

The End of the Road

The Darien Jungle

BY HAVEN COOK

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In a remote corner of the world, a wild place is still intact because of war. In this global village called Earth, there's one part of town that has everything you could want. The tiny country of Panama has tropical beaches, rain-forest jungles, coffee-growing mountains, and, of course, one humdinger of a canal. It also has one of the world's most natural, remote, and dangerous wild areas—the Darien jungle.

Panama itself is a bridge between the continents of North and South America, leading Smithsonian scientists to rate it as one of the top 10 areas in the world for abundance of flora and fauna. Biologically, the country acts as a funnel for migratory species traveling between the continents, resulting in over 900 bird species being identified in Panama (PANAM 2003). On the eastern end of the country, bordering Colombia, is the wild 6,435 square mile (16,671 sq km) Darien jungle (see Figure 1).

The Darien jungle is a dense, triple-canopy rain forest along four mountain ranges that grade into palm forest swamps, then into mangroves, marshes, rocky coasts, and beaches. It is home to the harpy eagle, howler monkeys, jaguars, caimans, giant anteaters, tapirs and peccaries, coatimundis, and the deadly fer-de-lance, as well as about 60 bird species found only in that area.

The Darien jungle may also be the only thing standing in the way of the fragmentation, deforestation, and development that a paved highway can bring. The Pan-American Highway stretches 19,000 miles (30,600 km) from Alaska to Chile, except for about 93 miles (150 km) of the Darien jungle. Known as the Darien Gap, it's the only thing that prevents the two continents from having a land-based transportation corridor.

In a sense, the highway did once go through the Darien Gap. In 1960, a successful attempt was made to cut a path through the jungle for two 4-wheel drive vehicles. The journey, chronicled by *National Geographic* magazine, took almost 5 months to travel what was then a 184-mile (297-km) gap, making 180 river crossings in the process. Today, it is an arduous, risky hiking

trek through bandit territory. The rough and watery terrain makes road building an engineering challenging, but the government of Panama is still considering completing the highway and closing the gap.

There was a time when a road through the Darien was the last thing the government of Panama wanted. Thirty years ago, hoof-and-mouth disease was a serious problem in Colombia and Panamanian officials feared it would spread into their country. In 1980, the Parque Nacional Darien was created, functioning as a natural barrier to transmission

of the disease. Colombia followed suit by extending the boundaries of adjacent Parque Nacional Los Katios, resulting in a transboundary wilderness between the two countries. Interestingly, Panama also has a transboundary wilderness on its western border with Costa Rica—the Parque Internacional La Amistad, a 1,005,290 acre (407,000 ha) park, with territory in both Panama and Costa Rica.

By 1991, hoof-and-mouth disease had been declared eradicated and efforts were revived to get funding to complete the highway. A completed Pan-American Highway would stimulate commerce and travel between Panama and Colombia, bring infrastructure and services to impoverished Indian villages in the Darien, open up the rain forest to forest utilization and ranching, and encourage settlement. Even some of the region's indigenous Indians believe the highway would bring economic opportunity and make travel less costly. In 1999, the Inter-American Development Bank (IDB) gave Panama an \$88 million loan for



Article author Haven Cook at Jardin Ecologique in Panama.

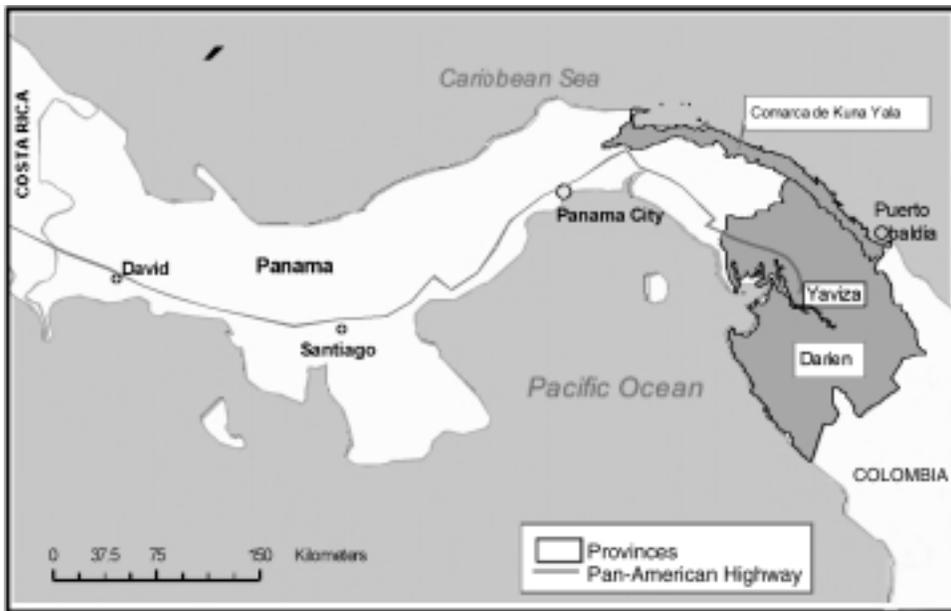


Figure 1—The Darien Jungle in Panama.



Figure 2—Trekking in the Darien. Photo by Fabrice De Clerck.

development projects, including the highway, in the Darien province. Unfortunately, a paved highway through this tropical rain forest may only bring deforestation and environmental destruction on a scale equal to that in the state of Rondonia, Brazil. One can look at satellite images of Rondonia to see the herringbone pattern of massive defores-

tation brought on by putting a highway into the heart of the Amazon rain forest.

National Park Status Is No Guarantee

The fact that 1,422,720 acres (576,000 ha) of the jungle are in the Parque Nacional Darien may not prevent the effort to pave paradise. The government of Panama is currently constructing a road through the Parque Internacional La Amistad so that 4-wheel drive tours can reach the top of Cerro Punta more easily and has proposed plans to cut a traffic-relieving connector highway through the Parque Natural Metropolitano, a 654-acre (265-ha) snippet of wildness within the limits of Panama City. The Parque Natural Metropolitano, already carved up by the Avenida Juan Pablo II and the Corredor Norte, would only suffer more fragmentation if a new highway cuts through it. Fledgling environmental organizations and conservation groups in Panama have had only moderate success in influencing Panamanian politics. Unfortunately, national park status is no guarantee of protection. Many environmentalists fear that as soon as the government can secure funding, mainly

from international aid organizations, paving will begin in the Parque Natural Metropolitano as well as in the Darien.

Others like Helena Lombardo, the advisor for external affairs at the Smithsonian's Tropical Research Institute (STRI), say completing the highway isn't even in the foreseeable future. "Of greatest concern right now," she says, "is the very real threat of Colombian guerrillas" (pers. comm. 2003). While hoof-and-mouth disease and screwworm have potentially disastrous economic consequences, they can't compare with the threat to human life that Colombia's civil war has meant for Panama. Dr. Stanley Heckadon-Moreno, a senior STRI scientist, says the institute has banned its scientists from even traveling in the region (pers. comm. 2003). Research and development projects have trickled to almost nothing, and today only one non-governmental organization, the *Fundacion pro ninos de Darien* is operating in the region. Asked about the \$88 million IDB project, Lombardo says it was targeted for development/sustainability projects for the Darien, and some of it went to extend the highway to its present-day terminus at Yaviza.

Rebels fleeing from Colombian army forces have long crossed the border to hide in the dense jungle, but in recent years, Colombian forces have been pursuing the rebels and bringing their war to Panamanian soil (Loza and Jackson 1999). Thousands of Colombian refugees have fled into Panama over the years, many of them squatting and practicing slash-and-burn agriculture in the rain forest. The government of Panama now discourages tourists from visiting the Darien, although as late as 1995 they were still trying to market ecotourism in the Darien. But rebels, drug smugglers, paramilitary forces, and garden-variety bandits hold sway over the Darien, and tourists as well as local residents are victims of kidnappings, shootings, robberies, and

rapes. As fate would have it, Colombia's civil war is helping to preserve the Darien.

The Kuna Yala

Fortunately, there's another force in place to defend the wilderness: the Comarca of Kuna Yala. Roughly translated as "province" or "territorial limits," the Comarca contains about 911 square miles (2,360 sq km). The Kuna Yala Indians are indigenous to the coral islands off the Caribbean coast and a coastal strip of mainland Panama (including part of the Darien jungle) and have never allowed themselves to be subjected to rule by others (LaFranchi 1998). In 1938, they were granted legal status, including control over their tribal lands, by the Panamanian government. They are governed by a Kuna General Congress, with village leaders and delegates from Kuna communities and organizations.

The northern part of the Darien jungle is often referred to as the "Kuna Yala Wilderness," an idea strengthened in 1983 by the formation of the Study Project for the Management of the Wildlands of Kuna Yala, Panama (PEMASKY) (Chapin 2000). The project was funded at various times by the Inter-American Foundation, the World Wildlife Fund, the Smithsonian Tropical Research Institute, the U.S. Agency for International Development, the McArthur Foundation, and a Kuna workers' union, and it received technical aid from all these as well as the Tropical Agriculture Center for Research and Teaching, the Tropical Science Center, and many other nongovernmental organizations.

The original Kuna proposal was for the establishment of a 148,200-acre (60,000-ha) protected area of rain forest on the southern border of the Comarca. As early as the 1970s, some Kuna realized that the proposed Pan-American Highway would enter their territory, and their goal was to establish a presence in the territory and prevent encroachment by non-Indians

and the government. The idea of an indigenous, autonomous people proposing to set aside virgin rain forest as a nature reserve struck a chord with conservation and development organizations around the world, and the Kuna Yala were hailed as independent, forward-thinking conservationists.

Many of the projects and activities in the PEMASKY management plan were never completed, but it did result in biological inventories of the flora, fauna, and ecosystems of the Comarca, environmental education programs for children, the initiation of young Kuna professionals in the concepts of conservation biology, and, most important, demarcation and protection of the Kuna Yala border. The emphasis on sustainable agricultural production has not translated into viable projects.

The pressures of development are evident in the region, and the Kuna are facing their own ecological challenges: deforestation on mid- to upper-slopes where spur roads have developed off the Pan-American Highway; encroachment by non-Indian settlers who move in and burn the logged areas to practice agriculture on the nutrient-poor soil; unmanaged, uncontrolled timber harvesting; soil erosion, sedimentation, and pollution of rivers; an influx of rebels, smugglers, and bandits reducing the ecotourism potential; the potential for the Panamanian government to allow gold mining within the Comarca border; and the poverty and malnourishment endemic to subsistence agriculture (Castillo 2002). The northern half of the Darien rain forest reflects a growing deforestation problem; some reports indicate roughly 123,500 acres (50,000 ha) a year are disappearing (World Rainforest Movement 2002).

The Kuna people, however, are astute businesspeople as well as a political force in their country. There are two Kuna Indians



Figure 3—Like the Kuna, the Embera people still maintain tradition. Photo courtesy of IPAT.

in Panama's National Congress, and the Kuna adamantly maintain their control over their homeland. The legacy of PEMASKY may be the environmental consciousness-raising that spurred the Kuna to develop natural resource management plans (Ventocilla et al. 1996) as well as a Strategic Plan for Eco-Tourism in the region (Eco-Index Project 2001). Implementing any management plan in the face of current threats may be impossible for the Kuna alone. If the highway is completed, environmental change could occur at a rate faster than they are able to develop their ability to manage and mitigate it.

The Road to Protection

The Kuna will need to flex their political muscle if they hope to stop the completion of the Pan-American Highway. Building a strong scientific case for the negative impacts of such an enterprise may be difficult in a country



Figure 4—Hiking trail in the Panamanian jungle. Photo by Haven Cook.



Figure 5—Logging the Darien. Photo by Tom Kursar.



Figure 6—Where road meets jungle. Photo by Marcos Guerra.

where environmental laws are often flaunted by the government itself, but the fact that the Darien is a global hot spot for biodiversity is a starting point.

The Kuna will need to be able to articulate the reasons why the wilderness should be left untouched. The development of wilderness philosophy and its values and benefits is of interest to Panamanian conservationists. Perhaps Panama would be an excellent place to host an international conference to highlight the threats to wilderness and its biodiversity.

Also needed is for the environmental and conservation movement to gather strength in Panama. Roberto Bruno, Director of the Standards Lab of the Universidad Tecnológica de Panama and an environmental activist, sees the need to raise Panamanians' environmental awareness and reach a broader segment of the population. Environmental groups will need to develop better organizational and funding resources in order to effectively fight environmental battles and find

ways to lobby and influence not only political decision makers in Panama, but multinational organizations that might be disposed to lend the government the roughly \$200 to \$300 million it would take to complete the road (Medina 1992). In the final analysis, it will be the Kuna people and conservation organizations that will lead the battle to protect the wilderness of the Darien, not the civil war from neighboring Colombia. ♪

REFERENCES

- Castillo, Geodisio. 2002. Bringing the community around. *International Tropical Timber Organization Newsletter*, December 13, 2002.
- Chapin, M. 2000. *Defending Kuna Yala: PEMASKY, the Study Project for the Management of the Wildlands of Kuna Yala, Panama—A Case Study for Shifting the Power: Decentralization and Biodiversity Conservation*. Washington, D.C.: Biodiversity Support Program.
- Eco-Index Project. 2001. Promotion of ecological and cultural tourism in the region Kuna Yala. *Rainforest Alliance Newsletter*. <http://www.rainforest-alliance.org/programs/cmc/newsletter/july01-2.html>.
- LaFranchi, Howard. 1998. Model of self-rule for Latin American tribes. *Christian Science Monitor*, April 14, 1998.
- Loza, W. C. and E. Jackson. 1999. Guerrilla intrusion sparks panic, political flap. *The Panama News*, July 27, 1999.
- Medina, C. C. 1992. Road through Panama's Darien? *Tropical Conservation Newsbureau, a Rainforest Alliance Project*. August 12, 1992. <http://forests.org/archive/samerican/panroad.htm>.
- Pan-American Highway and the Environment (PANAM). 2003. <http://www.american.edu/TED/Panama.htm>, (Accessed July 5, 2003).
- Ventocilla, L., V. Nunez, H. Herrera, F. Herrera, and M. Chapin. 1996. The Kuna Indians and conservation. In Kent Redford and Jane Mansour, eds. *Traditional Peoples and Biodiversity Conservation in Large Tropical Landscapes*. America Verde Publications, the Nature Conservancy.
- World Rainforest Movement. 2002. Panama: Eco-tourism alternative developed by the Kuna people. *Bulletin 59*, June 2002. <http://www.wrm.org.uy/bulletin/59/Panama.html>.

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flatly state that "the philosophical underpinnings of ICDPs are irreconcilable with the active protection of parks that comprehensive conservation requires" (p. xviii).

Making Parks Work reviews a number of ICDP case studies from around the tropical world and reviews the successes and failures of the ICDP model itself. What Terborgh et al. call "committed muddy-boots field researchers" are the people who write the vast majority of chapters in this section of the book; there is little academic philosophizing in this volume, although all the excruciatingly difficult moral and ethical issues inherent in this topic are well described. The following section analyzes the numerous challenges faced by parks in non-Western nations (e.g., monitoring and enforcing conservation, illegal logging/hunting, political instability and corruption, revenue sharing, overpopulation) and suggests various solutions based on these real-world experiences. The final section reviews the considerable lessons learned from the evaluation of all these case studies, noting that that both strict (i.e., traditional) and ICDP-type protected areas are needed, depending on various identifiable social, political, geographic, and ecological factors of each nation and proposed protected area.

The authors have admirably succeeded in creating a book that will be of considerable applied use to organizations and individuals involved in conservation and conservation-related development in non-Western nations. An excellent reference teeming with case studies from around the tropical world, Terborgh and his associates continue to challenge the sacred cow of ICDP in conservation and protected area discussions and challenge us to ensure that we create and manage protected areas that truly protect the Earth's fragile, fragmented wilderness.

Reviewed by JOHN SHULTIS