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PK-17
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Paraná Subtropical Rainforest: Putting the Pieces Back Together *via* a Three-Nation “Green Corridor”

By Peter Keller

AUGUST, 2001

MISIONES PROVINCE, Argentina—Once greater in size than Texas and Oklahoma combined, the Paraná Subtropical Rainforest has been reduced to just six percent of its original cover. Decades of clearing for agricultural fields, cattle ranches, timber production and hydroelectric projects have fragmented the remaining forest into numerous “islands” surrounded by a sea of development. Also known as the Atlantic Interior Forest and characterized by murky-brown rivers, a rusty-red soil and vibrant green forests that receive two meters of rain annually, the Subtropical Rainforest (Paraná Jungle) eco-region covers eastern Paraguay, south-central Brazil and Misiones Province in northeast Argentina.

In an effort to conserve the remaining Paraná Jungle, environmentalists from these three countries joined forces in 1995. Their initiative subsequently brought together a variety of international, governmental and private entities from Paraguay, Brazil, Argentina and the U.S. to create a *Corredor Verde* or “Green Corridor” as a means of conserving Paraná biodiversity. The vision for *Corredor Verde* is to connect protected areas that already exist and create new ones to essentially form a biological corridor, hence the name. Following Conservation Biology principles, this will permit circulation and exchange of wildlife populations among remaining jungle areas and prevent further deforestation.¹

What has been called the “extinction crisis” by some conservation biologists — because of industrial development that has caused an unprecedented extermination of species and ecosystems — continues to be a threat to biologically diverse ecosystems, like the Paraná Jungle. Nevertheless, activists are taking steps to stem further loss of the Jungle. They are approaching this complex challenge with a mixture of solutions. One key to success will be allowing locally bred solutions to flourish while not burdening the process with bureaucracy. The *Corredor Verde* program has had a few early successes in this approach, of not putting “all your eggs in one basket,” but rather letting them hatch at community- and private-sector nests, in addition to usual federal and provincial efforts. This combination of various approaches and attitudes drew me in for a closer look at the heart of a jungle averting extinction.

Tri-National Coordination

Turning the idea into action began in December 1995, when the then-director of the Argentine Wildlife Foundation (FVSA), Miguel Pellerano, organized a three-nation workshop of environmentalists in Hernandarias, Paraguay. At this work-

¹ Conservation Biology is “the scientific study of the phenomena that affect the maintenance, loss, and restoration of biological diversity.” The discipline of conservation biology relies upon collecting basic biological data on species and processes. This information helps provide a foundation upon which successful species and ecosystem management can be undertaken. Society for Conservation Biology Web page <http://conbio.net/scb/information>.



shop they focused on the idea that it is necessary to work at an eco-regional level to protect the Paraná Jungle region within Brazil, Paraguay and Argentina. In this and a subsequent meeting, workshop participants developed the “Green Corridor” concept as an important step to conserving the jungle.

What concerned workshop participants most was how to save remaining forested areas. Of the six percent remaining, most lie within Paraguay (42 percent) and Brazil (38 percent), leaving 20 percent in Argentina. However, stark differences among the countries surfaced when they examined how many acres of forest were protected within the Paraná eco-region. Of the protected jungle in parks and reserves, an area of over 5,000 square kilometers, or about seven percent of the 78,000 square kilometers, remained. Paraguay accounted for only seven percent while Brazil

had 11 percent and Argentina contained 82 percent of the acreage protected.

In 1999, among the three nations, Argentina was the first and only country to have passed a “Green Corridor” law. Passed by the Provincial legislature, this law establishes objectives for protecting watersheds, preventing isolation of protected areas and improving the quality of life for residents within the Corridor. Legislators created a special management unit within the provincial Ministry of Ecology and Renewable Natural Resources to coordinate and implement a strategic plan. They also created a Co-participation Ecological Fund, which set aside one percent of provincial taxes collected for distribution to eligible projects. Project proposals must be within one of four categories: sustainable rural development, eco-tourism, municipal environmental management and native forest restoration.²

² Law 3,631 “Area Integral de Conservación Y Desarrollo Sustentable Corredor Verde De La Provincia De Misiones.” Nov. 30, 1999.

Asked whether Brazilian and Paraguayan officials were developing their own laws, Mario Di Bitetti, program officer at FVSA in Puerto Iguazú, told me, “Brazil and Paraguay don’t have ‘Green Corridor’ laws, only Misiones. However, both countries have other environmental laws to decrease deforestation. Brazil and Paraguay are studying and debating in respective legislatures laws for reducing to zero the deforestation of the Atlantic Interior Forest. In Brazil the proposed legislation is called Zero Deforestation. The majority of Brazilian environmental organizations support this legal initiative.” While they may not have “Green Corridor” laws, both are active members at the tri-national level and have implemented projects with local and international support.³ Groups such as the World Wildlife Fund (WWF) Paraguay and WWF Brazil have each assigned personnel to work closely with the Green Corridor program. Both organizations have collaborated with FVSA in developing the “Biological Vision” — a strategy for implementing the three-nation *Corredor Verde*.

This *Vision* develops the concept of creating a three-nation biological corridor that seeks to connect protected areas, thus impeding the acceleration of deforestation. “The hope is to guarantee the continuity of biodiversity and avoid the further effect of isolated parks and reserves,” Di Bitetti said. An Argentinean, with a graduate degree in primate biology from State University of New York at Stonybrook, he is particularly concerned with threatened species such as the red howler monkey. The effort now is to establish corridors, also known as buffer zones, between “islands” of jungle, called *Monte*, to maintain continuity. On a larger scale, these *Montes* are really biodiversity “islands” separated by cultivated fields, forest plantations, hydroelectric projects and pastures. Fragmentation affects species survival by increasing habitat loss. For example, the Paraná Jungle is home to *yaguaretés* (*Panthera onca*), jaguars. Scientists estimate 10,000 contiguous hectares are needed to sustain four adult jaguars. Thus, many tens of thousands of hectares of uninterrupted jungle are needed to sustain the jaguar population, estimated at 15-20 in just the northern Misiones area alone, It may be a jungle out there, but there’s not enough. Animals such as jaguars, ocelots (like bobcats) and red-chested toucan, among others, are depending on it for survival.

Currently, an assortment of national parks, provincial parks, biosphere reserves and private reserves protect patches of the ecosystem, but this is only seven percent of the remaining Paraná Jungle. Efforts by government officials in Argentina’s Misiones Province, which includes the highest concentration of continuous rainforest, have created a series of sophisticated laws and regulations for Argentina’s portion of the Green Corridor. Since the Argentine portion of

the Green Corridor has been the most progressive, I have decided to concentrate, for the most part, on this aspect of the tri-national cooperation.

Misiones Province — Multiple Facets for Multiple Issues

In the early 1990s a consultant from Costa Rica was invited to Misiones to help develop a system of laws and regulations to protect the jungle. She led a commission that produced a proposal, which in 1992 was incorporated into Law 2,932, “Protected Natural Areas System.” This progressive approach is not surprising coming from Misiones Province, for it leads other provinces in environmental-protection initiatives. In 1984, it was the first province in Argentina to create a Ministry of Ecology and Renewable Natural Resources and a decade later it was the first to establish a provincial park-ranger school.

The province now has 35 protected natural areas under federal, provincial and private management totaling nearly 468,000 hectares, which represent 15 percent of the province. For the provincial protected areas, regulations promulgated in 1994 require management plans for each site. Plans are required to describe the resources of the park, develop zoning schemes and recommend areas that are suitable for development of visitor facilities. A unique aspect of the regulations are the fines assigned to a list of specific illegal actions within protected areas. Fines, *per se*, are not unique, but setting the value of the fine is different. In this case, liters of gasoline are the pricing mechanism. For instance, hunting a protected species brings a fine of 20,000 liters; littering, 500 liters. Violators don’t pay their



The 50-some provincial park rangers in Misiones wear a patch on their uniform promoting the province as ‘A Green Bastion in the Planet.’ The strips to the left represent the Argentine flag and to the right is the provincial flag.

³For example, in 1988 the Paraguayan Bertoni Foundation for the Conservation of Nature received a \$10,000 grant from the MacArthur Foundation to produce a sustainable development plan for Mbaracayu Forest Nature Reserve. From MacArthur Foundation Web page.



An assortment of mate drinking vessels made of gourds, wood, bamboo, and bullhorns distinguish regional mate culture in parts of Argentina, Paraguay, Brazil and Uruguay. The cups are filled with yerba mate and water; straw-like filters called bombillas are used for drinking the bitter blend.

finer by purchasing gas, but rather by paying the cost of a liter of gasoline. In August the price was around 79 cents per liter. In a country that experienced hyperinflation in the 1980s, matching prices to liters of gasoline is seen as more reliable than pegging them to pesos.

Located in the middle of Misiones Province among rolling hills of tea plantations and Paraná Pine trees is the small, sleepy town of San Pedro (population 3,100). Wannabe park rangers come here for training before they are dispatched

to one of 17 provincial parks. This is where they develop an array of valuable skills on their way to becoming a provincial park ranger. Joining me on this jungle tour was Karina De Stefano, a guide at several nature sanctuaries in Buenos Aires and *Yerba mate* connoisseur. I met Karina at a conference in November 2000, where she talked about her favorite place — the Paraná Jungle. On previous trips she had visited numerous protected areas and met a variety of provincial rangers and park planners. On our trip, generally each park visit would begin with an hour or two of drinking *Yerba mate* and catching up with friends. *Yerba mate* is a tea of sorts, and a social tradition at best. The dried and crushed leaves used in this drink come from a plant in the Holly family. It grows naturally in this region and looks like an evergreen tree, reaching several meters in height. Gourds (also called *mate*) are traditionally used as the cup in which a coarse mixture of *yerba mate* is placed. Hot water, but not boiling hot, is poured into the gourd and the thick mixture is drunk with a metal or wooden straw-like tube with a strainer at the end. *Mate* fanatics usually travel prepared with a hot water thermos and appropriate *mate* paraphernalia. The gourd is passed from person to person and drunk completely before it is refilled with water and passed to the next person. The straw, called a *bombilla*, is used by everyone. For Gringos fixated on hygiene, use of the same straw can be a bit disconcerting.

Traveling with a *yerba mate* fanatic does have its benefits, especially during our first week when a blast of Antarctic cold air swept across South America's southern cone. Expecting humid, jungle conditions, I didn't bring warm clothes, but luckily the *mate* kept me toasty. *En route* to our first park visit we stopped in the Argentine town of El Soberbio (population 1,000). On a bluff above the choco-



Moconá Falls along the Uruguay River in northeast Argentina. The Falls are flooded frequently due to a hydroelectric project upstream in Brazil. Photo courtesy of Karina Verónica De Stefano.



Looking across to the Brazilian side of the Uruguay River and Turvo State Park, the once visible Moconá Falls are somewhere below the surface of the river.

lately-brown Uruguay River, El Soberbio faces the Brazilian State of *Rio Grande Do Sul*. The influence of South American powerhouse Brazil is easily noticeable. Town residents speak Portuguese, as well as Spanish, and listen to Brazilian radio stations. Their sense of hospitality is equally as generous as that of rival Brazilians. Upon arrival at El Soberbio's bus station our inquiry for lodging was answered: "Well, why don't you stay at my cabin on the hill? No one's using it and there's no charge." So we did. Karina and I were headed to Moconá Provincial Park, site of unusual waterfalls. Moconá Falls cuts longitudinally along the river for three kilometers providing a spectacular sight — when the Falls can be seen.

For nearly seven months the Falls have been hidden from view due to unnaturally high water levels. "*Ita*" is the reason why. *Ita* is a Brazilian hydroelectricity project upstream on the Uruguay River. Since the project was completed, no one has seen Moconá Falls. Essentially, the outflow of water from the project's turbines has flooded lower reaches of the river. However, local tourism officials don't publicize the fact that their prime tourist attraction has been flooded. I asked a park ranger if any complaints had been made to Brazilian officials. He said, "It's Brazil. What can you do?"

The National Parks surrounding Iguazú Falls

"Which side did you like best? Argentina or Brazil?" This is usually how a conversation begins when the topic of Iguazú Falls is discussed. I know, because I've answered that question dozens of times. It's interesting how rivalries

develop between nationalities over natural wonders, as if the country had a hand in creating Iguazú Falls.

Of course, neither Brazil nor Argentina commissioned the construction of Iguazú, which means "big water" in the indigenous Guaraní language. "Construction" work



The British-designed and -engineered Trencito arriving at the main station in Iguazú National Park. This day it was running behind schedule because, coincidentally, British Prime Minister Tony Blair was in the park meeting with Argentine President Fernando de la Rúa to discuss Argentine economic problems. Their wives took a special park tour via Trencito.

began some 100,000 years ago by ecological processes of erosion. What each country has constructed, however, is an array of visitor facilities that begin to rival those at Grand Canyon National Park.

A construction contract let by Argentina's park service will soon be fulfilled by a complex of new visitor facilities — farther from the Falls than the original visitor complex. Built upon an old runway for small airplanes, the estimated \$15 million project started in 1998 and now includes an entrance station, parking lot, visitor center, gift and food stores, conference center and the centerpiece rail-transportation system. The train, known as *Trencito*, operates along a narrow-gauge rail and transports visitors to viewing walkways.

To recover project costs, the contractor, Carlos E. Enriquez, Inc., is authorized to charge an additional \$4 entrance fee in addition to the park service's \$5 fee. As a part of its contract, the Enriquez company can continue to collect this additional entrance fee for the next 12 years. As Iguazú National Park becomes even more popular each year, visitor levels will certainly rise from the current 600,000 annually. On peak weekends, visitation has reached up to 8,000 people per day. The new visitor facilities will lessen visitor impacts on natural resources by centralizing use to certain areas. However, the project has not been free of controversy due to lack of design control at the park level, resource impacts during construction and the near-doubling of the entrance fee. In spite of this, the project is seen by biologists as the lesser of evils compared to rejected plans to build a tramway over the Falls.

On the Brazil side, Iguazu National Park receives nearly a million visitors each year. The Brazilians have opted for a shuttle bus system to take people from the visitor center to the Falls. The 15-minute ride is complete with recorded visitor information in three languages. I think this is a good service to provide, because if you manage a park with international significance, you have to offer orientation to foreign visitors. Brazilian park authorities have successfully incorporated this

concept throughout the park. However, one small suggestion would be to produce tape-recorded announcements featuring native speakers. Another observation: Commercial interests have clearly played a significant role in park operations. For example, the first stop on the shuttle is not a viewing area or visitor center, but rather a concession-operated safari charging nearly \$30 per person. Other commercial interests include Brazilian-based helicopters carrying tourists that hover above the Falls as land-based visitors look up in envy. This overtly visible commercialization is the main reason I prefer the Argentine sides — although both side afford spectacular vistas.

Private Wildlife Refuges and Partnerships

Talk of the town in Buenos Aires is the economic crisis. The problem is, Argentina has accumulated nearly \$130 billion in foreign debt, much of it due in the short term. Fears of loan-default or peso-devaluation have had a domino ef-



(Above) Iguazu Falls viewed from the Brazilian side. Over a million visitors come here each year to see these cascading water in the middle of the Paraná Jungle. (Right) An elevated walkway in Argentina's Iguazú National Park funnels hundreds of visitors to the viewpoint above Garganta del Diablo — the Devil's Throat — a seventy-meter drop down a narrow canyon.



fect across the economy, as was evident each day when Argentines read about the country's "risk" level published in newspaper headlines. The level of risk is a point system, used by economists and investors, that indicates ease of debt repayment. The economic problem has reverberated throughout all sectors of society. I spent my first few days making appointments with National Park Administration and Argentina Wildlife Foundation (FVSA) staff, only to have these meetings postponed because of strikes by state employees, transportation workers and unions in response to proposed government cutbacks in spending and paychecks. Work stoppages continued to hound me a week later when I was ill and went to a public hospital in the capital of Misiones Province, Posadas. The doctors, too, were on strike. Thus, I continued to stumble around in pain from a headache, backache, sore muscles and congested throat. The next day my friends found a private doctor who diagnosed a respiratory infection, nothing a few shots and pills wouldn't take care of.

Finally, by the end of my week in Buenos Aires, I met FVSA wildlife-refuge program manager Diego Moreno. FVSA has been an active non-governmental organization for Argentine environmental causes for more than 20 years. After the traditional *yerba mate*, Moreno and I launched into a conversation about the difference between FVSA "reserves" and "refuges." A reserve is an area owned and managed by the Foundation, of which it has two, totaling 6,700 hectares, including the first private reserve in the country, *Campos del Tuyu*, established in 1978. The other private reserve is *Urugua-i*, adjacent to Misiones' provincial park of the same name. Its 3,243 hectares are not for general tourism, but rather for scientific investigation and specialized groups — like bird watchers. A refuge, on the other hand, is a wild area owned by a particular landowner with whom FVSA has developed a relationship and is providing technical assistance. Eleven refuges totaling over 40,000 hectares are currently included in the program. The relationship, between FVSA and the landowner, is based on a written agreement outlining the goals of each refuge. A 29-page manual details the enlisting, evaluation — and possible elimination of refuges — from the FVSA program.

Moreno, a biologist educated at the University of Buenos Aires, has headed the refuge program since 1996. It began in 1987. "At this moment we are not looking to broaden the program. Generally people come looking for us because they've heard about our services through word-of-mouth," he told me. FVSA had a high of 19 refuges in 1994, but since then several have been cut from the program. Now the NGO is concentrating on applying resources with the most impact for the peso. The FVSA refuge program is funded by WWF-United Kingdom through 2003. Both organizations realize that with over 80 percent of the land base in Argentina privately held, and with limited government budgets to buy land, protection options need to focus on cooperation with landowners. Refuges serve as examples of what can be done, particularly in protecting



Wildlife refuge program manager Diego Moreno at his office in the Argentine Wildlife Foundation headquarters.

areas with high biological value or a potential for sustainable tourism or sustainable use of wildlife.

At first it doesn't sound quite right that an environmental organization would be promoting the sustainable use of wildlife, such as *guanaco* (a type of llama), *yacaré* (caiman, similar to a small alligator) and *carpinchos* (capybara, a large rodent that looks like a beaver). However, by breeding these animals for culling of their wool, meat and hides, these refuge programs are helping the species as a whole to survive. This takes pressure off the wild population of animals that were hunted illegally, and now provides a legal method for locals to earn a living.

* * *

Before visiting any of the FVSA wildlife refuges, Karina and I stopped off at *Urugua-i* Provincial Park, Misiones' largest (84,000 hectares) to visit a ranger who has been helping locals earn a living harvesting fruits and plants on their own land. Park ranger Carlos Araujo welcomed us with the usual cup of *mate* and invited us to stay the night in his cabin. We were looking for Aloisio Foletto, who has been coordinating agro-forestry sustainable-development programs for the last few years. Ranger Araujo took us to meet Foletto at *San Sebastian de la Selva*, an ecotourism ranch. We found Foletto with the ranch owner, discussing trail-design plans and maintenance of ponds used for sport fishing. Through FUCEMA (*Fundación para la Conservación de las Especies y El Medio Ambiente*), Foletto looks for and promotes local projects that use non-park, native forest in a sustainable manner.

A group of women in a remote sector of the forest, outside the park, harvest fruit that naturally grows in the jungle. With fruits such as *Pindó*, *Palmito*, *Yacaratiá*, *Ubajay* and *Yaboticaba* (palm tree and guayaba fruits), the women make preserves and sweets they sell in local towns and at



Alfonso Werle inspecting an electric fence line. Powered by a small solar panel, the size of a laptop computer, the fence has prevented attacks by jaguars on his livestock.

gift shops in Iguazú National Park.⁴ The bright red soil also supports tobacco crops. Foletto took us to a nearby farm where a neighbor grows tobacco to be sold in international markets. The diversity of products sold, ranging from fruit preserves and manioc (a tuber like a potato), to palm hearts and tobacco, has enabled locals to earn a living while protecting remaining jungle areas from harvest.

The next morning Ranger Araujo awoke early to radio reports of a *yaguareté* (jaguar) that had attacked and killed a neighbor's pig. Jaguars here reach two and a half meters in length and weigh between 60 to 115 kilos. These felines are nocturnal, and move swiftly in pursuit of such prey, as domestic pigs and sheep. Attacks are not unusual, especially in a case where the neighbor lives on private land inside the park.

Park officials are working to alleviate the pressure on domestic livestock from *yaguaretés*. At another farm east of Iguazú National Park, biologists with the Subtropical Ecology Research Center (CIES), the Argentine park service's (APN) science lab, are working to reduce jaguar attacks on livestock. Fittingly named, *Chacra Yaguareté* (Jaguar Ranch), this parcel comprises of 133 hectares and includes native forest, plantations of *yerba mate*, *palmitos*, fruit trees and livestock. FVSA and APN have teamed up to assist ranch owner Alfonso Werle. Soon this parcel will be the 12th wildlife ref-

uge in the FVSA system when the agreement is signed later this year. Both organizations are using *Chacra Yaguareté* as a poster child to demonstrate sustainable agriculture and wildlife protection practices.

Iguazú National Park is only 300 meters from the Werle's home. Since jaguars wander without regard to borders when looking for food, they often came to attack Werle's livestock at night. To prevent any more livestock loss, which could lead to unwanted jaguar extermination (a government decree declared jaguars a protected species in 1988), CIES installed a system of solar-powered electrical fences around livestock pastures. In the past ten years, Werle tells me, "jaguars have killed 17 pigs and attacked four cows. I guess they prefer pork. However, since the electrical fence was installed no at-

tacks have taken place." This cooperation has been an important factor in controlling illegal hunting. Obviously, good relationships between park employees and adjacent neighbors are a key to successful management and conservation of resources such as jaguars and their meals.

* * *

"It [the rainforest] reminds me of Disneyland. Also, the lodge is funky and cool."

—Bailey Daum, New York, NY

While reading comments in the guest book at *Yacutinga* Lodge, I chuckled at first at Bailey Daum's remarks. However, in retrospect, her observation disturbed me. It struck me as unnatural that a theme park would be used as one's comparison to nature, as if reality were mimicking fantasy and one could not distinguish the difference between *Disneylandia* and *Mother Nature*.⁵

My visit to *Yacutinga* lodge was at the tail end of our two-week tour of northeastern Argentina. *Yacutinga*, named after a local bird species, is 42 kilometers upriver from Iguazú Falls, the main tourist attraction within the Paraná Jungle. After a tour of *Yacutinga*, reserve owner and manager Charlie Sandoval invited me to his restaurant terrace to talk shop. Originally from San Carlos de Bariloche in

⁴Until recently Palmito trees (*Euterpe edulis*) were harvested illegally on a broad scale. These palm trees, about 20-30 feet high, were cut down to harvest the stem portion — the part just below the umbrella-like canopy. The harvested circular rods, known as palm hearts, are used in salads and side dishes in many countries. Illegal harvesting has been brought under control by declaring palmitos a protected provincial monument (1992, Decree 557) and by promoting palmito plantations as a cash crop.

⁵A common play on words in South America is to refer to the United States as *Gringolandia* based on the influence of Disneyland, jokingly pronounced *Disneylandia* in Spanish.]

southern Argentina, Sandoval has been involved in the *Yacutinga* project since January 1998. He had 18 years of tourism experience prior to purchasing these 570 hectares and constructing a lodge and other visitor facilities such as a boat dock, trails, a pond and a canopy walkway. Visitors are transported by boat up the Iguazú River to the refuge, a 45-minute tour along the shores of Brazil's Iguazu National Park. The lodge caters to international visitors from Europe and North America who have an interest in birding.

Sandoval told me, "We don't want to be just a hotel in the forest. We want to be more." He continued, "we try to avoid the words eco-lodge and eco-tourism because the word 'eco' is being used as a marketing tool and has lost much of its significance." He took pride in showing me all the steps he had taken to ensure that the operation had a minimum impact on the environment. Solar-heated tanks provided hot water, waste water was filtered through an engineered marsh, local labor was employed and food was produced from local farmers or *Yacutinga's* own greenhouse. The nature reserve also has programs to re-seed dis-



A hanging walkway used for bird watching in Yacutinga Wildlife Refuge, a private reserve that includes 570 hectares with a lodge, restaurant, river trips and trails.

turbed areas and breed species of threatened native flora and fauna.

Although I was happy to hear all this, I wanted to understand the financial aspect of the lodge and wildlife refuge. What was the incentive for developing such a lodge and why was this done in association with an environmental group? "These little animal symbols give you some status, and the organizations provide technical assistance," Sandoval was referring to the World Wildlife Fund's panda and Argentine Wildlife Foundation's anteater. "They give us more credibility with visitors, but there are relatively few benefits in regard to taxes." His taxes, like those of other businesses, include a 21-percent value-added tax, a 3.5-percent gross-income provincial tax, a one-time commercial fee of .5 percent of total worth, a transitory tax and a provincial property tax. The latter is the only one that provides tax relief for private nature reserves. He is eligible for a 60 percent to 80 percent reduction in his provincial property tax, which for him amounts to about a five-dollar savings per year. However, what disturbs him most is that tax officials don't recognize the benefits of international tourism. "I help bring in new money to the country. It is a form of export, in the sense that foreign consumers are buying Argentine products — in this case it's a vacation instead of Argentine beef or wine." However, the tax system doesn't consider his business an export business, so it's not eligible for the tax-benefit package given exporters.

Sandoval and his partners have invested \$1.25 million thus far in the *Yacutinga* project. Operations continue to lose money, but he hopes the balance sheet will turn around in the near future, when the reserve begins to develop a larger client base. In the meantime he continues to produce a payroll for his 15 employees while tourists pay over \$300 for a three-day stay at the lodge.

Witness Bailey Daum's comment, we all compare new environments to something we know. In order to comprehend a new sight, sound, smell or taste we often categorize new experiences in the context of previous ones. Thus, Iguazú Falls is somewhat like Niagara Falls (but greater in height with less volume, not as developed and in a jungle). The sound is like that of a jet airliner as it rumbles past, and *yerba mate* smells like green tea and tastes like bitter rubber tires (although it does get better with experience). However, what simple comparisons leave out are the emotions provoked by the Paraná Jungle, like those captured in poems about the *tierra colorada*, the dust and mud that stains shoes and clothing a permanent red, or the sense of being in a forest with a species diversity of over 2,000 plants and 700 species of birds, mammals and reptiles. This is a full, living reality that even Disneyland can't replicate—and, hopefully, humankind can save through efforts such as the Green Corridor. □

INSTITUTE OF CURRENT WORLD AFFAIRS

Fellows and their Activities

Shelly Renae Browning (March 2001- 2003) • **AUSTRALIA**

A surgeon specializing in ears and hearing, Dr. Browning is studying the approaches of traditional healers among the Aborigines of Australia to hearing loss and ear problems. She won her B.S. in Chemistry at the University of the South, studied physician/patient relationships in China and Australia on a Thomas J. Watson Fellowship and won her M.D. at Emory University in Atlanta. Before her ICWA fellowship, she was a Fellow in Skull-Base Surgery in Montreal at McGill University's Department of Otolaryngology.

Wendy Call (May 2000 - 2002) • **MEXICO**

A "Healthy Societies" Fellow, Wendy is spending two years in Mexico's Isthmus of Tehuantepec, immersed in contradictory trends: an attempt to industrialize and "develop" land along a proposed Caribbean-to-Pacific containerized railway, and the desire of indigenous peoples to preserve their way of life and some of Mexico's last remaining old-growth forests. With a B.A. in Biology from Oberlin, Wendy has worked as a communications coordinator for Grassroots International and national campaign director for Infact, a corporate accountability organization.

Martha Farnelo (April 2001- 2003) • **ARGENTINA**

A Georgetown graduate (major: psychology; minor, Spanish) with a Master's in Public Affairs from the Woodrow Wilson School at Princeton, Martha is the Institute's Suzanne Ecke McColl Fellow studying gender issues in Argentina. Married to an Argentine doctoral candidate and mother of a small son, she will be focusing on both genders, which is immensely important in a land of *Italo/Latino machismo*. Martha has been involved with Latin America all her professional life, having worked with Catholic Relief Services and the Inter-American Development Bank in Costa Rica, with Human Rights Watch in Ecuador and the Inter-American Foundation in El Salvador, Uruguay and at the UN World Conference on Women in Beijing.

Gregory Feifer (January 2000 - 2002) • **RUSSIA**

With fluent Russian and a Master's from Harvard, Gregory worked in Moscow as political editor for *Agence France-Presse* and the weekly *Russia Journal* in 1998-9. Greg sees Russia's latest failures at economic and political reform as a continuation of failed attempts at Westernization that began with Peter the Great — failures that a long succession of behind-the-scenes elites have used to run Russia behind a mythic facade of "strong rulers" for centuries. He plans to assess the continuation of these cultural underpinnings of Russian governance in the wake of the Gorbachev/Yeltsin succession.

Curt Gabrielson (December 2000 - 2002) • **EAST TIMOR**

With a Missouri farm background and an MIT degree in physics, Curt is spending two years in East Timor, watching the new nation create an education system of its own out of the ashes of the Indonesian system. Since finishing MIT in 1993, Curt has focused on delivering inexpensive and culturally relevant hands-on science education to minority and low-income students. Based at the Teacher Institute of the Exploratorium in San Francisco, he has worked with youth and teachers in Beijing, Tibet, and the Mexican agricultural town of Watsonville, California.

Peter Keller (March 2000 - 2002) • **CHILE**

Public affairs officer at Redwood National Park and a park planner at Yosemite National Park before his fellowship, Peter holds a B.S. in Recreation Resource Management from the University of Montana and a Masters in Environmental Law from the Vermont Law School. As a John Miller Musser Memorial Forest & Society Fellow, he is spending two years in Chile and Argentina comparing the operations of parks and forest reserves controlled by the Chilean and Argentine governments to those controlled by private persons and non-governmental organizations.

Leena Khan (April 2001-2003) • **PAKISTAN**

A U.S. lawyer previously focused on immigration law, Leena is looking at the wide-ranging strategies adopted by the women's movement in Pakistan, starting from the earliest days in the nationalist struggle for independence, to present. She is exploring the myths and realities of women living under Muslim laws in Pakistan through women's experiences of identity, religion, law and customs, and the implications on activism. Born in Pakistan and immersed in Persian and Urdu literature by her grandfather, she was raised in the States and holds a B.A. from North Carolina State University and a J.D. from the University of San Diego.

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Author: Keller, Peter
Title: ICWA Letters - The Americas
ISSN: 1083-4303
Imprint: Institute of Current World
Affairs, Hanover, NH
Material Type: Serial
Language: English
Frequency: Monthly
Other Regions: East Asia; Sub-
Saharan Africa; Mideast/North
Africa; South Asia; Europe/
Russia

ICWA Letters (**ISSN 1083-4303**) are published by the Institute of Current World Affairs Inc., a 501(c)(3) exempt operating foundation incorporated in New York State with offices located at 4 West Wheelock Street, Hanover, NH 03755. The letters are provided free of charge to members of ICWA and are available to libraries and professional researchers by subscription.

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