Henri Pittier National Park

Summary

Date of most recent on-site evaluation: December 2000
Date posted: September 2001
Location: Aragua and Carabobo States
Year created: 1937
Area: 107,800 ha
Ecoregion: Cordillera de la Costa Montane Forest, La Costa xeric shrublands
Habitat: Dry semi-deciduous forest, deciduous forest, coastal shrub forest, savanna, evergreen rain forest, cloud forest, and mangroves.

Description

In 1937 Henri Pittier became Venezuela's first national park. It is named in recognition of the Swiss naturalist who promoted and founded Venezuela's National Park System. Henri Pittier covers 107,800 ha and is located in the central portion of the Cordillera de la Costa mountain range that extends east to west along the northern Caribbean coast. Along the park's altitudinal gradient are several distinct habitats, including mangroves, savannas, dry forests, humid forests, and cloud forests, which result in high levels of biodiversity. World-class birdwatching and the beautiful beaches of the Caribbean Sea make the park a popular destination for international and Venezuelan tourists. Several towns lie within the boundaries of the park. Some of these towns are small, traditional communities that depend on the sustainable cultivation of cacao (Theobroma cacao). Several resort towns also lie within the park along its borders.

Biodiversity

Henri Pittier National Park is internationally known for its high biodiversity, and the avifauna is of particular importance. About 43% of Venezuela's bird species, including six globally threatened bird species and the harpy eagle (nearly threatened), live within the park. In addition to resident species, there is a migration corridor (Paso de Portachuelo) that supports seasonal birds and butterflies from North America. Populations of vulnerable and endangered species, such as the American crocodile, tapir and Hercules beetle are well represented in Henri Pittier. The park hosts the green beetle, a rare insect species, and a large variety of mammal species such as the bush dog, long-haired spider monkey, jaguar, puma and ocelot. The flora is also extremely diverse: in an area of 0.25 ha of cloud forest, 150 arboreal species can be found including the giant tree locally known as "el niño" (Gyranthera caribensis). Endemic species to the park include the aquatic rat Ichtyomys pittieri, the nocturnal butterfly Eudaemonia semiarimis ranchogradensis and the grass Gunnea pitteriana.

Threats
Henri Pittier National Park is considered threatened, meaning that remedial action is needed in order to counteract threats and preserve its biological integrity. The majority of threats are human induced the most serious being forest fires, human encroachment, pollution, and poaching. Other threats include lack of information on park regulations, lack of patrolling, and road construction.

View of Henri Pittier National Park

**Description**

*Physical description*

The park stretches from the northern xeric shrublands in the mountains overlooking the Caribbean Sea, crosses the cloud forests, and reaches the city of Maracay in the south. Several resort communities are established along the Caribbean coast and are officially outside park boundaries (private enclaves). The park’s diverse landscape begins at sea level and rises abruptly 2,436 m to its highest point in Pico Cenizo. The natural areas along the coast consist mainly of arid scrub forests and mangrove forests. Towards the south and along the north-facing slopes of the mountains, humidity increases changing scrub forests into semi-deciduous forests. As one goes higher in elevation, the semi-deciduous forest gives way to an evergreen rain forest, which eventually becomes a dense cloud forest along the mountaintops. The southern slope of the park is not as variable as the northern side, and ends with open savannas in the foothills of the Aragua Valley.

*Biodiversity*

Changes in vegetation composition and variation in climatic zones sustain extremely high faunal diversity, including 578 bird species. The park is home to several rare mammal species including the bush dog (*Speothos venaticus*), the longhaired spider monkey (*Ateles belzebuth*) and several bat species (*Diclirus alba, Ametrida centurio, and Sphaeronycteris toxophyllum*). Populations of large cats are also present, including jaguar (*Panthera onca*), puma (*Puma concolor*) and ocelot (*Leopardus pardalis*). The endemic aquatic rat (*Ichtyomys pittieri*) is one of the park’s most notable mammal species. Rare insect species such as the green beetle (*Psalidognatus sallei*) and the endemic, nocturnal, saturnid butterfly (*Eudaemonia semiarimis ranchogradensis*) are also found in the park.
Several populations of vulnerable and endangered species are well represented in Henri Pittier, including the American crocodile (Crocodylus acutus), tapir (Tapirus terrestris), and the Hercules beetle (Dynastes hercules). Six of the 24 globally threatened bird species found in Venezuela live in Henri Pittier. These are the helmeted curassow (Pauxi pauxi), two species of siskins (Carduelis cucullata and C. yarellii), plain-flanked rail (Rallus wetmorei), great antpitta (Grallaria excelsa), and the military macaw (Ara militaris). The harpy eagle (Harpia harpyja), one of Venezuela's locally threatened bird species and nearly threatened on a global scale, also lives within the park. One area of special importance is a place called Paso de Portachuelo, which serves as a migration corridor for birds and butterflies from North America.

The park's flora is also extremely diverse. For instance, the cloud forest surrounding the Rancho Grande Biological Station harbors 150 different arboreal species in 0.25 ha (Huber 1986).

The giant tree locally known as "el niño" (Gyranthera caribensis) is endemic to the region of the coastal mountain range and is also well represented in the highest altitudinal zones of the park. This spectacular tree can reach 40 m and is supported by enormous, buttressed roots. The red mangrove (Rhizophora mangle) is the predominant species in the Cienaga de Ocumare and Turiamo regions, which also contain the endemic grass Gunnea pitteriana.

Management

The management plan for Henri Pittier was published in 1995 by INPARQUES, the government agency that regulates and manages Venezuela's national parks. This plan covers park regulations and offers solutions to problems that were affecting the park in 1995. The plan defines and distinguishes nine management zones within the park, each of which has specific legal uses. These are:

- **Integral Protection Zone**: Access restricted to INPARQUES' personnel for monitoring or scientific research.
- **Primitive and Wilderness Zone**: Restricted access. Devoted to research, monitoring and educational activities. Access is granted only under INPARQUES supervision.
**Management Zone**: Its legal uses include low-impact recreational activities, educational activities, and camping.

- **Natural Recuperation Zone**: Areas that are being rehabilitated after human impact.
- **Recreation Zone**: Open to the public for recreation.
- **Service Zone**: Contains roads, parking areas, the Rancho Grande Biological Station, and buildings owned by INPARQUES.
- **Zone of Historical, Cultural and Paleontological Interest**: Contains historical structures, historic cacao farms, and other important cultural features such as petroglyphs.
- **Special Use Zone**: Includes human settlements, cacao plantations, and the Fire Department and National Guard buildings.
- **Traditional Human Settlements Zone**: Contains historically important human settlements such as the town of Cepe.

The management plan also specifies biological, historical, cultural and aesthetically important areas that are priorities for preservation. These areas include the habitats of some animal and plant species, archeological ruins, and ancient trails used by ancestral native inhabitants. INPARQUES' rangers are in charge of monitoring and enforcing park regulations. There are 16 rangers working in 10 ranger stations throughout the park, and three new ranger stations are under construction. Six of the rangers work at Rancho Grande Biological Station, but none of the rangers in the park have adequate means of communication or transportation. There is a fire department with limited infrastructure and equipment run by volunteers working in conjunction with INPARQUES' personnel. Along with other fire prevention measures, INPARQUES is currently writing a fire prevention plan that proposes the construction of an observatory tower.

**Human Influence**

Two roads, constructed in the mid 1930's, bisect the park in a north-south direction, connecting 10 small towns on the sea coast to the southern city of Maracay. The roads are both 44 km in length, paved, and extremely narrow. The Spanish settled the coastal towns during the 16th century. Historical reports show that the valleys of Choroní and Chuao were first occupied by indigenous people and then in the early 16th century by Europeans and African slaves. Beginning in the 17th century, these coastal settlements were important agricultural centers that primarily produced cacao that was once considered the best in the world; several of those settlements still depend on cacao production. These coastal towns are either inside the park or are private lands enclosed within the park that can only be accessed by boat (sea) or by car.
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(two main roads). In addition, 22 small towns are located inland along the two main roads. As in the case of the coastal towns, 20 of the small towns are considered property of the park, and the remaining two are enclaves of private land.

Most of the towns are very small, consisting of only a handful of houses. According to Venezuela's Official Department for Statistics and Information (OCEI) and data from the National Census, there were 2,070 people living in the park in 1990. Despite a management plan that intends to prevent population growth, most of the towns are growing rapidly due to high birth and migration rates in towns that lie outside the park. Taking into account estimates made by the historian Bolivar in 1992, ParksWatch estimates that the current park population constitutes approximately 4,500 people. These rapidly growing populations have begun to adversely affect the park.

Due to the historic importance of the traditional farming communities within Henri Pittier, the Venezuelan government considers the park not only a reserve for flora and fauna but also a cultural reserve. In fact, several of the traditional cacao plantations are protected by law. For example, the town of Cepe and its cacao plantations are recognized by the management plan as a Traditional Human Settlement Zone.

A major threat is the amount of tourists that flock to the beaches for holidays and weekends. Legally, the resort towns are not included within the territory of the park, but their geographic location does lie within the park, being in essence private enclaves of land. The integrity of the park around resort areas is threatened as a result of the severe environmental impact of large numbers of tourists and the absence of any conservation
regulations.

Conservation and Research

Numerous research projects, primarily in the areas of biology and ecology, have been carried out in the park. A partial inventory compiled by Carlsen (1999) lists at least 175 research projects that have taken place from 1989 to 1999. The National Universities and NGO's are the most common institutions that promote scientific studies in the park.

The Sociedad Científica Amigos del Parque Nacional Henri Pittier (SCAPNHP) is a local NGO that has publicized park problems and sponsored research activities in the park since 1989. In partnership with the NGO Sociedad Audubon de Venezuela, SCAPNHP organizes the Annual Bird Festival, an educational event that showcases the park's remarkable birds as a means to educate people about wildlife and the need to protect it. Additionally, in collaboration with the Phelps Ornithological Collection, both SCAPNHP and Sociedad Audubon de Venezuela work on the Annual Monitoring of Migratory Birds project, which is carried out in October during the park's peak migratory season.

Fundación Tierra Viva manages the project "Pittier: Park, People, Cacao," which works with park communities to promote cacao cultivation as an economically and ecologically sustainable practice. Other organizations have developed conservation activities in the park. The Sociedad Conservacionista de Aragua has been working since 1973; the Brigada Heroes Anónimos has been devoted mainly to fighting fires since 1989; the Sociedad Ecológica de Aragua has had a presence in the park since 1972; the Grupo Ecológico y Excursionista Palumbu is a university group devoted to outdoor activities and conservation activism.

Threats

The most significant threats to Henri Pittier National Park are the following:

- Fire
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Human encroachment

- Pollution
- Poaching
- Lack of information
- Lack of vigilance
- Road construction

Fire

Fires -mostly set by humans- are the most serious threat to the park. Part of the reason hundreds of hectares burn each year is that INPARQUES does not possess the infrastructure and personnel to control the fires. In the exceptionally dry year of 2001, fires were more destructive than usual, burning more than three times the area burned in an average year. By the end of March, 95 large fires had been recorded, burning a total of 2,473 ha. The majority of these fires began as a result of human error. The park rangers and National Guard personnel believe that many of the fires might be linked to religious ceremonies that are usually performed near waterfalls and involve candles, gunpowder, and sulfur (see PW news).

Human encroachment

Illegal settlements in the park are another serious threat. The absence of clearly defined park borders and the influence from growing populations in the surrounding cities has resulted in migrations into the park. Numerous towns located close to the coastal zone are experiencing a rise in tourism, and as a result, people from inland towns are moving to the coast in search of jobs. This contributes to overcrowding and waste management problems. The garbage of some towns has recently been found inside the park, while increasing tourism is also contributing to the large amount of trash. Towns located outside the park are beginning to expand into surrounding areas of the park, and they are developing a tourism infrastructure within park boundaries.

The value of park lands close to the coast has increased with recent construction of guesthouses and restaurants for tourists. Similarly, the lands surrounding the sprawling city of Maracay in the south are also highly valued for development. Often, people that move to these areas take advantage of the absence of marked boundaries and build residences inside the park.
Recently, Hugo Chavez, President of Venezuela, has promoted a "land revolution" by proposing the New Law of Lands, which people misunderstand as the opening of protected areas for settlers. Consequently, people have invaded both private properties and public lands, including national parks. This is a mistake that could represent a threat not just to Henri Pittier but to all protected areas in Venezuela. In February 2001, 200 families moved onto a private farm located 500 m from the town of Choroní (on the border of Henri Pittier), and as a result, four hectares of park surroundings were deforested and burned. In October 2000, three hectares were cut and burned by a group of 40 families.

Pollution

The large number of tourists that enter the park on their way to the beach bring with them large amounts of garbage, which is often discarded improperly. The water is polluted when people wash their cars in the park's creeks and rivers. The previously mentioned religious ceremonies may also pollute streams.

Poaching

People living in towns located within and around the park do not depend on hunting for subsistence; however, poaching is a major problem because the economic crisis that confronts Venezuela is forcing people to find alternative sources of income. Inhabitants of local communities are hunting protected species such as paca (*Agouti paca*) and white-tailed deer (*Odocoileus virginianus*) in order to sell their meat, which is highly valued by the restaurants in the resort towns. Although clearly illegal, sport hunting also occurs within the park and is considered a problem. According to local informants, sport hunting is popular mainly among military personnel, the wealthy and politicians.

Lack of information

The lack of information about park regulations is another significant threat. Most of the people who cross into the park to the beaches and tourist towns do not know that they have entered a national park and do not respect the regulations. The fact that even local people are not aware of park boundaries is also distressing. Unawareness of park boundaries and regulations is indeed the cause of most minor violations. On the other hand, people may simply choose to ignore park regulations.
Lack of patrolling

Although the park has 16 park guards, most of them are concentrated in a few places, with the Rancho Grande Biological Station supporting six rangers. Without an adequate number of vehicles or radios for communication, and with a relatively large area to monitor, rangers are only minimally effective at patrolling and responding to problems. According to the supervisor of the National Guard's Division of Environmental Protection, the institution that helps to enforce park laws, more than 50 small violations are committed each month.

Road construction

The most significant future threat is the construction of a new road that would run along the northern coast of the park. The construction began in 1988, but was stopped by the conservation efforts of NGOs, who widely publicized the road's violation of the park management plan. Nevertheless, the Aragua and Carabobo state governments are still hoping that this road construction project will continue.

Recommended Solutions

Fire

With proper planning, the number of fires set by humans could be reduced. The following preventive measures could be implemented to reduce the possibility of fires and their harmful effects:

- Construction of natural fire barriers
- Investment in equipment and hiring more personnel for the fire department of Las Cocuizas
- Build lookout towers
- Increase patrolling along the roads during the weekends and during days of high tourist activity.
- Implementation of educational campaigns to create awareness among visitors about the large problems that fires create and how to prevent accidental fires

Human encroachment and Poaching

With the recent increase in tourism demand, local people are abandoning traditional cacao farming for more lucrative work in hotel management and commercial hunting. It is unfortunate that people do not take advantage of increased tourism by exploiting environmentally related jobs such as guides for nature hikes, boating, and other eco-tourism activities. In contrast to the great impact that hunting and construction of new guesthouses has on the park, cacao cultivation is a sustainable economic activity that does not degrade the park. Cacao plantations are an environmental friendly form of agriculture because cacao plants occupy a relatively small area. One plant produces many generations of fruits throughout its life, and because cacao needs shade, there is no deforestation. Most of these traditional
communities have cultivated cacao since they were established about 400 years ago. The NGO Fundación Tierra Viva is helping the park communities to develop sustainable cultivation and production techniques. Helping communities to continue with cacao harvesting is an environmentally sound alternative against commercial hunting.

Corrective measures need to be implemented to stop illegal colonization, as well as to punish those that do not abide by park regulations. Park boundaries need to be redefined and marked by signs and fences.

Pollution, Information, and Patrolling

Most of the minor violations reported in the park could be prevented with an aggressive environmental awareness campaign that shows and clarifies the boundaries of the park and its regulations. Visitors need to know that they are in a national park and need to act accordingly.

Enforced patrolling will depend on providing guards with radios for communication and motorcycles and four-wheel drive vehicles for transportation. More guard stations are also needed, and INPARQUES is now building new ranger stations in strategic locations (a project financially supported by the World Bank). This represents a very important action because guards are currently concentrated in only a few areas. Also, more signs, trash containers, and increased enforcement of regulations will help prevent misuse of Recreation Zones that currently bear the brunt of the tourism.

Road construction

Construction of the road that would lie along the northern area of the park has been halted, but it will be necessary to continue campaigning against the continuation of this highway project. INPARQUES and local and national conservationists need to engage in conversations with the Aragua and Carabobo governments to explain and emphasize two important things: The first point is to indicate that the road is illegal under Venezuelan law. The second point is that the highway will increase the number of people that have access to the Northern coast. This will result in the degradation and loss of biological integrity in an area that has remained almost unchanged for centuries.

Conclusion

Henri Pittier National Park is considered threatened and in need of a remedial action to remove its threats and protect its biodiversity. The park was created with the intention of protecting the natural
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landscape from detrimental human activities. However, the presence of traditional settlements inside the park seems contradictory to this goal. These traditional communities cannot be relocated and should be categorized under a special use zone, similar to a biosphere reserve. Cacao farming and ecotourism activities, such as birdwatching, could represent a sustainable economical alternative to local people.

Henri Pittier has the potential to be an exemplary park because most of the current problems can be solved by strict enforcement of the management plan. It will be very important to create alliances with regional politicians and other stakeholders to promote tourism and other solutions to the problems of the park. Henri Pittier has great potential for ecotourism, but one should bear in mind that uncontrolled tourism has negatively affected several park beaches. Any investment in tourism should be done cautiously without threatening the biological and cultural integrity of the park.

Links

Conservation and Research

Sociedad Audubon de Venezuela
Fundación Tierra Viva
Grupo Ecológico y Excursionista Palumbu

Bibliography

• Áreas Naturales Protegidas de Venezuela. 1992. Serie Aspectos Conceptuales y Metodológicos DGSPOA/ACM/01. MARNR.