

**THE LACANDON FOREST**

by

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presentation at the UC MEXUS Conference

**Chiapas and Beyond**

April, 1994

Riverside, California

## THE LACANDON FOREST

The Lacandon Forest is located in the northeastern side of the State of Chiapas in the border with Guatemala. The origin of its name comes from the indigenous population of Lacandones who have inhabited this area for hundreds of years. In turn their name came from an island known as Lacan Tun in the Laguna Miramar. This place was a lacandon settlement in prehispanic times. The Spaniards confused the name of the place with the name of the indians. The name "Lacan-Tun" means "big stone".

The Lacandon forest extends from the southernmost portion of Chiapas into neighboring Guatemala and Belize. In the past the whole region was known as the Lacandon area, but in recent times the Guatemala area has come to be known as the "Petén" and the area on the Mexican side of the border as the Lacandon forest. Some ecologists now call this trinational forest area "The Great Petén".

The Lacandon forest region has a complex topography with a network of hills and mountains with valleys and different types of depressions. Limestone rocks dominate the landscape and produce the typical karst topography produced by the effect of water. Sinkholes and other micro topographic forms are common in the area.

The altitude of the area ranges from almost sea level to mountains close to 6,000 ft. This altitudinal variation produces an interesting climatic zoning from the typical warm climate of the lowland tropics with an average temperature higher than 70° F to a semi-warm climate in the mountains with temperatures below 70° F. but never below 64° F.

The area has a high annual rainfall that ranges from 59.1 inches. to more than 118.2 inches of rain a year. The rainy season is clearly defined in the summer and early autumn, followed by a dry season with scattered rains produced by the cold air masses coming from the north, called "nortes".

The soils in the area are diverse. The most abundant soils in the region are: lithosols and rendzines, typical soils of limestone areas. They are fragile, thin soils but rich in organic matter. Other important soil type are the gleisoles, which contain permanent or semipermanent water in the soil profile.

Most of the soils in the area do not represent high quality agricultural soils. Good agriculture soils are scarce and located in the few alluvial plains in the area.

The Lacandon area is crossed by several rivers which are tributaries of the Usumacinta, the principal river that divides the countries of Mexico and Guatemala. There are several outstandingly beautiful karstic lakes at altitudes above the 2700 inches.; such as the system of lakes of El Ocotol, Ojos Azules, Escobar and El Suspiro. At lower altitudes, the largest lakes encounter in the region are: Laguna Miramar and Lago Metzaboc among several others. The ecology and biota of these water bodies are unknown. In addition a legend is told of an unknown large aquatic reptile which lives in Laguna Miramar.

### **Vegetation**

The area has been known for having the largest patch of mature evergreen rain forest in northern tropical America. The principal vegetation types are the following:

*Tall evergreen tropical forests.* These are the richest and most highly diverse forests in the lowland regions of the area. The upper story can reach up to 30-35 m. tall. These magnificent forests are also the most economically valuable, because of the presence of a few highly valued timber species such as Mahogany and the Red Cedar. The Lacandon forest region usually is identified only with this vegetation type. Variations of this vegetation type can be found throughout the general region with lower overall tree size and distinct floristic composition depending on the variations in topography, soils, altitude and climate.

*Palm stands.* Another important vegetation type in the lowland area are the palm stands. They are found throughout the area, forming a vegetation mosaic with the forests. In addition they are frequently found in deeper soils with drainage problems. The most well known palm stands are the cohune palm stands (Orbignya cohune).

*Wetland vegetation.* In the lowland area there are many kinds of wetlands with very diverse flora and fauna. In one of these wetlands one of the most important botanical discoveries of this century was made: the discovery of a new botanical family: Lacandoniaceae.

The only species known up to now is the Lacandonia schismatica, a strange saprophyte with flowers with inverted sexes: stamens at the center and carpels on the outside.

*Forests from temperate regions.* At higher altitudes in the Lacandon sierras, temperate vegetation types are found; such as pine-oak forests. There are other interesting kinds of subtropical forests known as mesophylous forests, cloud forests or deciduous forests. These forests are biologically as important, or more so, than the lowland rain forests. Very little is known about the flora and fauna of these sites. This is also the area where the famous quetzal bird lives where the wild relatives of the avocado still are found.

### **The Lacandon forest in pre-hispanic times**

The lacandon forest represents one of the most important sites where the ancient Maya civilization developed and flourished. Before the Maya there is evidence of the presence of the intriguing Olmec culture in the area, almost 3,000 years ago, which overlaps in time with the early Maya.

The first explorers Stephens and Catherwood showed the spectacular sites of the ancient Maya to the world through their writings and through drawings in the well known book: Experiences of Travel in Yucatan.

The archaeological research initiated by Maudsley and Maler subsequently confirmed the existence of a high developed civilization in a tropical forest environment.

Additional important news to the world was the presence in the area of a small group of indians called Lacandones or Caribes. In 1907, Alfred Tozzer published the first ethnography of this indigenous group.

According to the archaeological studies the lacandon area, was a heavily populated. It has been estimated that the ancient site of Tikal alone could have had half a million inhabitants in the late classic, about 1,100 years ago.

In the Lacandon forest the most important sites are Yaxchilan and Bonampak. This last one was discovered in the 1940's by Carlos Frey y Giles Healy.

Hundreds of unstudied sites still exist in the Lacandon Forest, and some archaeologists think that a major center is still to be discovered in the southern part of the Lacandon area.

There is no acceptable estimation of the population that existed in the Lacandon forest at the climax of the classic period, but it is possible from extrapolations from other Maya sites to estimate that they could range in the millions.

At the end of the classic period (1200 years ago), the Maya stopped building monuments and abandoned all the great centers. There is evidence of a rapid disintegration of the society and depopulation of the area. There is no definitive explanation for this phenomenon which is known as the "collapse of the Maya civilization". The hypotheses include wars, diseases, soil depletion, deforestation, collapse of markets with other areas, plagues, hunger and religious believes.

The population that remained there or that came later, were isolated groups that left almost no important buildings or other cultural traces. They left some simple clay pots in their burials sites in caves.

The present tropical forest ecosystems of the area can be considered to be the result of this abandonment, more than 1000 years ago. The impact of the scattered groups that remained in the forest are not likely to be significant since they had low population densities and their subsistence consisted mainly of shifting agriculture combined with hunting and gathering.

One of my principal research interests has been to find evidences of the kinds of past forest management by the old Maya in the study of the present-day rain forests, . The question to be answered is: if the Maya civilization supported a high population densities for several centuries in this area, why isn't there any evidence of biological impoverishment in the forests of today? What sort of silviculture and/or conservation practices they might have had to maintain their populations without destroying the resource base?

The indigenous populations remaining after the collapse were the original Lacandons, who spoke cholti maya. They lived in the lowland forest environment without any known disruptions until the first arrival of the Spaniards in the area of Lacan Tum in the year 1530. According to Jan De Vos, the Lacandones hid in the forest while the Spanish destroyed their houses in their search for gold and other valuable goods. This first encounter made them decide to resist all intervention in their area. They fought any group related to the Spanish, including other indigenous groups. One of those incidents included the historical attack on a Tzeltal community created by Dominican friars.

In 1559 the "official" government of that time organized a large punitive expedition against the Lacandons called by the chroniclers: "the War of the Lacandon".

The Lacandones were badly defeated and many died or were captured, and the rest fled into the forest and remained there as scattered enclave populations. However, later they returned later to Lake Lacan Tun and rebuilt a fortress, from which they continued their hostilities toward the conquerors.

Later on, the army returned to destroy their fortress, but this time the Lacandones escaped into the forest. The history of this people is fascinating but tragic, resulting in their final surrender and subsequent extinction by the diseases brought by the European populations.

At the end of the 17th century, another group of rebel Maya from Guatemala and Campeche also arrived in the area. This group spoke yucatecan Maya and were peaceful semi-nomads who used to live in small family communities called "caribales". They probably co-existed for a short time with some of the original cholti-speaking lacandons. These new-comers were incorrectly called "Lacandones" because they occupied the abandoned area of the original lacandones.

These people, also known as "caribes", are the ancestors of the present day "lacandones" that live in Nahá, Metzabok, Bethel and Lacanjá Chansayab.

**Modern times**

For three centuries the Lacandon Forest was inhabited mainly by these new Lacandones. Their population numbers were always very low, consisting of a few hundred people.

The last chapter in the history of the area which is still not finished, is the history of the Lacandon precious woods. This chapter begins immediately after Mexico's independence from Spain. The discovery of mahogany by the world market was the starting point of a new type of colonization of the area. Lacandon mahogany was known as "Tabasco wood" because it was exported from ports in the state of Tabasco and sold at very high prices in London, Liverpool and New York.

During the time of Porfirio Díaz, the so-called Mexican dictator, at the beginning of the century, the liberalization of the country's economy opened the doors to foreign investments to exploit Lacandon mahogany and the Mexican government gave permits to exploit the forests.

Almost all the rivers in the area were used to transport the wood. This "modern" exploitation was both primitive and rudimentary. The conditions of the workers were extremely bad, consisting in a form of quasi-slavery (according to de Vos). Early in the century, the land was considered national land and no private property rights were recognized.

This situation changed rapidly with the opening of the area for timber exploitation, and the Porfirio Diaz government began the process of dividing up and selling large lots of the Lacandon forest. Most of the buyers were the same lumber companies who also undertook the delimitation of the property boundaries (among them are the families: Doremberg, Romano, Valenzuela, Schindler-Gabucio and Bulnes). Thus they became owners of the forests that they were renting.

The Mexican revolution arrived at the Lacandon forests in the early 1910's. The revolutionary army dismantled most of the lumber camps and effectively ended the lucrative business of the lumber companies. In addition, the initiation of the first World War decreased the demand from Europe for precious woods. The large forest properties of the Lacandon were left as standby were left in an standby for future expropriation by the Mexican revolutionary government.

The area thus remained populated by only approximately four hundred Lacandons inhabitants, and the forests remained in very good condition by ecological standards. The principal disturbances were the exploitation of the Manilkara latex by the chicleros and some low-scale lumbering. There exists little evidence of any large threat to the forest until the 50's.

In 1949, the Vancouver Plywood Company and a group of Mexican entrepreneurs decided to organize a large scale forest operation in the northern part of the Lacandon. They formed a Mexican company known as Maderera Maya and bought 420,262 hectares of tropical forest. They then embarked on a very ambitious plan for a sustainable (word not used at that time) tropical forestry program based on the use of multiple products and the management of the natural forest.

In 1958, I was hired by the Maderera Maya for my first professional visit to the Lacandon forest. I was recommended by Dr. Faustino Miranda, my undergraduate professor who later became my main professor, advisor and mentor. He served as an advisor to the Maderera Maya, which had asked for an inventory of the trees in a transect planned for inclusion in their forest activities.

This first visit marked my interest in tropical forests for the rest of my life. It was a unique experience to be confronted by the frightening diversity of trees and the difficulty of identifying them in the field. I received my first advanced field course in tropical forestry from a Tzeltal man who came along on the expedition as my assistant. He was able to name every tree from a distance, without even seeing a leaf or a flower or smelling the bark.

My collections were mainly to verify his identifications and thanks to him, my work was accomplished in two weeks. Without him I would have needed at least a year to do it.

I have been a lucky man all my life. My first botanical discovery came in that expedition and it was a lucky event. After a day's walk, we stop to arrange the tents, give rest, food and water to the mules, and prepare our main meal of the day. I hung my hammock beneath two trees to rest, and after a while, looking up, I saw a plant well known plant to me a: a Yucca. I was pleased to see one of the very few plants I could identify at a distance. Recollecting my thoughts, I



remembered that this genus occurs mainly in deserts, so this plant I was seeing could be something interesting. After two boxes of shots with my 22 rifle, I managed to bring a branch of the plant to the ground, and to my surprise, it had fruits and some dry flowers. I had no idea that the plant I collected became the only epiphytic Yucca known to science and a very primitive one. From my collections in this first trip, two new species of trees were described by Dr. Miranda.

In the end, the grandiose project of Maderera Maya was not approved by Lopez Mateos, in spite of its considerable investments in infrastructure and research. Several reasons existed for that decision.

First, it was politically risky for the federal government to give approval to a foreign owned company which would have control and ownership of a large area of the Mexican territory.

Second, there was increasing demand for land by landless peasants, mainly indigenous groups which had been expelled or escaped from the inhuman treatment by the coffee finqueros and ganaderos of the highlands of Chiapas.

Third, some of the properties of Maderera Maya were invaded by many of these people with the "approval" of the Agency of Agrarian Reform and Colonization. The approval of the project would have required the use of force to expelled these peasants from the occupied land.

Although the large project was not approved, some permits to extract the woods were allowed. Maderera Maya, as well as other companies interested in buying tropical woods started to buy mahogany and other woods from a Mexican company installed in Chancalá in the Lacandon Forest: Aserraderos de Bonampak. In contrast with the original program of Maderera Maya, Aserraderos Bonampak had no forest management plan of any sort.

This marked the beginning of the accelerated destruction of the forest. This company, with modern machinery and capital started building roads and used more efficient and heavier machinery for the felling and extraction of the lumber.

The company attracted many landless peasants from the uplands of Chiapas to work for them in the extraction of wood by making illegal offers of land in the exploited areas.

Cattlemen saw also a unique opportunity for access to newly deforested areas for raising cattle. Thus, the area became an attractive place for landless people and entrepreneurs who could find unique opportunities for work and possible access to land for themselves.

The new forest roads and temporary villages became the new settlements of the newcomers and the starting point of the deforestation.

The process was triggered by the Aserraderos Bonampak, with the approval of the Government authorities and with the complicity of the cattle industry. The visible executors were the poor landless indians looking for a job and a piece of land.

In the early 70's the deforestation of the northern part of the Lacandon forest as well as in other tropical regions of Mexico became very obvious. The arrival of landless farmers from different parts of the country became almost a Government policy, because there was no enforcement against the take-over of national lands or even private lands. In addition there were formal colonization projects of the government to give land to landless farmers from central and north Mexico. The "conquest" of the humid tropics seriously began.

There were some opposition voices, but the conservation groups almost were non-existent at that time.

The loudest voice came from my research group of colleagues and students from the National University of Mexico asking the government to reconsider the trend. The principal project we criticized was the Uxpanapa re-settlement project. We chose that project because we knew the area. We were studying those forests.

The Uxpanapa crisis became the most controversial project of the Government at that time. Many other scientists from Mexico joined us in the fight to defend Uxpanapa and the lives of the Mazatecan peasants who were going to be moved from Oaxaca because of the building of a dam.

The President of Mexico at that time was Luis Echeverría, a very controversial leader. He became very sensible to the criticisms and responded to them by creating, among other things, 6 research centers of ecology and natural resources.

The organization and directorship of one of those centers was offered to me: the National Institute of Biotic Resources (INIREB).

However the problems and the deforestation in the Lacandon Forest continued at even faster pace. During Echeverría times several events occurred that are key to the understanding of Chiapas today.

The ecological disaster provoked by the Aserradero Bonampak became a national and international issue. The invasions of lands by all kinds of people went out of control.

The Aserradero of Bonampak was closed and instead a new state owned company was formed: COFOLASA (Lacandon Forestry Company). The assumption was that this company was going to be more concerned with the people and the forests. This did not occur, the deforestation continued.

President Echeverría declared as national property 401,959 hectares in the Lacandon Forest in the Municipalities of Ocosingo, Triinitaria, La Independencia, La Libertad and Margaritas. He decided to put some order to the disorganized colonization of the forest by creating new population centers.

The other historical decision he made was the creation by Presidential Decree of the Lacandon communal property. This land had an area of 614,321 Has. This land became the property of the 400 Lacandons. By doing this he thought could stop new invaders. However there was a problem with that decision. In the Lacandon land were already more than 20 colonies of tzeltales and choles.

These people were forced to leave their settlements and were "convinced" to form two large towns: Frontera Echeverría (now Palestina) and Frontera Velazco Suárez (now Corozal). Assistance, schools, medical facilities, agriculture advice, potable water and housing was offered to the people.

I witnessed the painful process of forced resettlement with great anger. I was asked to find alternatives to shifting agriculture. I

worked in the area with the tzeltales and choles developing a demonstration projects of integrated farming that included: organic farming, forestry, agroforestry and aqua culture. That project gave me my first direct contact with the tzeltales, lacandones and choles. The end of Echeverría was the end of the first set of promises. All programs stopped.

During López Portillo's time as President, the process continued, the arrival of people continued and the demand of new land was ever increasing. The conservation of the Lacandon Forest became an international demand.

An special commission for the conservation of the Lacandon forest was created with the participation of 4 of the centers created by Echeverría: INIREB, INE, CECODES and CIES.

The most important activity achieved was the creation of the Montes Azules Biosphere Reserve. This type of protected area was appropriate for the area because it included different kinds of land property, the acceptance of people in the area and a commitment for developing sustainable development projects. There was a very good response from the communities and several projects were developed at that time. Some of the initiatives and projects (integrated farms, organic farming) started by INIREB in 1975 are still remembered by the people. However, the oil prices went down, the programs were cut and the promises stayed unfulfilled.

During the 70's the poor peasants in the forest became threatened by the political forces from the central and state governments. They decided to create independent organizations to defend themselves. The most important ones in the region were: the Organización Campesina Emiliano Zapata (OCEZ) and the ARIC Unión de Uniones. The most important activity of both organizations has been the request for the legalization of land tenure rights, some of which go back to 1774. They also have been fighting against repression. There are new organizations with similar goals, such as the Frente Nacional de Organizaciones Campesinas Zapatistas.

This pressure for land has resulted in fast decisions by the government to give land in areas that were already given to other groups, creating a very tense climate against the government and between groups.

In addition the Lacandon Forest communities have had to deal with the problem of the Guatemalan refugees. The indigenous communities have received their neighbors very well. However, the refugees increased the problems by demanding lands to cultivate.

Let me give you one example: In 1969 the Ejido Amador Hernández with 1,779 has was given to 31 families. In 1989 the Ejido was increased by 2294 has. for 40 new families. However the ejidatarios took 6,679 has. Today they have possession of 8,500 has. This is great. However the land given to them was taken from the land given by Luis Echeverría to the Lacandon community. The Lacandons accused this people for their lack of concern on the forest and they have asked them to go some place else. They are now planning to do a legal demand to the government to return the land that belongs to them.

This is not an exception, in the Lacandon Forest there are at least 200 population centers. Most of them do not have clear possession of the land. The agrarian authorities have been plagued by dishonesty and lack of action. It seems that there is a policy for not making decisions with the hope that the problems will be solved by themselves. Well, it has not been so.

During de la Madrid period the problems were not solved, they just accumulated. He created several commissions that did not solve anything. The state government became more and more repressive in order to control the almost uncontrollable problems in the Forest.

During de la Madrid term the criticism increased, in Mexico and abroad. The historical image of the deforestation of Mexico in the border with Guatemala published in National Geographic had a tremendous impact.

To my knowledge during the President Salinas de Gortari government three principal actions were done in the Lacandon Forest:

1. To increase the budget for social development in the Lacandon area under the direct control of a commission headed by the Governor of the State.

The problem with this action was the head of the Commission, Governor González Garrido, who was not willing to discuss the

demands of the indigenous people. They were not represented on the Commission. The commission was not willing to discuss the agrarian problems in the lacandon area.

2. To stop the deforestation via a general prohibition of any forest activity in the state of Chiapas. The reason for this prohibition was to cut completely the illegal traffic of wood from the Lacandon area and to stop the forest fires caused by shifting agriculture.

This action was a response to the international pressure for the deforestation of Chiapas. The first reaction to the prohibition was positive since it stopped the deforestation. However, the prohibitions ("vedas forestales") have not been very successful in the long term.

The peasant economy is linked very strongly to forest use. It is often confused with the activities and interests of the forest industry. They are very different. However, with the veda the most seriously affected were the poor peasants that needed the income from selling wood and also they needed wood for their constructions, heating and cooking. Several peasants were put in jail for cutting trees or transporting wood.

3. To initiate a pilot project on tropical forest conservation and management under the auspices of SARH. This project is known as the Tropical Forest Action Program (PROAFT). This project was suggested by me to the Salinas Government to face the problems of development of the communities living in a tropical forest environment. The principal instrument was an agreement with the local communities to work together for the improvement of the quality of life through a process of participatory planning with one main goal: to improve the forest conservation and management activities. These agreements are known as the Tripartite Alliances for Forest Conservation. The three parts are: the community, a local organization (mainly NGO's) and the PROAFT-SARH. This project is going well and several projects are underway in a few communities in Chiapas.

The main problem is facing is that it takes time to develop a truly participatory process. In addition the projects are few, and the program is under budgeted. Most of the funds for the field activities come from international philanthropic organizations.

The most important allies for the protection of the Forest have been the Lacandons, now joined by the tzeltales and choles who live in the area. They have asked President Salinas to solve the problem of the invaders of their lands. They have offered themselves to negotiate the acquisition of available cattle ranches to reubicate the landless people that occupy (invaded) private, communal or ejido lands. It seems that some of the most acute problems in the area could be resolved by the acquisition of some cattle ranches that are for sale in the region and give the option to some landless families to buy them at a low price with one condition: to be used for agriculture and/or forestry projects.

The worst enemy in the area is the poverty of a fast increasing population, which are the children of the settlers that came into the area a few years ago. The demographic growth is not helping a bit. This is a subject that needs to be discussed openly. I am well aware that population growth is only a symptom of a larger problem. However we need to work on the problem behind the symptom.

It is very clear to me that the Lacandon problem only reflects the failure of our society to provide appropriate education, agriculture, forestry and cattle ranching activities from which the people could earn a decent living. What our society has provided have been exploitative activities of the land, the resources and the people for the benefit of a few.

There are no clear solutions. However, there is a need for a real honest social pact of all sectors of our society to find together the solutions. The new elections offer a possibility of such a pact: an agreement for a multiparty new government. South Africa is doing that in much worst political climate than Mexico.

The arrival of the EZLN in January started a new chapter in the history of the Lacandon Forest. Their Declaration of the Lacandon was a dramatic result of a long history of injustice, poverty, unfulfilled promises and desperation.

The Lacandon community (formed by the Lacandons, Choles and Tzeltales who live in the Lacandon territory) have expressed publicly their independence from the Zapatistas and their interest to continue protecting the area. Their last action was the creation of an additional protected area in their own land to connect the Montes Azules with

the Peten of Guatemala and to include a carefully protected area where the Lacandonia schismatica lives.

It seems to me that there is a great need for understanding the multiple groups of people that live in the area. They have opinions, aspirations and ideas. We need to give them an opportunity to express their views. The dialogue between the Zapatistas and the Government should be complemented by an open dialogue of other sectors as well.

In 1991 I wrote: " the lacandone forest is bound to disappear in the next decade because of: the lack of a coherent ecological policy for the area. The contradictory activities of the multiple state and federal agencies who operate in the area such as : SEDESOL, SRA, PEMEX, CFE, SARH and Reforma Agraria combined with the inefficient state and municipal agencies led me to believe that there is no hope. The only possibility is a decision at the highest level to do a participatory strategic plan with the collaboration of all sectors involved in the area with two main objectives: the protection of the biodiversity of the area and the considerable improvement in the quality of life of the local indigenous population"

This text was read at a meeting of conservationists from all over the world (Grupo de los Cien Internacional) in front of President Salinas. In that occasion he answered my complaint by asking me to serve as his advisor and specifically to help in the Lacandon area.

During the first year of my work in Chiapas, I met with many authorities and was able to recommend some actions to protect the area and to give an opportunity to the indigenous people to participate in the planning of the Lacandon area. Unfortunately my recommendations were not taken seriously. At the end of my first year I felt that I was invited very politely by the Government of Chiapas not to interfere with the business of the Government. The feeling was based in the complete lost of communication with all the authorities. They made me feel unwelcome in Chiapas. People who wanted to consult with me were asked not to do so. I was even attacked by a local newspaper, known to be closely related to the state government, because of my activities in defense of the El Ocote Reserve in Chiapas.

However I did not follow this invitation and continued to work directly with several communities who welcomed me even more



when they were prohibited by the state Government to talk to me. Some of them invited me to serve as one of their advisors for the protection of their forests. I accepted and I am working with them.

The history of the Lacandon Forest is not over. The last fight is on. The zapatistas now, have another responsibility: the protection of the forest resources. In their written demands to the Government they have included the need to protect the natural resources of the Lacandon forest. Good for them.

It is not going to be easy to stop the long waited accumulated demands of so many poor landless people.

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