response, silence, asks Sommer to undertake a more sociologi-

them as "precarious." "I grew up on the streets and I'll die on the streets," he told me after knowing him for six months.

Yet, what Sommer's book wants on the level of sociology, it provides on the level of theory. Her discussion connecting the bilingual aesthetic of irony, precariousness, and tolerance to the vibrancy of pluralistic democracy opens the pores of the imagination and forces the reader to walk new lines of thought. Sommer would argue that encounters such as the one I had with Miguel make democracy relevant and necessary: "But if we managed...to be rid of the 'negative' moments of disagreement and doubt, there would be little democracy to defend... Risk and doubt remind us not to second-guess other people and pre-empt what they have to say" (72-73).

She is right. Because of my initial encounter with Miguel, I am careful not to presume and try to listen to others better. Moreover, I am more aware of the otherness within me—the "other" that Miguel sees, the other who is not from his world.

This predisposition to listen coupled with the self awareness of otherness within—of "double consciousness" as Sommer, who borrows from WEB Dubois, would call it—this is the lifeblood of a pluralistic democracy that breathes in that space between languages. Hopefully, with a democracy built along these lines, we will move in the direction of making our linguistic misunderstandings less painful for the Miguels in the world.

Dan Vazquez '02, recently lived in Mexico City, where he worked for Casa Alianza and the Los Angeles Times. He continues explorations into the life of the mind in India, where he is currently working for an NGO on a fellowship.

Bilingualism is the lifeblood of a pluralistic democracy that breathes in that space between languages.

endemic to linguistic plurality and further argues that these collisions, far from dividing our polities, maintain democracies fit and vibrant.

Sommer's argument has appeal in a time when many perceive migrants and resultant multilingualism as threats to the cohesion of societies. However, I wonder how Miguel fits into Sommer's vision.

Sommer would tell Miguel that "language is precarious" and that "communication [between people] teeters, unsure if contact

Bilingual Aesthetics, the next step for Miguel would be to "cultivate a taste for imperfection and for irritation as features of democratic life," for "irritation exercises the faculties of knowing and feeling," which are crucial both to the growth of individuals and societies (55, 142).

Somehow, I imagine that Miguel would not be comforted by this line of reasoning. He would not take solace in such statements as, "The poor can play as well as the rich, because bilingual games often level the

cally sophisticated approach to the interconnections between power and language.

The lack of this approach comes through when Sommer reifies all bilinguals into a metaconcept of "the bilingual" as in the following phrase, "The bilingual's unsettling sense of human arrangements as constructed and precarious" (110). I would venture that Miguel, a bilingual versed in Spanish, Mexican slang, and even a little English, would not see human arrangements and the position he occupies within

RECENTLY PUBLISHED

These books have been published recently by Harvard Faculty and Visiting Scholars. Some will be reviewed in future issues of ReVista.

- Merilee S. Grindle, *Despite the Odds: The Contentious Politics of Education Reform*, Princeton University Press, 2004
- Jorge I. Domínguez and Chappell Lawson (editors), *Mexico's Pivotal Democratic Election: Candidates, Voters, and the Presidential Campaign of 2000*, Stanford University Press and the Center for U.S.-Mexican Studies, UCSD, 2004
- Jeffrey Davidow, *The US and Mexico: The Bear and the Porcupine*, Markus Wiener Publishers, Princeton, 2004
- Philip B. Heymann, *Terrorism, Freedom and Security: Winning Without War*, The MIT Press, Cambridge, 2004
- John Quelch and Rohit Deshpande (editors), *The Global Market, Developing a Strategy Across Borders*, Jossey Bass, San Francisco, 2004
- Sanjeev Khagram, *Dams and Development: Transitional Struggles for Water and Power*, Cornell University Press, 2004
- Jody Heymann (editor), *Global Inequalities at Work: Work's Impact on the Health of Individuals, Families, and Societies*, Oxford University Press, 2003
- Jorge I. Domínguez and Michael Shifter (editors), *Constructing Democratic Governance in Latin America* (second edition), John Hopkins University Press, 2003

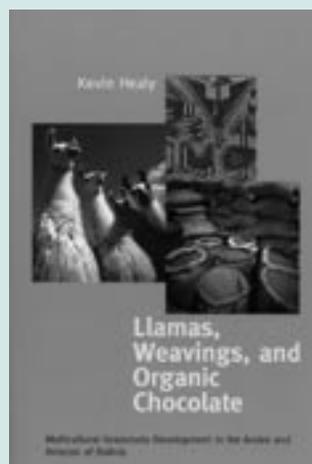
Development with Identity

Kevin Healy, *Llamas, Weavings, and Organic Chocolate: Multicultural Grassroots Development in the Andes and Amazon of Bolivia*, University of Notre Dame Press, Notre Dame, Indiana, 2001, 485 pages.

A REVIEW BY RAYMOND TRIPP, JR.

I first met Kevin “Benito” Healy a little over four years ago at an information session he gave to a group of State Department Foreign Service officers on their way to assignments in the Andes. After the session, I asked Healy for more information about Bolivia’s indigenous peoples in preparation for my assignment in La Paz. As we talked, he suggested I meet with an Aymara student from the Bolivian Altiplano studying at Georgetown through a scholarship provided by his organization, the Inter-American Foundation (IAF). My initial contact with this student, who with a shaven head and chiseled features resembles at first glance a Tibetan monk, was for coffee. Over the course of my assignment, this proved to be the first of many conversations we shared. It was also the catalyst for my interaction with a variety of indigenous groups and people interested in their welfare in the country. At the time of our first meeting, however, I

my first introduction to Bolivia in the opening chapters of Healy’s book - and more. Healy, the IAF’s Bolivian project officer for over twenty years, brings to this book a personal, hands-on understanding of the country. In particular, he notes in the nine development project case studies he reviews that discrimination is - and remains - an institutional and social obstacle to improving the lives of the country’s poorest people. This observation essentially captures what makes economic development in Bolivia different, with the possible exception of Guatemala, from whatever could be considered the norm in the Hemisphere. With few exceptions, the poorest people in Bolivia are indigenous. They are also the majority of the population, constitute a number of distinct indigenous identities, and live in a geographically diverse terrain that includes some of the highest mountains in the world (the Andes) and a portion of the tropical headwaters of one of its



Healy measures success as the ability to improve the quality of life of people living below, on or slightly above the poverty line. He is not talking about multi-million dollar infrastructure projects. But, from what I have seen during my years in Bolivia, there is scant evidence large-scale projects have contributed much towards helping the poorest people if the measure is a significant or sustained contribution to the eradication of their poverty. From this perspective, I believe Healy is accurate

Healy looks at Bolivia’s social, economic and political realities and the related daily challenges faced by its indigenous peoples.

had little sense of how rare it was to meet an English-speaking indigenous student from the Altiplano of Bolivia attending an Ivy League school in the U.S.

Today, I cannot think of a better introduction to the social, economic and political realities of the country and the related challenges its indigenous peoples face in their daily lives. If you read with an open mind, you will find all the elements of

longest rivers (the Amazon).

Healy sketches out for us in his selection of case studies that the cultural identity and heritage of this “multicultural” indigenous population, once considered an impediment to development, is quite the opposite - it is a strength. This may sound obvious, but the evidence of more than fifty years of relative failures at the local level by international donors says otherwise. Granted,

in what he is saying to us in this book: that cultural revitalization is an element common in the grassroots development projects supported by the IAF that were successful in improving the quality of local people’s lives.

I am most familiar with the type of success Healy describes in his case study about textiles and the Jalq’a weavers of Chuquisaca. These weavers and their textiles were featured in

1992 at the Washington, D.C. Smithsonian Folklife Festival and in an exhibit at the same time at the Sackler Museum. On a wall in my apartment hangs one of their signature black and red weavings with its distinctive khurus (primal creatures with origins in the dreams of ancestors and cave drawings) that I purchased at the Antropologos del Sur Andino (ASUR) museum in Sucre, Bolivia. This textile came with the name and a picture of the woman who wove it. After the sale, most of my purchase price was returned to her by the museum. Her textile is the direct result of her community’s efforts to recover the almost lost techniques of their weaving heritage. Arguably, the community’s recovery effort and relative commercial success may not have been possible without their interaction with Veronica Cereceda, a Chilean anthropologist and the director of ASUR. Cereceda initially brought the community together and served as a continuing catalyst for them to rediscover their weaving techniques and symbols. Her museum also markets their work and features the weavers as a living exhibit. However, as Healy relates in this case study, the recovery work and production was ultimately their initiative, on their terms, and at their own pace. These are common elements in the projects presented by Healy. Together they play an important role in the ultimate success or failure and sustainability of any of the development efforts he describes.

The acceptance that the cultural resources and perspectives of indigenous peoples are as

essential to a project's success or failure as the more traditional contributions of others – such as that of Cereceda and Healy through the IAF grants he administered – is what makes this book different. In the book's nine case studies, ranging from chocolate and quinoa, to llamas and the textiles mentioned above, we are reading about economic change through social interac-

tion on equal terms. This sort of development in Bolivia, as Healy touches upon, is contributing to broader changes in society that began in 1953 with an uprising that gave indigenous peoples the right to vote for the first time in the country's history. Through accepting and building on indigenous identity, development through cultural revitalization is perhaps proving to be a 21st century path-

way to an elusive social inclusion and acceptance that has been missing since the conquest of the New World. As we are seeing played out today in the country's tumultuous contemporary political scene, this social change is also occurring at their initiative, on their terms and at their pace.

Raymond Tripp, Jr. is a career Foreign Service Officer with the U.S.

Department of State. He is currently a member of the U.S. Permanent Delegation to the United Nations Education, Science and Cultural Organization (UNESCO) in Paris, France. His previous assignments have been in Bolivia, Poland, Turkey and India. Any opinions expressed by him in this review are his own and do not necessarily represent the policy or viewpoint of the U.S. government or the Department of State.

The Perils of Truth and Impartiality During Civil War

June Carolyn Erlick, *Disappeared: A Journalist Silenced*, Seal Press, 2004, 348 pages

A REVIEW BY ANTONIUS C.G.M. ROBBEN

The cover of *Disappeared: A Journalist Silenced* depicts the Guatemalan journalist Irma Flaquer holding up a page in her left hand as if proofreading. Yet, her eyes are not looking at the paper but upwards. What is she gazing at with such intensity, melancholy and disillusionment? Has she lost faith in herself and her profession? Is she suggesting that we should not look for truth on a printed page or that truth cannot be entrusted to paper? Is this posed picture her ultimate statement about the paradox of practicing political journalism during a civil war?

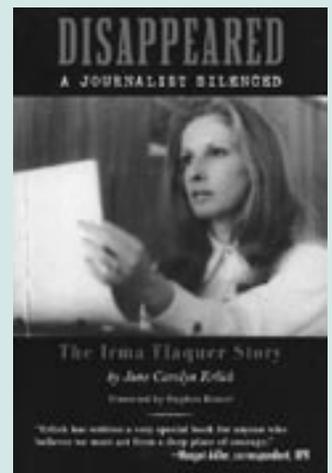
Irma Flaquer's professional career began with the writing of the newspaper column 'Lo que los otros callan' or 'What Others Don't Dare Write.' A natural talent with only four years of schooling, she was instilled with an ethic of truth-seeking and impartiality by a senior editor. She was a severe but balanced critic of the Guatemalan government, and held no punches to denounce corruption, poverty,

and social injustice. Repeatedly, she tried to find a reasonable and pragmatic middle ground in her newspaper articles. She was not against the Guatemalan military but against their abuse of power, not against Cuba's utopian ideals but against Castro's sellout to the Soviets and the imprisonment of political opponents. Irma favored gradual social reform to a violent social revolution, and was, according to her biographer June Carolyn Erlick, 'humanitarian, Christian, vaguely leftist, and highly nationalistic.' She empathized with all combatants, but never lost sight of the human suffering they inflicted on the poor and downtrodden. In the mid-1960s, Irma Flaquer even tried her hand at repairing Guatemala's injustices herself by collaborating closely with the Méndez Montenegro government, but became disillusioned by Guatemala's rapid decline into civil war. She found it increasingly hard to investigate the truth behind many disturbing events, condemning the violence from both sides and pleading for

an open dialogue.

Unfortunately, Irma failed to realize that anyone who tries to hold a middle ground in a polarized political situation tends to get criticized from both sides. In this sense, Irma Flaquer resembles Hannah Arendt and Albert Camus. All three were public figures who sought to mediate political violence through dialogue and mutual understanding, and all three were criticized and disparaged by the parties in conflict. Camus considered it his moral duty to infuse some humanity into the French and Arab Algerians during the 1960s independence war, Hannah Arendt tried to be sympathetic to both Jews and Palestinians, while Irma Flaquer sought to reconcile the interests of the military and the guerrillas with those of the Guatemalan people.

What Arendt, Camus, and Flaquer understood was that political conflicts and human suffering are of human making and unmaking. They challenged the logic of violence and appealed



to the existence of a common ground, thus undermining the inevitability of a bloody solution to the political and ideological differences. The reconciliatory attitude of Arendt, Camus, and Flaquer placed them above the hostilities and unmasked the oppositional structure as a political construction. All three were condemned, but Irma Flaquer suffered the severest physical consequences.

In 1969, a bomb was placed under Irma's car, nearly killing her. After a lengthy physical

recovery, she returned to political journalism but stayed far from party politics. She stopped believing in national saviors who could single-handedly lift Guatemala out of poverty. Instead, she became infatuated with the 1979 Sandinista Revolution. Here was a progressive reformist movement that occupied a middle ground between capitalism and communism, and tapped into the religiosity of the Nicaraguan people by embracing liberation theology.

Irma Flaquer became increasingly disheartened by the deteriorating political climate in Guatemala—the death squads, disappearances, massacres, impunity, and reign of terror—frustrated by the difficulties to get at the truth, and disillusioned by the lack of impact of her newspaper columns. In a final attempt, she founded in 1980 the *Guatemalan Human Rights Commission* to document the growing human rights abuses. This effort ended after seven months because of the inability to carry out reli-

able fact-finding missions. Irma Flaquer also stopped writing her polemic columns, and locked herself into her apartment while continuing to be showered with death threats. Secretly, she joined the FAR (Rebel Armed Forces) and was awaiting orders about where and how to join the armed struggle, when reliable government sources warned her that her life was in grave danger. On the 16th of October 1980, after a rare visit to her grandson, she and her son were ambushed. Her son was wounded mortally and Irma was dragged from the car never to be seen again.

Irma Flaquer's relentless pursuit of a political dialogue in a hopelessly polarized Guatemalan society, and her professional emphasis on truth and impartiality had imperiled her from all sides. She had become such a political liability that the identity of her assailants remains unclear to this day. This paradox of practicing impartial journalism during a civil war extends itself into this intriguing book

by June Erlick. Erlick's literary talent allows her to maintain a constant suspense that is reminiscent of Francisco Goldman's brilliant *The Long Night of White Chickens*. However, unlike with Goldman's fictional novel, the mysteries in *Disappeared: A Journalist Silenced* are reflections of Guatemala's political reality and Irma Flaquer's complicated life journey. Erlick's painstaking investigation cannot help but being inconclusive, thus enhancing the credibility of her compelling account. The author suggests that the Guatemalan military were most likely responsible for Irma's disappearance. She posed a threat if they would fail to stop her from joining the armed struggle in Guatemala, while her acrid pen would do much international damage if they would let her flee abroad. Yet, Irma might just as well have been perceived as a security risk to the guerrillas who feared she might reveal sensitive information under torture.

Irma Flaquer's persistent

attempts to stand above Guatemala's polarized parties were both edifying and fateful. Journalists stand in the best sense of their profession betwixt and between the world, trying to give equal time to all interlocutors and be evenhanded towards conflicting parties. Irma's tenacious commitment to truth and impartiality demonstrated the professional limits and personal costs of maintaining such high ethical standard under violent political circumstances. *Disappeared: A Journalist Silenced* is an enthralling book, highly recommended for all scholars interested in twentieth century Latin America, and a must-read for journalists because of its humbling lessons in professional courage and integrity.

Antonius Robben is professor of anthropology at Utrecht University, the Netherlands, and a former research fellow at DRCLAS. His most recent book is *Political Violence and Trauma in Argentina* (2005, U of Pennsylvania Press).

Magnates and Paper Tigers

Angélica Rettberg, *Cacaos y tigres de papel: El gobierno de Samper y los empresarios colombianos*, Ediciones Uniandes Bogotá, Colombia, 2003

TRANSLATED FROM SEMANA MAGAZINE

During the political crisis that almost toppled the government of President Ernesto Samper, no one examined the role played by business. This was despite the fact that, on several occasions, principal business sectors recommended the president's resignation because they feared possible economic sanctions by the United States.

But ultimately, they did not accomplish anything. This is the topic that political scientist Angélica Rettberg, a professor

at the Universidad de los Andes in Bogotá and a founder of the Harvard-MIT Colombian Colloquium, discusses in her book, *Cacaos y tigres de papel*.

On June 19, 1994, a Sunday and an election day in Colombia, Samper's campaign manager Fernando Botero Zea received a message on his beeper from Augusto López Valencia. The Bavaria beer company president asked Botero to contact him immediately. When Botero returned the call, Lopez

didn't even say hello. He enthusiastically shouted, "We won!" Later he explained that he had just received radio network Caracol's last results, indicating that Ernesto Samper had been elected president of Colombia. (*Semana*, June 21, 1994).

This episode is not very well known, but the events that followed are common knowledge. A few hours after voting closed, Samper was caught up in a judicial and political crisis regarding the donations of money from drug



trafficking to his campaign, commonly known as *Proceso 8.000*, (in reference to the number of the judicial dossier raising the charges). The process polarized the Colombian society, wounding feelings, tearing apart friendships, and even resulting

tendency to see the private sector as a unified bloc without examining internal differences and multiple—and at times—contradictory interests. This tendency has resulted in a generally simplified vision of business participation in politics. Rettberg's book breaks

■ Business people want different things in the political arena. Keeping these divisions and distinctions in mind helps to understand why, at times, they don't achieve what they want. Recent events in Venezuela also illustrate this situation. Until it obtained the

with saints (when other national and international figures visited the FARC in their territory of Caguán), now we feel ourselves talking with God." (*El Espectador*, March 18, 2000).

■ The economic groups are powerful, but not omnipotent. In Colombia, as in other Latin American countries, globalization has brought, as a consequence, fierce competition between economic groups to protect their privileges and their market niche. In this sense, relationships with government assume new importance, giving them more capacity for maneuvering and negotiation than what is commonly assumed as a result of their dependence on capital.

■ The Colombia business sectors continue to have an identity crisis because—with the exception of those linked to exports—they have not managed to overcome the loss of privileges that came with the opening towards free trade in the 1990s. They have not been able to assume a role of true interlocutors of the government in formulating policy.

Cacaos y tigres de papel presents a shortened version of Rettberg's doctoral dissertation, based on first-hand interviews with protagonists and observers close to the events under consideration. These include business sector leaders, executives from the economic groups, business managers, government officials, academics and journalists. In turn, the interviews were compared and contrasted with other sources such as archival materials, newspaper reports and statistics from several institutions.

The first two chapters of the book can be found on <www.semana.com>. This review was translated and reprinted with the permission of *Semana Magazine*.

In Colombia, as in other Latin American countries, globalization has brought fierce competition between economic groups.

in fatalities. The majority of the Colombian populace watched perplexedly as the events—in the tradition of a tragi-comic soap opera—played themselves out.

The Colombian business community was one of the more visible actors in the scandal surrounding the contributions of drug trafficking money to the Samper campaign. While some industrial sectors recommended the president's resignation, several large economic groups strongly supported the president, thus fracturing the unity of the business community.

Rettberg uses *Proceso 8.000* as a window through which to study certain aspects of the relationship between business and politics in Colombia. There is a

with that popular vision, pointing out the difficulties of making and keeping business interests united in the face of common threats to come up with a tentative model for relations between business and politics in Colombia.

In analyzing the relationship between the business sectors and the large economic groups, one must ask why the latter supported Samper. The book goes beyond the specific case of *Proceso 8.000* and delves into why businessmen and women get involved in politics, when this involvement is effective, and how they mutually interact to achieve their goals.

Cacaos y tigres de papel makes several revelations in this area:

support of the powerful Cisneros group, the anti-Chávist business movement could not produce a collective response against the government. Fedecámaras, the strongest Venezuelan business association, did not manage to sustain the opposition against President Hugo Chávez in spite of having succeeded in organizing a several-day anti-government strike.

■ The internal differences within the private sector regarding their access to power and their capacity for influence explain who is listened to in political decision-making. For example, in the unsuccessful peace process during the government of Andrés Pastrana in March 2000, a group of business leaders who attended one of the first public audiences was subject to embarrassing cat-calls. The hardest blow came a few days later when representatives of the principle economic groups—magnates, "big shots" known in Colombian Spanish as *cacaos*—were invited by the government and received in a private session by the leader of the FARC guerrilla group in Caguán. The qualitative difference in the treatment of the two groups was appreciated even outside the business community due to the manner in which the guerrilla negotiator known as "Joaquín Gómez" referred to the visit of the *cacaos*. "If we previously felt we were talking

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Inside the Ring of Fire

Beatriz Manz, *Paradise in Ashes: a Guatemalan Journey of Courage, Terror, and Hope*, Berkeley: University of California Press, 2004

A REVIEW BY TARAYN A. GRIZZARD

Traditionally, anthropologists have divorced themselves emotionally and physically from their subjects, placing the highest priority on objectivity and the role of the anthropologist as expert observer, while often neglecting or de-emphasizing the potential for advocacy that anthropologists may have, particularly those who work with populations in which torture, genocide, or other human rights violations may be occurring.

Current concerns over the ethical ramifications of observing without intervening in populations where these violations are present have made ethnographic work in vulnerable groups a difficult task, one in which the ideal balance of the roles of observer and advocate is difficult to ascertain and even more difficult to achieve.

Few anthropologists in the United States have provided personal examples of how to manage the ethical and professional issues inherent in working with communities in crisis, and very few have used their vantage point as researchers to advocate for and educate others on a broader level about the on-going tragedies their work encounters.

Providing this example is Beatriz Manz, a recent speaker at Harvard and an anthropologist at the University of California-Berkeley, whose latest work, *Paradise in Ashes*, is an intense, detailed account of the atrocities of the civil war in Guatemala in the 1980s. This work gives Manz a distinct place among a small handful of other notable books describing an observer's

perspective on modern-day genocide.

The culmination of her 20+ years working and living in the highland village Santa Maria Tzejá, *Paradise in Ashes* is not only perhaps the most detailed longitudinal account of the civil war but also provides a sterling example of an optimum balance of advocacy and ethnographic analysis in the face of human tragedy.

Manz, Chilean by birth and influenced by the coup of the Pinochet era, shows the reader through well-done ethnographic analysis how the war marches on through generations of Guatemalans born to Santa Maria Tzejá, the first village visited by the Ejército Guerrillero de los Pobres (EGP), or the Guerilla Army of the Poor, and a central site of conflict and army intervention during the war.

Throughout the book, Manz unflinchingly details not only the immense loss of life that the villagers endured throughout the war but also those whom she

Paradise in Ashes, is an intense, detailed account of the atrocities of the civil war in Guatemala in the 1980s.

lost as well, dedicating the book in part to Myrna Mack, a friend and Guatemalan anthropologist who was murdered by the military for her 'subversive' activities organizing Guatemalan women's groups.

Manz's straightforward perspective on the war, coupled with her excellent analyses, gives the reader a rare and intimate perspective on Guatemalan politics, one rarely seen in other foreigner-penned accounts of the

Guatemalan civil war. Particularly well-done is Manz's account of the creation and settlement of Santa Maria Tzejá in the 1970s. In the chapter, "Settling in the Promised Land," Manz discusses the arduous journey, personal sacrifices, and immense work that the village's future inhabitants put forth in order to settle what they had presumed to be an inconspicuous, relatively worthless bit of rain forest so that they might have land and a better future for their families.

Her account of the hope and optimism with which the villagers raised up Santa Maria Tzejá, assisted in part by Catholic organizations such as Maryknoll and church groups, not only poignantly frames the horrid story of war to come but also encapsulates the local setting for much of the Guatemalan civil war, where Indian villages, Catholic priests and nuns, and church groups of all descriptions became targets for the government's war against its own people.

Also notable is her account



tensions but the solidarity eventually achieved between *antiguos* and *nuevos* despite the original intent and the army's psychological and physical control of Santa Maria Tzejá during that time.

Paradise in Ashes is deeply engaging in part due to the compelling, emotionally gripping and often horrific subject matter and also due to the personal perspective from which Manz occasionally relates. Using clear, objective, and direct language, Manz also provides appropri-

ate 'remedial history' for those who, for whatever reason, may not have been cognizant of the extremes of this particular era in Guatemala and showcases the political and social forces at work in the creation, destruction, and eventual rebirth of Santa Maria Tzejá. Manz's own efforts to be an accurate and ethical witness are also detailed as Manz describes her own personal actions in the light of the civil war through work with local

activist groups, reporting “disappearances” and murders to the often-unconcerned authorities, or writing editorials and articles to broadcast the Guatemalan army’s reign of terror, showcasing the author’s own delicate negotiations between advocacy and academia.

Finally, *Paradise in Ashes* makes an enormous impact as a first-hand observer’s account of perhaps one of the larg-

est-scale genocides in Latin American history since the first “settlement” of the Americas. The details of Manz’ personal journey as anthropologist, advocate, and friend to the people of Santa Maria Tzejá also make a significant contribution to public anthropology as a guide for those who might seek to integrate political activism and advocacy into their academic inquiries. With skill,

sensitivity, and a trained eye, Manz expounds not only on the tragedy resulting from the 36-year long civil war in Guatemala but, importantly, also the intricate web of social and political factors contributing to it. She thus gives academia and a broader audience alike a foundation for future work in Guatemala as it continues to arise from two decades of terror and repression.

Tarayn A. Grizzard is a 4th year medical student pursuing a combined MD/MPH program at the Harvard Medical School and the Harvard School of Public Health. A recent intern at the Universidad de Chile’s CEMERA (Centro de Medicina Reproductiva y Desarrollo de la Adolescencia) clinic in Santiago, her research interests include adolescent medicine and cultural aspects of women’s health in Latin America.

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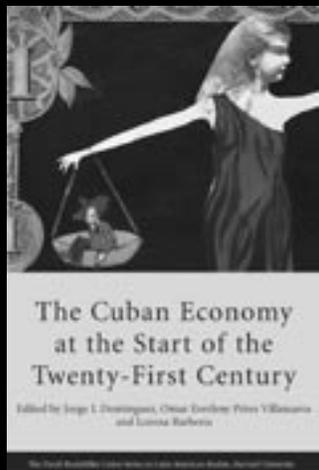
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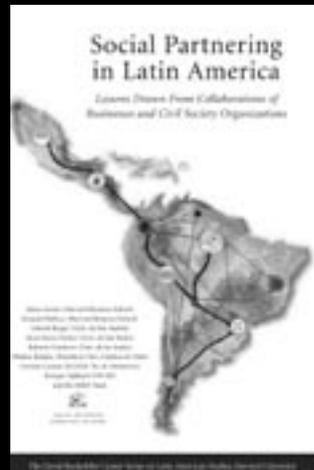
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The Vicious Violence Circle

BY MARIE-EVE SYLVESTRE

I was working at the Global Justice Center, a Brazilian human rights NGO when the prison rebellion at the Benfica House of Detention begun on May 29, 2004. During the 62 hours that the riot lasted, 88 inmates escaped, 30 more were killed, many others were seriously injured, and one prison guard was murdered. It was Rio's most violent prison riot and the third in importance in Brazil after Carandiru, São Paulo and Urso Branco, Maranhão. Suddenly, the generalities and academic research on state violence and its root causes of repression became a hard, specific and immediate reality.

I already knew from my readings that to talk about State violence and repression in Brazil, and in particular in the state of Rio de Janeiro, is to make an understatement. Corruption, fraud, slave labor, lack of access to health care and education services, police brutality towards street children and bad treatments inflicted to adolescents inside juvenile facilities are all too common. In 2003, the police alone killed 1,195 civilians reaching an average of 3.2 civilians killed every day, according to the Global Justice

Center's 2003 annual report on police violence in Brazil.

Most of these killings occurred in shantytowns and in the most impoverished suburbs. Indeed, in 2003, 92% of the homicides committed in Rio de Janeiro took place in the western and northern zones where there is a high concentration of poor populations, the Rio Civil Police admit in their December 2003 Weekly Bulletin.

Thus, Brazilian prison conditions reflect that violence against the young and the poor: 54.2% of the Brazilian prison population is under the age of thirty years old, 10.4% are analphabets, 69.5% have not completed elementary school (grade 9), and 98% of inmates lived in poor or modest economic conditions prior to their arrest, according to the previously mentioned Global Justice Center report, referring to a study by the Center on Security and Citizenship, Cândido Mendes University.

United Nations Special Rapporteur on Torture Nigel Rodley says that torture is "widespread and systematic" in prisons and other detention centers. Guards and other officials use punishment for improper behavior, but also as a means of ensuring



Prison conditions in Brazil have set off riots.

authority and control over the increasing prison population. Prisons conditions are notoriously harsh and riots often arise.

But when the riot broke out, every word that I had read erupted into harsh reality.

The circumstances in which the killings were perpetrated are absolutely horrible. Inmates identified with one criminal gang (*Red Commando*) murdered other inmates identified with a second criminal gang (*Third Commando*). Before being killed by the red Commando leaders, the inmates were accused and tried before a

fake tribunal. The "judges" (the leaders of the Red Commando) sentenced the "accused" inmates to death by torture or offered redemption through bad treatments, humiliation and conversion to the Red Commando. Weeks after the events, the police were still unable to identify all the victims because many of them were intensively wounded or mutilated.

In the hours following the riot, I, and other members of the organizations working closely with prisoners, struggled hard to make sense of this tragedy

and to understand how, as a society or as human beings, we create conditions in which such barbaric acts are possible.

First, we are struck by the State's role in this case. Several months before the events occurred in Benfica, many human rights organizations warned the government about the dangers of mixing members of different criminal gangs in the same prison blocks. Several inmates interviewed by our organization already predicted the bloodshed. Yet, mixing members of different criminal gangs was part of a new strategy adopted by Rio de Janeiro State Governor, Anthony Garotinho. He argued that the objective was to neutralize gang action and power in the prison system. There are many reasons to be skeptical of his position. The State itself classifies inmates by criminal gang. Despite the fact that most inmates have no affiliation or relationship with drug traffickers or criminal gangs, the Police classify inmates into one gang or another on the basis of their home address i.e. corresponding to the gang controlling the drug market in the shantytown where they usually come from. Thus, if the objective is to reduce gang power, the State should review its own policy in the first place. Second, it seems obvious that by putting eight times more members of the Red Commando than of the Third Commando in the same block at Benfica, we exacerbated the tensions and the fear among prisoners and put at risk the lives of hundreds of inmates and prison guards.

Further, although Benfica was a new jail—inaugurated one month before the April 5, 2004—it presented many serious problems of administration, infrastructure and security. On May 11, 2004, during a visit of the Community Council, the prison director reported that the

some parts of the prison had already collapsed, that water was infiltrating and that bars were missing in many windows as they were used by inmates to make weapons. Moreover, there were a total of 4 guards and 25 retired military police officers with no specific training at all times to look over some 862 inmates. The prisoners reported various acts of torture, lack of resources (paper, soap, mattresses, etc), increasing feelings of insecurity due to gang mixing in the same units, to the proximity of many shantytowns controlled by the Red Commando, and to the fact that the military police let weapons circulated in the prison. These facts are not newspaper or adversary accusations; the Community Council of Rio de Janeiro, which has legal

Brazilian prison conditions reflect violence against the young and poor. More than half of prisoners are under 30 years old.

jurisdiction to monitor Rio prison facilities, published these findings on May 11, 2004.

To counter State repression, it is also important to understand that the inmates are not the monsters and the devils that the State governor and the general population supporting harsh criminal law policies too often like to believe. First, all the individuals killed at Benfica were in preventive detention i.e. they were waiting for their trial and were still considered innocent under the law. Further, in the days following the events, *O Globo* newspapers reported the story of 24-year-old David de Paula Pereira, homeless and mentally ill, who was arrested after having shot rocks at parked cars in a street of Copacabana in March 2004. They also described the stories of nine other young men accused of theft or robberies in the south zone of Rio, including theft of a pair of running shoes

(Francisco da Costa), robbery of a tourist backpack (Leomel Gregório), robbery of a cell phone (Alessandro da Silva), attempted robbery of a watch and of one *real* (Wagner Souza Santos) and other robbery of 52 *reals* (Carlos Alvarenga). Among the 20 victims identified by the police, 19 were under 30 years old, 3 were homeless men, 17 were accused of non violent crimes (foremost, drug-associated crimes and theft in rich neighborhoods), at least 3 had serious mental health problems, and *none* of them had any relationship or association with the criminal gangs.

Finally, we should note that all the killed and tortured inmates were extremely poor individuals since the rich and powerful inmates were kept under custody

in a special prison unit. Thanks to Brazilian laws, elite members of Brazilian society, including judges, lawyers, government officials, police officers, and every person with a university degree, have the right to a special prison, separate from poorer inmates, with several privileges and "general detention conditions that are adequate to *human dignity*." (Section 295, Brazilian Code of Criminal Procedure). Among those kept in this special prison in Benfica, two are prisoners accused of embezzlement for a total of US \$33 million.

Despite having attracted huge international attention, the State refused to conduct any serious investigation to identify the persons responsible for this tragedy and, to this day, it did not review its policy to classify inmates by criminal gangs and to let them cohabit in the same prison blocks. For example, human rights organizations

had already sent several warnings concerning the situation at the Prison Complex of Bangu. Instead, the government decided to close Benfica and to transfer the surviving prisoners to other prison units. As a result, only in June and July 2004, there were four other incidents in Rio's prisons causing further deaths and injuries. Asked to comment the situation at public hearings organized by civil society, Astério Pereira, State Secretary for the Prison System, washed his hands and blamed the press for alimentering gang power in saying that "some reporters should go through an episode such as that of Tim Lopes," referring to a reporter who was assassinated in June 2002 by drug traffickers in Rio. When violence and repression is all a society has to offer,

it should come as no surprise that it is then learned and reproduced behind prison walls.

Marie-Eve Sylvestre is a LL.B. (Montréal), LL.M. at Harvard Law School, and is pursuing her SJD degree at Harvard Law School. She is a Frank Knox and Byse Fellow 2004-2005. A footnoted version of this essay can be obtained at < <http://drclas.fas.harvard.edu/publications>>.

Grant recipients have the choice of submitting a grant report or an article to be considered for ReVista. Grant application deadlines for research travel and internships in Summer 2005 are February 28 and March 18, respectively. For more information contact Erin Goodman, Student Services Coordinator <egoodman@fas.harvard.edu>

Highlights of Cuban Colonial History

BY MICHELLE TISDEL-FLIKKE

On January 6, 2002, *el cabildo habanero*, hundreds of dancers and musicians reenacted the activities of *las comparsas* of nineteenth-century Cuba. During the era of Cuban slavery, these wandering groups of costumed musicians, singers, and dancers marched through the five main plazas of Old Havana, eventually stopping in front of el Palacio de los Capitanes Generales (the Palace of the Capitanes Generales), the current Museo de la Ciudad in the City of Havana. Since 1986, Casa de Africa has organized this event to commemorate the Día de los Reyes, the one day that African slaves were free to revel in the streets of Old Havana. The renowned Cuban scholar Fernando Ortíz noted:

Of our old Havana carnivals of the nineteenth century, the most expressive were the festivals of the negro slaves: the Day of Kings which has been extinct since 1884 and [las comparsas], which even though they lasted, readjusted to the preferences of the epoch {Ortíz, 1991 #324:208}.

Ortíz noted that during the era of slavery when the Día de los Reyes was the principal carnival of the slaves, la comparsa was an act of wandering theater, a folkloric episode, and a spontaneous group of revelers who took advantage of the carnival or festival celebration.

Ortíz meant that the Cuban comparsa phenomenon was not a “cosa de negros” or a thing of blacks, rather a common expression that whites and people of color manifested, as well. The comparsa was not an culturally exclusive expression, but rather what a Spanish Academy dic-



Wandering groups of costumed musicians, singers and dancers celebrate Three Kings Day, January 6.

tionary defined as “a group of persons that in the carnival days or public gatherings go dressed with costumes of the same kind.”

During the celebration of el Día de los Reyes, the African slaves tried to reproduce certain aspects of their native festivals through the dramatic dances and pantomimes. Ortíz argues that as part of the nocturnal processions and street festivals of West Africa and mediaeval Europe, the people also formed unions or organizations to attend great civil and religious festivities, such as the procession of Corpus Christi or el Día del Corpus .

The white and black comparsas did not form racially exclusive groups until after the Spanish authorities outlawed the Día de los Reyes celebration in 1884. Then, the distinct social groups, white, black, and people of color formed separate groups during the carnival season. The whites held their processions down the picturesque Paseo del Prado, while the blacks, mulattos, and Chinese

groups kept to the outer walled areas of the city.

It was not surprising, then that Casa de África was an important point of orientation in the heritage landscape of the Historic Center of Havana. The collection of Fernando Ortíz, “the second discoverer of Cuba,” was the centerpiece of the museum’s eclectic collection. Through the object-centered narrative that identified Afro-Cuban religions as a symbol of Cuban heritage, Casa de África promoted the Cuban State’s shared heritage paradigm to international tourists, as one might have expected. Old Havana’s status as a World Heritage Site was a result of Cuba’s role in globalizing processes of the sixteenth century, particularly the trans-Atlantic Slave Trade. Casa de África was responsible for creating meaningful representations of Cuba’s African presence and promoting its significance for the local residents of Old Havana. The emergence of Havana’s colonial history and Casa de África was inseparable from the work



of heritage preservation and socio-cultural projection in the Historic Center of Havana. The Historic Center was an important focal point within the local and national heritage landscapes.

OLD HAVANA BECOMES THE HISTORIC CENTER

The Historic Center refers to the 352.1 acres that comprised the original town of San Cristóbal de la Habana (est. 1519). Havana did not expand rapidly and the island was not the source of mineral riches for the Spanish Crown. Nevertheless, Havana became an important port and rendezvous point between the American colonies and Spain because of its geographic location and natural harbor. This location also made the island an easy target for sea attacks by pirates and privateers. Old Havana was the center of Spanish military and financial activities in the seventeenth century, which also made it vulnerable to external economic, political, and social conditions. Although the city was “fortified like no other

in the West Indies," the English captured San Cristóbal de la Habana in 1762 and remained until 1763. The Spanish erected three fortresses—La Real Fuerza, Los Tres Reyes del Morro, and San Salvador de la Punta—to protect Havana from raids. The Spanish reinforced the defense system, adding more fortresses, watchtowers, and observation posts and in 1763, built a wall around the city to protect it from further pirate attacks.

This history made Old Havana distinct from other Latin American colonial cities in two respects. First, Havana has a unique system of large and small plazas and irregular street plan that create a distinct "cityscape." The city's second feature is the system of fortifications, which OHCH literature describes as possibly the "finest and most complex anywhere in Latin America."

In the nineteenth century, the town spread beyond the wall, new neighborhoods spread west to the adjacent zones to accommodate the burgeoning Creole aristocracy. These "exclusive" districts, such as el Cerro and el Vedado became the new "select" neighborhoods, and their architectural styles departed from the colonial architecture of

or rented the ground floors as warehouses and workshops related to port activities {Leal Spengler, 1998 #1374:42}. The newer and more affluent areas became concentrated in the west. Old Havana became disadvantaged and later was the site of the aqueduct, the gas lines, and the sewer systems. In the 1990's, the Office of the Historian restored many of these homes and converted them into casa museos (museum houses), such as Casa de África.

CUBAN CULTURAL POLICY YIELDS WORLD HERITAGE

In 1981, the Cuban State designated funds to the OHCH for the First Restoration of the Historic District (el Primer Restauración del Centro Histórico, hereafter the First Restoration). The OHCH created the Department of Architecture (el Departamento de Arquitectura) and received funding from UNESCO to create the CENCREM (1985), which supported project management, technical work, and investment in the Historic Center and beyond. The Provincial Management of Physical Planning and Architecture, a section of the OHCH, created the General Guidelines for the recovery of the Historic

museums but to all visitors of the Historic Center. The concept of historic value and patrimonio universal meant that everyone had the right to criticize and enjoy these sites.

The third restoration stage began with the first five-year restoration plan of Old Havana (1981 to 1985). In the 1980s, the OHCH also focused on increasing the "popular awareness" of the historic value of Old Havana. Articles appeared in newspapers and magazines and the OHCH started a series of walking tours of the area led by Leal. These tours became so popular that the OHCH moved the lectures to the amphitheatre in Old Havana and eventually turned them into the television program, "Andar la Habana." In this same phase, Casa de Africa underwent renovation (1984-1985) and opened in 1986, on January 6, the date when the African slaves traditionally celebrated Día de los Reyes.

In the second five-year plan (1986 to 1990), the restorations focused on two squares, Plaza de Armas and Plaza de la Catedral, as well as several area monuments that were not in the prioritized zone. The OHCH was concerned with revitalizing

During the celebration of the Día de los Reyes, the African slaves tried to reproduce certain aspects of their native festivals through dramatic dances and pantomimes.

Old Havana, according to Leal Spengler. The new areas, unlike the old city, had mansions, large boulevards, parks and walkways for leisure activities. The wall came down around the middle of the nineteenth century and over the next century, Old Havana declined as a popular residential area for the wealthy. Inside the city walls, property owners sold the old family homes, converted them into residential complexes,

Center. The municipal Section for Architecture and Town Planning outlined the first steps of the municipal "Master Plan"

In 1982, Old Havana became a World Heritage Site, entering the list as the twenty-seventh heritage site. For Suárez, the value of the Centro Histórico increased after it became a World Heritage Site (Patrimonio de la Humanidad). It not only belonged to Cubans and the neighbors of the

the cultural and social life of the neighborhood, so they studied the local social life and living conditions, as part of the plan of heritage preservation and rehabilitation. Most of the population of the Historic Center resided in buildings of great historical value. The main concerns were to: 1) resolve adequate housing for the residents of historic buildings and 2) rehabilitate damaged sites of historical value.

ON BECOMING A "SPECIAL MUNICIPALITY" AND THE "HISTORIC CENTER"

Just after the third five-year plan began, the fall of the communist bloc severely affected the Cuban economy. The loss of favorable trade partners sent the Cuban economy into a downward spiral, which drove inflation rates high and created shortages of foodstuffs, primary materials, combustibles, and other important resources. In June of 1993, the state also legalized the holding and use of the US dollar for the many citizens who illegally possessed dollars that they had received from their families abroad or from other sources. The legalization of the US dollar was one of many measures that the State implemented to give relief to different sectors of the society during the crisis.

"We have to work with the social projection of the museum," Suárez said. As Suárez affirmed, in the OHCH and in Cuba in general, challenges inspired practices and innovation. The OHCH had thirty-seven edifices to maintain, which for Suárez, was a source of pride. "This is something to be proud of," she said. "Although it isn't easy." In Cuba, the Historic Center is a special case because in other countries, corporations have to assume this responsibility. In Cuba, the state assumed this responsibility and the work done with respect to museums "motivates admiration." "We are making history," Suárez said accentuating each syllable with the nod of her head.

Michelle Tisdal Flikke, born in 1971 in Texas, is a doctoral candidate in the Department of Social Anthropology at Harvard University. Her research interests include the interface of politics, culture, and identity, museums and heritage production, and diaspora identities. A footnoted version of this article can be found at <<http://drclas.fas.harvard.edu/publications>>.

Building Houses, Improving Lives

BY NDIDI NENIA MENKITI

A house can provide much more than basic safety and shelter from the rain. As an intern for Habitat for Humanity in San Ramon, Costa Rica, I discovered that for many Habitat partner families, their home becomes the embodiment of something sacred: an answer to a prayer, or the realization of a dream once out of reach. One such person was David Fonseca, a Costa Rican artist. "Even though it lacks a few details...the house to me is a castle" said Fonseca, a Habitat Costa Rica beneficiary whose house was completed in 2001. "[It is] a dream come true".

Three years ago, Fonseca and his wife, Auxiliadora, went to numerous banks to inquire about loans to build a house. With each visit it became clearer that their economic situation would not allow them to borrow money from a bank. The high interest rates would make it impossible to avoid a lifetime of unmanageable debt. Fonseca grew discouraged. At the time, he, his wife and their three children were living with his mother in a one bedroom house made of tin. He feared they would never get a home of their own. Auxiliadora assured him, however, that she trusted in God to find a way.

Soon after, the FONSECAS heard about Habitat For Humanity and decided to make an appointment at the Cartago affiliate. His spirits dampened by the unsuccessful visits to banks, David was initially doubtful that Habitat could help. Nevertheless, he followed through with the meeting, and a few weeks later the FONSECAS received news that would change their lives: Habitat had approved their application, and a volun-

teer brigade from Washington was coming to help build their house. David was surprised and excited beyond belief. "They told us a brigade was coming... but I didn't believe it", he said, his voice full of emotion as he recalled that memorable day. "It was some of the best news...of my life. I felt shivers down my spine." The FONSECAS began to build, brick by brick, and six weeks later they completed their house. "It was a beautiful, beautiful experience," Fonseca said. "[After Habitat] my life changed...Before I lived dependent on others and that created a sense of insecurity...Now we feel more secure, more free. We can welcome visitors...".

Because of his appreciation for what Habitat did for his family, Fonseca has become one of the organization's most active supporters. He now volunteers daily at the Cartago office and serves on the Costa Rican national board of directors. "Habitat is part of my family" he said, "I am very

grateful to Habitat." Fonseca is dedicated to ensuring that other families also have the chance to experience a decent home. "Sometimes I'm riding on the bus and I see someone who doesn't have a house and I tell them about Habitat," he said. When Fonseca sees a friend living in conditions like those he used to live in, he encourages them to apply for a Habitat loan and supports them throughout the process.

Habitat for Humanity International is a nonprofit, ecumenical Christian housing organization seeking to eliminate poverty housing and homelessness. It has built more than 175,000 houses around the world. The Costa Rica program is one example, and Fonseca is just one of the 900,000 people Habitat has helped with safe, decent and affordable housing around the world.

The FONSECAS are already showing to others the same generosity Habitat showed to them. David and Auxiliadora have

opened their home to Laura, a friend of their daughter Raquel, who needed a place to live closer to school. When asked the most important thing he learned from his Habitat experience, Fonseca simply replied: "to help others."

Fonseca noted how the act of helping others can have a powerful effect on a community. Neighbors say "how incredible" when they see people come to help build houses, and are especially inspired when they see women doing construction, something that seldom occurs in Costa Rica.

Habitat has certainly made an indelible mark on Fonseca and his family. "Habitat is inside of us" Fonseca said. "Whenever my children hear...`Habitat for Humanity' they will feel a sense of identification, and I (will too)."

Inside the Fonseca home, the furniture is neatly in place; the table and counters decorated with traditional Costa Rican crafts. The walls, creatively painted with splashes of pastel blue and orange, are adorned with Fonseca's artwork. Using items collected from nature, Fonseca constructs depictions of serene country dwellings. "I like to reflect tranquility," he explained. Thanks to Habitat, there is newfound tranquility in Fonseca's life, as well as in his art.



David Fonseca and his family stand in front of their Habitat house.

Ndidi Menkiti '06 is an English and African-American Studies concentrator from Somerville, MA. She is very grateful to have received a DRCLAS grant to help fund her internship with Habitat this summer. Ndidi wishes to thank the FONSECAS, the Habitat staff, and all of the other Ticos who showed her the real meaning of "pura vida."



Empty chairs represent the 65 Cubans denied visas.

Book Launching Becomes Protest

BY LORENA BARBERIA

Sixty-five chairs sat empty in protest for the denial of visas to the same number Cuban academics. A book launching party transformed into a special session on “Academic Freedom and Scholarly Exchange with Cuba” at the 2004 Latin American Studies Association (LASA) International Congress. The October 8 session, hosted by the David Rockefeller Center for Latin American Studies (DRCLAS) was to have been a cheery event, a panel to celebrate the publication of *The Cuban Economy at the Start of the Twenty-First Century*, a book on the Cuban economy, the latest volume in the David Rockefeller Center Series on Latin American Studies.

The panel was to have included all three editors—Jorge I. Domínguez, Omar Everleny Pérez Villanueva and Lorena Barberia—as well as most of the contributors. However, one week before LASA, the U.S.

State Department denied visas for each and every of the 65 Cuban scholars who had been planning to come to LASA, whether they taught psychology, poetry, or politics. The unprecedented action meant that the co-editor of the volume and four authors of chapters in the book could not participate in the panel. DRCLAS changed its plans and marked the occasion by hosting a session to discuss the denial of visas to the Cuban scholars and more broadly the issue of academic freedom and scholarly exchange with Cuba.

The panel, now with a different focus, drew a standing-room only audience, facing the 65 empty chairs, each with the name of an absent Cuban and his or her institution. DRCLAS Director John Coatsworth, U.S.-based editors, Jorge Domínguez and Lorena Barberia, and Steve Schwadron, chief-of-staff to Congressman William Delahunt (D-MA) addressed the audience and read a state-

ment from the volume’s Cuban co-editor and discussed appeals by the Cuba Working Group of the U.S. House of Representatives to Secretary of State Colin Powell.

In his introductory comments, John Coatsworth read from his preface to the new volume, stressing, “We have learned from our Cuban colleagues, from their knowledge of their fields and their passion for truth, from their resilience in the face of the difficulties their country has faced, from their patriotism, and from their extraordinary warmth and humanity.” Coatsworth added that the decision to deny visas to attend the LASA congress also violates the academic freedom of U.S. scholars. Weatherhead Center for International Affairs Director Jorge Domínguez disputed characterizations made by the U.S. State Department that questioned the academic credentials of Cuban scholars, reading passages from the book to prove his point.

In response to the decision by the U.S. State Department, Coatsworth announced that DRCLAS will launch its book on the Cuban economy in Mexico, where Cuban academics have no problem obtaining visas. The rescheduled panel will include all Cuban co-authors and the Cuban co-editor, as well as the U.S. editors and authors. The location and date will be announced shortly. Coatsworth stressed, “the panel will have to take place outside the U.S. in a country which respects academic freedom more than the current administration.”

Lorena Barberia is a Program Associate at the David Rockefeller Center for Latin American Studies and the co-editor of *The Cuban Economy at the Start of the Twenty-First Century* (David Rockefeller Center Series on Latin American Studies, distributed by Harvard University Press, 2004).

Kenneth Maxwell at DRCLAS

BY TOMÁS AMORIM

As the new coordinator of Brazilian Studies at the David Rockefeller Center, it is a treat for me to write a few words on Kenneth Maxwell's arrival to DRCLAS, where he is now a Senior Fellow. To borrow John Coatsworth's words from earlier this year, "his appointment promises to be a great boon to the Brazilian Studies Program." Indeed, it has been both a boon and a boom!

In addition to his appointment at DRCLAS, Ken is now a Visiting Professor in the History Department where he is developing two new courses for the Spring of 2005: "Turning Points in Brazilian History: From Cabral to Lula," a lecture course, and "Brazil Between Revolutions, 1776–1789," a seminar. This Fall he is teaching the conference course "Contestation, Rebellion, and Revolution in Spanish America and Brazil." These courses will fill a significant lacuna in Harvard's curriculum pertaining to Brazilian history.

Ken Maxwell brings more than thirty years of experience not only from academia (having taught at Columbia, Yale, Princeton and the University of Kansas) but also from



the world of foundations (having been Program Director of the Tinker Foundation and a consultant to the Ford and Hewlett Foundations) and the foreign policy realm (having served for the last fifteen years as head of Latin American Studies at the Council on Foreign Relations in New York).

He is the author or editor of more than a dozen books, including, most recently, a new edition of his classic *Conflicts and Conspiracies: Brazil and Portugal, 1750-1808* (Routledge, 2004),

widely known in Brazil in translation as *A Devassa da Devassa*, and *Naked Tropics: Essays on Empire and Other Rogues* (Routledge, 2003). In a review of *Naked Tropics* in the *New York Review of Books*, the illustrious British historian Sir John Elliott described Maxwell's extraordinary ability to show "why Luso-Brazilian history matters, and how it can and should be more effectively integrated into the broader picture of the history of Europe and the wider world." Students and scholars at Harvard will now be able to explore this wondrous Luso-Brazilian world in Ken's courses and research.

He has certainly not shied away from controversy. His September 2002 op-ed in the *Financial Times* on the likely election of a former factory worker as president of Brazil created huge commotion for going against the conventional wisdom on Lula. Maxwell, as usual, had not minced words. He wrote then: "In Latin America 'magical realism' has faded as a literary fad. But when it comes to Brazil, fantasy reigns supreme within the IMF and on Wall Street.

How else can you explain the demonization of Luiz Inácio Lula da Silva, presidential candidate of the Workers' Party?" Not to mention the recent high-profile dispute over his book review on Chile's 9/11 in *Foreign Affairs* magazine... As Sir John Elliott put it, Ken has "always [been] something of a romantic rebel with a hard realist streak."

The projects Ken has spearheaded over the years are too many to mention, as are the scores of young scholars he has mentored and supported along their academic and professional journeys. I am honored to be counted among them, and to be able to continue collaborating with him. Along with the many distinguished faculty and stellar students here, we very much hope to further develop and strengthen Brazilian Studies at Harvard and beyond.

Tomás Amorim is Research Associate for Brazil at the David Rockefeller Center for Latin American Studies and former Director of Western Hemisphere Affairs at the Council on Foreign Relations, where he worked with Ken Maxwell for five years.

SAMPLING OF BOOKS BY KENNETH MAXWELL

- *Conflicts and Conspiracies: Brazil and Portugal, 1750-1808* (Routledge, 2004), revised edition. Published in Brazil in multiple editions as *A Devassa da Devassa*.
- *Naked Tropics: Essays on Empires and Other Rogues* (Routledge, 2003).
- *Mais Malandros: Ensaios Tropicais e Outros* (São Paulo: Paz e Terra, 2002).
- *Chocolate, Piratas e Outros Malandros: Ensaios Tropicais* (São Paulo: Paz e Terra, 1999).
- *The Making of Portuguese Democracy* (Cambridge Univ. Press, 1995). Published in translation in Brazil and Portugal.
- *Pombal, Paradox of the Enlightenment* (Cambridge Univ. Press, 1995). Published in translation in Brazil (forthcoming) and Portugal.
- *The New Spain: From Isolation to Influence, with Steven Spiegel* (CFR Press, 1994).
- *Portuguese Defense and Foreign Policy since Democratization*, ed. (Camões Center, 1991).
- *Spanish Foreign and Defense Policy*, ed. (Westview Press, 1991).
- *Portugal, the Constitution and the Consolidation of Democracy, 1976-1989*, ed. with Scott Monje (Camões Center, 1991).
- *Portugal: Ancient Country, Young Democracy*, ed. with Michael H. Haltzel (Wilson Center Press, 1989).
- *Portugal in the 1980s: Dilemmas of Democratic Consolidation* (Greenwood Press, 1986).
- *The Press and the Rebirth of Iberian Democracy*, ed. (Greenwood Press, 1983).

Puerto Rico Winter Institute

BY JOSIANE PELTIER



A view of San Juan

"Culture at the Crossroads" will be the theme of the inaugural program of the Puerto Rico Winter Institute January 10-28, 2005 in San Juan. Each year the Institute, a joint collaboration of the David Rockefeller Center for Latin American Studies at Harvard University and the University of Puerto Rico, will focus on a different academic area.

The Institute seeks to stimulate research, collaboration and intellectual exchange between Harvard and key institutions of higher learning in Puerto Rico. This seminar is the brainchild of Doris Sommer, a faculty member in the Department of Romance Languages at Harvard. Her goal was to put Puerto Rico on the research map of mainland academics and increase visibility for the rich cultural, political and social heritage of Puerto Rico.

Each week, two distinguished professors, one from Harvard and one from Puerto Rico or the diaspora, will co-teach a seminar on a topic related to the theme, this year, that of transnational culture. Seminar participants will include faculty from Harvard and

Puerto Rican institutions. Harvard and Puerto Rico faculty, as well as Harvard and Puerto Rico-based graduate and professional students, are eligible to apply.

This institute is made possible by a generous grant from the Wilbur Marvin Foundation and the contributions from the Universidad de Puerto Rico (UPR), the Centro de Estudios Avanzados de Puerto Rico y del Caribe (CEA) and Escuela de Artes Plásticas (EAP).

SEMINAR LEADERS:

Thomas Cummins is Dumbarton Oaks Professor of the History of Pre-Columbian and Colonial Art at Harvard. His latest book, *Toasts with the Inca: Andean Abstraction and Colonial Images on Kero Vessels* (University of Michigan Press, 2002) examines ways in which the colonization process modified indigenous forms and objects.

Enrique Vivoni, Professor at the School of Architecture and Director of the Architecture and Construction Archives at UPR, has curated more than 15 architectural exhibitions and published

multiple essays. He is the recipient of an NEH grant for his project "Hispanophilia: the Spanish Revival in Architecture and Life in Puerto Rico, 1900-1950."

David Carrasco teaches anthropology and religious history at Harvard. He is Editor in chief of the *Oxford Encyclopedia of Mesoamerican Cultures*. He is the author of *City of Sacrifice: The Aztec Empire and the Role of Violence in Civilization*. His latest book *Alambrista* looks at art and culture among immigrants in border areas.

Juan Flores is Professor in the Department of Black and Puerto Rican Studies at Hunter College (CUNY) and in the Sociology Program at the CUNY Graduate Center. He is the author of *The Insular Vision* (winner Casa de las Americas award), *Divided Borders: Essays on Puerto Rican Identity*, and *From Bomba to Hip-Hop: Puerto Rican Culture and Latino Identity*.

James Lorand Matory, Professor of Anthropology and of African and African American Studies at Harvard, studies the diversity of African, African American, and Latin American cultures. His publications include *Sex and the Empire that Is No More* (1994) and the upcoming *The Trans-Atlantic Nation: Tradition, Transnationalism and Patriarchy in the Afro-Brazilian Candomblé*.

Angel G. Quintero Rivera is a researcher and lecturer at the Centro de Investigaciones Sociales of the University of Puerto Rico. His publications include *¡Salsa, sabor y control! Sociología de la música «tropical»* (1998) and *Virgenes, magos y escapularios. Imaginería, etnicidad y religiosidad popular en Puerto Rico* (1998).

2005 WINTER INSTITUTE PROGRAM

WEEK OF JANUARY 10

"The Architectural Grammar Of Conquest"

Thomas Cummins (Harvard) & Enrique Vivoni (UPR)

WEEK OF JANUARY 17

"Popular Culture, Religiosity and the Latino Imaginary: Varieties and Continuities"

David Carrasco (Harvard) & Juan Flores (CUNY)

WEEK OF JANUARY 24

"Diasporic Countercurrents: Latinos and Yorubas"

James Lorand Matory (Harvard) & Angel Quintero-Rivera (UPR)

Leo Matiz: The Eyes of Time

BY MIGUEL ANGEL FLÓRES GÓNGORA

Leo Matiz, a legend in 20th century photography, was born in 1918 in Aracataca, Colombia, the hot and marginalized mythical territory on the banks of the Magdalena River that is also Gabriel García Márquez' birthplace.

Matiz was not only a photographer, but a painter, caricaturist and creator of newspapers and art galleries. As a gallery owner, in 1951, he held the first exhibition of the Colombian painter Fernando Botero in Bogotá.

As a 24-year-old in 1940, Matiz set off through Central America on foot to reach Mexico where he hoped to live off of painting, cinema and caricaturing. He defined his artistic vocation by affirming: "I am a painter because of atavism, photographer because of hunger and crazy because of talent."

Much of his youth took place in the anarchic and agitated atmosphere of Colombian and Central American cafés and newsrooms, earning money by selling caricatures to illustrate the literary and political pages.

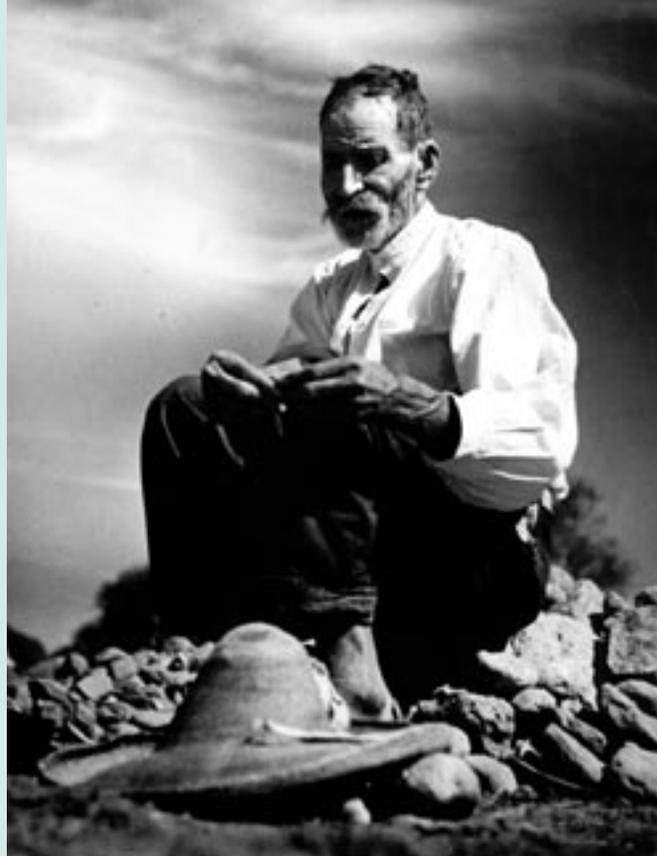
His abundant long hair, his absurdly colored jackets, his mustache in the style of a Mexican cinema gangster, his indiscreet and impulsive guffaws, the folder under his arm full of caricatures and color drawings turned him into the center of the intense intellectual bohemia of Bogotá and Central American capitals.

Readers have asked about Leo Matiz, who took the picture of the fisherman with his open net, the Spring 2003 *ReVista* cover.

Matiz scrutinized the faces, gestures and defects of the people he observed, converting his caricatures into scathing and incisive commentary. Important film makers, painters and caricaturists like Gustave Doré, George Groz, Nadar and Guadalupe Posada influenced the caricatures of Leo Matiz, providing his drawings with agility, penetrating observation and irony. Above all, he refined his sharpness for outlining faces—an art that he subsequently transferred to photography and which he exercised with mastery in portraiture.

The Colombian photographer's arrival in Mexico in 1940 transformed his vital and aesthetic perspective. The discovery of cinema, muralism, the polychromy of the landscape, the Mexican history plagued with popular insurrections and betrayed revolutions and the cultural inheritance of the Aztec and Maya civilizations, served as a fountain of existential liberty and artistic creation.

He traveled around Mexico, taking photographs for magazines such as *Así*, *Life*, *Reader's Digest*, *Harper Magazine*, *Look* and *Norte*. Matiz evokes that intense journey through the rich and diverse Mexican geography, affirming that "The magazine *Así* launched me as a graphic reporter in Mexico. I began to look for themes and discovered the old and deep Mexico, eternal and fleeting. There before my eyes was the baroque architecture, the paintings, the murals, the Maria islands and the poignant histories of its presidents, the pulque, the starving coyotes



Leo Matiz: "El Quijote"

in the desert, the day of the dead, the sacred temples and the purity of Yucatan, the red ants in the desert, the women of Pancho Villa, the dead trees, the divas in the movies, the cemeteries, the colour of the folk crafts, the peasants and the remote hope of their redemption."

Matiz's camera recorded cinema and art celebrities painting throughout the 1940s. With his inseparable Rolleiflex he achieved portraits endowed with intimacy, fascination and profound sociological penetration. Frida Kahlo, Diego Rivera, Ester Williams, Janice Logan, David Alfaro Siqueiros, Agustín Lara, the first castings of de María Felix, Gabriel Figueroa, Esther Fernández, José Clemente Orozco, Mario Moreno "Cantinflas", Luis Buñuel, Marc Chagall, Dolores del Río and Pablo Neruda all figure in his memorable, seductive and nostalgic gallery of people.

AN UNEXPECTED EXILE

Matiz's friendship with Mexican muralists, especially the painter David Alfaro Siqueiros, led to the visual documentation

of the mural Cuauhtémoc contra el mito through more than 500 photographs. However, a few years later, Siqueiros exhibited 70 paintings inspired by the photographs of Matiz in Mexico City's Palacio de Bellas Artes. Indignant at seeing his images redrawn and unauthorized murals, Matiz made strong accusations of plagiarism against Siqueiros in the Mexican press.

In turn, the muralist politicized the case, accusing Matiz of being a North American imperialist agent and an enemy of muralism. He set fire to Matiz's studio and had him expelled from Mexico.

Leo Matiz died in Bogotá, on October 24th in 1998. His images and artistic legacy are conserved and promoted by the Foundation Leo Matiz as an intense and suggestive breviary of the 20th century, which Matiz was able to communicate with beauty and expressive force.

Miguel Angel Flóres Góngora is a Colombian journalist and he is the author of *La metáfora del ojo*, a biography of Leo Matiz.

Reader Forum

To The Editor:

I write you now from my native state of Vermont. I have just returned from a month long visit to Chile for my graduate program in Intercultural Relations at Lesley University. Before I traveled to Chile, I knew very little about it other than what my atlas dictated on its glossy colored pages. However, just before leaving, my supervisor at the Center for Academic Achievement at Lesley, where I work as a graduate writing tutor, passed along her copy of *ReVista* to me. This resource traveled the twenty-four hours down with me and proved my savior. *ReVista* greatly facilitated participating and better understanding the current and historic Chilean political, social, and economic conditions.

As a freelance photographer and writer at heart, I used the *ReVista* guide to direct me as I composed a travelogue and a photo essay on Chilean culture, which I will present to my university this fall.

SINCERELY,
JENNIFER LACROIX

Thanks, Jennifer. ReVista is for everyone, not just Harvard-related people; it's free (you can sign up online). We do appreciate donations, however.

To The Editor:

Response to Soledad Loeza
Soledad Loeza's review of our book *Opening Mexico: The Making of a Democracy* (New York: Farrar, Straus and Giroux, 2004) was thoughtful and thought-provoking. However, several of her assertions misrepresent our work.

"In spite of the fact that the authors do not name many of their sources," Dr. Loeza writes, "these can be identified

relatively easily simply through their versions of events."

This statement is puzzling. *Opening Mexico* includes 51 pages of endnotes citing sources for each passage. Readers do not have to "imagine," as Dr. Loeza suggests, that José Newman, Manuel Camacho, Jaime Serra Puche and Liébano Sáenz were among our sources, since they are named in endnotes corresponding to the passages that draw upon our interviews with them. Of 92 people we interviewed in depth for our book, a few asked not to be quoted directly or not to be tied to the disclosure of particular facts. In cases where we used information from our reporting for *The New York Times* that came from sources who had requested anonymity, we honored those commitments. But none of the material in *Opening Mexico* is unsourced or based primarily on anonymous sources.

In the case of José Newman, Dr. Loeza says, "It would have been interesting if the authors had checked his version of the events with other protagonists or documents from that period."

As our chapter on 1988 and the 58 endnotes accompanying it make clear, the election that year was a national saga, and Newman had a first-hand account of only one slice of it: the events at the Government Secretariat. Fortunately, Mexican scholars have richly documented much 1988 history, and we saw that our contribution would be to synthesize their work and supplement it with new sources to write an accurate and readable narrative. We cite at least 20 books and articles we examined, including a meticulous academic study, Pablo González Casanova's *Segundo informe*

sobre la democracia: México el 6 de julio de 1988, published in 1990; and Manuel Bartlett's official version, from 1995. To these written sources we added interviews, cited in the endnotes, with many players, including Bartlett, Cuatémoc Cárdenas, Rosario Ibarra, José Antonio Gómez Urquiza, Leonardo Valdés, Jorge Alcocer, Juan Molinar Horcasitas, and of course José Newman. The latter had scores to settle, as whistleblowers do, but we compared his version carefully against other accounts and found no important factual contradictions. We believe that Newman provided accurate and vivid insider details of the machinations at *Gobernación* in those historic days.

Dr. Loeza's comparison of our work with Creelman's famous interview with Porfirio Díaz seems inapt. We did not parachute into Mexico to sit with the president. During six years living there as correspondents, we interviewed Mexicans across the political and class spectrum. In general the objective of the sources for our book was not to "settle accounts with some enemy" but to provide primary accounts to help us understand the mosaic of change that underlay the peaceful ouster of the PRI in 2000. The approach of José Newman in particular was notably different from Don Porfirio's. Newman did not go first to foreign journalists with his details of the 1988 elections; he spoke with Jorge G. Castañeda, who wrote about them in his 1999 book, *La herencia: arqueología de la sucesión presidencial en México*. We admire that book, cited it in our endnotes, and sought to build on it in our interviews with Newman.

—SAMUEL DILLON AND
JULIA PRESTON, NEW YORK

Response to Julia Preston and Sam Dillon.

Mexico City, October 5, 2004.
In my book review, published in the Spring 2004 *ReVista*, I stressed the value of the many voices collected by Julia Preston and Sam Dillon in their book. Nevertheless, the authors consider that my review does not do justice to their work because of my observation that they failed to escape the risk implicit in all work based on interviews, that of favoring some versions of a story over others. For example, José Newman forgot to mention that he was the very person who told the press two days before the elections that results would be available one hour after polls closed July 6. The spark that set off the crisis.

I believe that the comparison with the Díaz-Creelman interview is still valid because although the journalist did not know México and did not have Mexican friends, President Díaz knew how to take advantage of the opportunity the reporter offered to send a message to his friends and enemies in México. The same thing has happened with this book, although this may not have been the intention of the reporters.

THANK YOU,
SOLEDAD LOEZA

Letters to the editor are welcome in English, Spanish or Portuguese! Please send your comments, suggestions and complaints to: June Carolyn Erlick <jerlick@fas.harvard.edu> or DRCLAS, 61 Kirkland St., Cambridge, MA 02138. <http://www.drclas.fas.harvard.edu>

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