

The Maya world in movement

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Demanding a stop to the “plundering of our natural wealth,” hundreds of Indians of Maya descent—Tzotzils, Tzeltals, Chols and Tojolabals—rose up in arms against the Mexican government in the early morning of January 1. The Indian uprising took place in Chiapas, one of the states with the greatest natural wealth and highest index of poverty in the country, and revealed the poverty, oppression and lack of prospects experienced by the inhabitants of one of the last remaining tropical forest zones in Mexico: the Lacandon jungle.

The burning of the Cattle Ranchers' Union building in Ocosingo, one of the most important towns in the Lacandon area, is significant. Inhabitants of the Mexican tropics have suffered the advance of extensive cattle raising, seen how the tropical forest is shrinking and watched their lands and most elementary rights dwindle away.

The Indian peoples of Chiapas have experienced the exploitation of their resources as virtual onlookers for centuries. In the words of Subcomandante Marcos of the Zapatista Army of National Liberation (EZLN), “Chiapas has been bleeding to death in a thousand different ways,

paying its tribute to the empires: oil, electricity, cattle, money, coffee, bananas, honey, corn, cocoa, tobacco, sugar, soya, sorghum, melon, mamey fruit, mango, tamarind and avocado, and Chiapas' blood flows through the thousand and one fangs embedded in the throat of the Mexican southeast.”

Chiapas, for example, generates 55% of Mexico's hydroelectric power and is the country's main coffee producer.

Original sin

The tremendous destruction suffered by tropical lands can be attributed to a sort of original sin: the birth of Western civilization in a temperate zone and its expansion to the rest of the world.

The Europeans conquered much of the globe, imposing their way of life and with it their form of using natural resources. When the Spaniards came to the New World, they sought the regions that most resembled their homeland to settle in and recreate their methods of production and cultivation.

Already on his second voyage, Columbus brought plants and animals to America for this purpose.

The Spanish conquerors regarded the luxuriant American tropics as terrifying places, alive with insects, predatory animals and unknown plants whose uses they were ignorant of, and which were therefore nothing more than obstacles for sowing wheat and raising cattle. It was a hostile environment that had to be “conquered” to make it fit for civilization.

Likewise, its inhabitants were regarded as “savages,” souls that had to be rescued and whose knowledge of the environment did not warrant the slightest interest in the conquerors' eyes, except in a very few cases.

Time stands still

The situation has changed very little in this region since the Spaniards' arrival. The Lacandon jungle was inhabited by a non-Maya group, whom the newcomers called *Lacandon* after the name of their main ceremonial center, Lacam Tun. The colonial authorities settled in the high area, with its temperate climate, and there they founded Ciudad Real—now San Cristóbal de las Casas—whence they controlled the entire region.

It was not easy for the Spaniards to subject the Indian peoples of Los Altos, still less the Lacandons, the “disobedient Indians” whom they exterminated. After this, the Lacandon region lay uninhabited for more than a century until, in the early 19th century, a small group of Maya

The recent Indian revolt in Chiapas has highlighted the need for a change in the way natural resources are used in tropical zones. Some alternatives are beginning to emerge from the experiences of groups of organized peasants in the nearby state of Quintana Roo.

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Caribbean Indians migrated to the jungle from the Yucatan peninsula. These are the present-day Lacandons.

The subsequent history of this region is not very different from that of the rest of the wet tropics: irrational extraction of precious woods, opening up to settlements and the establishment of extensive cattle raising, with the deterioration that this type of production entails.

One of the special features of the Lacandon area is the fact that, due to the region's inaccessibility, the extraction of cedar and mahogany did not start until 1860, almost a century after it began in the Antilles. This, however, did not prevent the exploitation of timber from reaching a level similar to that of other regions by the beginning of this century.

Another particular feature has been the persistent exploitation of the Indians in the Los Altos region of Chiapas and the Lacandon area since the installation of the first logging companies to extract wood from the jungle. In *The Rebellion of the Hanged*, Bruno Traven described the inhuman working conditions of the Los Altos Indians and the despicable way they were inveigled into working there.

The complicity between political authorities, the army and the leading families in Chiapas is revealed by this writer of German origin, whose knowledge and descriptions of this region of Mexico are superb.

The 1917 Revolution, the optimistic movement with which Traven's novel ends, did very little to change the conditions of exploitation. Although the properties of several landowners in Porfirio Díaz' time were gradually expropriated, land still tended to be accumulated and the concentration of political power remained intact, as did discrimination against the Indian peoples. The result is that five hundred years after the Conquest, the prevailing situation in Chiapas has a strongly Colonial feel, as though time had stood still in this part of the country.



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Living in ecosystems as complex as the tropical jungle requires knowledge of how they work.

Tropical civilizations

The Lacandon jungle in Chiapas is part of the area known as the Gran Petén, now the second largest area of evergreen forest in the American continent, after the Amazon. And it is in this region, which covers part of Belize, Mexico and Guatemala, that the Maya civilization originated and flourished during its first period, reaching population densities of 750-1000 inhabitants per square mile.

Living in ecosystems as complex as the tropical jungle requires a great deal of knowledge of how they work. The Maya inhabited this land for almost ten centuries thanks to a refined system of water management and the construction of terraces and ridges that enabled them to handle excess water and the flooding it causes in thin soil.

They encouraged the profusion of the most useful plants, managing to grow over one hundred species in a small area. By taking care of the areas of vegetation during their regeneration, they allowed the soil to recover while providing shelter for the white-tailed deer, one of the main sources of protein. They developed a system for handling multiple resources, in keeping with a diverse ecosystem that was little suited to one-crop farming.

The veneration and respect with which they regarded nature, in contrast with the Conquistadors' destructive spirit, can still be seen in a prayer, recorded by the archaeologist E.J. Thompson, that present-day Maya offer before clearing the land to sow corn:

Oh God, my father, my mother, lord of the hills and the valleys, spirit of the jungle, treat me well! I shall do as I have always done. I shall make you an offering so you know I shall not harm your heart. Allow me to do so. I shall disfigure you (destroy your beauty) and plow you to be able to make a living. Let no animal chase me, no serpent, scorpion, nor wasp bite me. Let no tree fall on me (when I cut it down) and let no axe nor machete cut me. I am going to plow you with all my heart.

Descendants of this civilization, the Indians of the Lacandon jungle have produced several initiatives for managing their resources. Coffee growers' unions, credit unions and *ejido* (a form of community land tenure) unions, as well as health and education councils, have sprung up in this area. However, this desire for improvement was not enough in the

A bit of history

History tells us that in the 19th century the American James Adams, who was introduced to gum by Mexican President Santa Anna, had the idea of introducing little balls of gum with flavoring and sugar to the U.S. market. It was an immediate success. Chewing gum became extremely popular. During World War II U.S. soldiers spread the use of gum to all corners of the globe.

At the end of the war, synthetic petrochemical substitutes were discovered. Gum extraction plummeted and only a few companies continued to produce natural gum. However, the demand for natural products in recent years has revived interest in natural gum.

"Natural gum has synergism," says Giuseppe Sozzi, director of Gum Base Co., a leading Italian chewing-gum company, "that makes added flavors longer-lasting. Natural gum is like first-class steak."

It is not known for certain whether the ancient Maya chewed gum, but the Aztecs did. Women and young men chewed gum in private to clean their teeth, while prostitutes and homosexuals chewed it in public, "making loud, clicking noises" to announce their presence.

face of the conditions of marginalization and market difficulties such as the international fall in the price of coffee.

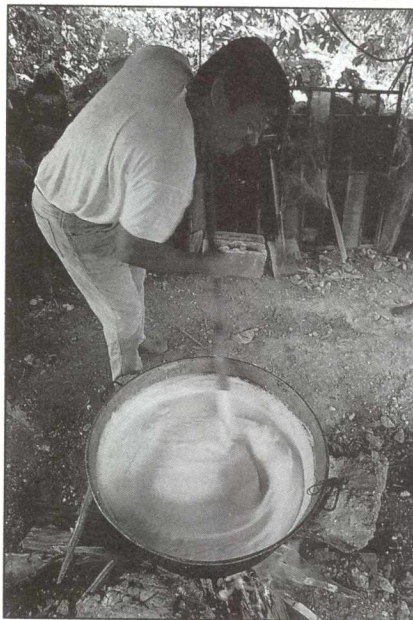
In addition, some orthodox conservationist groups blamed the inhabitants of the jungle for its destruction. The regional organizations' response summarizes their concern: "A true jungle conservation policy should be based on regarding the peasants who inhabit the Lacandon jungle not as destructive animals but as creative people who are not only capable of preserving the jungle but also of making it productive."

As a result of this concern, in September 1993 a forum of peasant organizations was held in San Cristóbal de las Casas. The final declaration speaks for itself: "It is necessary to recognize the importance of the knowledge historically acquired by the Maya culture in order to be able to live in the jungle, by using natural resources adequately for several thousands of years, and to invite the inhabitants of this region to recover the valuable experience of sustained development acquired by their ancestors and other ancient cultures in the world's wet tropical zones. This recognition will serve as proof of the tolerance of diversity and enrich the national culture."

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In another area of this same Maya world, dozens of *ejidos* have pointed out new alternatives for the sustained use of natural resources. The states of Quintana Roo and Campeche, part of the zone that covered the second period of Maya civilization and with a history similar to that of Chiapas—the extraction of fine woods to supply the European market and later gum to supply the U.S. army, which regarded the latter as a strategic material—have been the setting for these novel experiences.

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Stirring the latex.

"We take an interest in looking after the jungle. My grandfather was a gum collector and so was my father, and I've gone on collecting gum here, in the same place," said El Piporro, as we walked through the jungle of the community called Tres Garantías, in the south of Quintana Roo. "We have 110,000 acres of land here. Over half of it is jungle, which is what we call the permanent forestry reserve. Here no one is allowed to raise cattle or plant crops. We extract gum and wood, but you have to know how to do that."

Unlike Chiapas, in this part of the Yucatan peninsula, ownership and exploitation of the forest is in the hands of the peasants themselves, and each community has a clearly-defined forest area. This situation has raised the peasants' awareness, as Piporro himself states: "We know that the forest could disappear, which is why we have to look after it."

There is a story behind this way of looking at things. When foreign companies unlawfully held the concession for these woods, peasants were contracted as day workers and paid a pitiful sum for cutting down trees and extracting gum.

These companies were never concerned about preserving the jungle. They never replanted a single tree nor respected the time allotted for letting the gum trees recover. Herman

Konrad, a Canadian researcher who has studied the history of the region for several decades, calculates that during that period, in the state of Campeche, 20% of the trees never recovered. This meant nearly a million dead trees in 1929 and 1930.

During the '30s, the concessions for these forests were withdrawn from foreign companies and their tenure transferred to local companies. This measure had an immediate beneficial effect on the peasants' standard of living, since income from the sale of gum rose 300% and small settlements were formed that concentrated the population in specific areas. This permitted the introduction of services such as water, schools and sanitary brigades.

Within a few years, the communities were responsible for all gum production and this gave rise to the first producers' cooperative.

Deciding about their own resources

The situation did not change much as regards the extraction of wood, since foreign companies were replaced by private local and state companies.

The qualitative change took place just over a decade ago when the concessions ran out and the communities took over the management of the forests. With the support of enthusiastic forestry technicians, *ejido* members began the first inventories of their resources as the basis for a planned exploitation of the jungle. This led to the Pilot

Forestry Plan, begun with financing from the state government as well as the government of Germany.

A key aspect has been the training of forestry technicians from the communities themselves, which has given them a greater ability to intervene in policy-making. "We have divided the forestry area of our *ejido* into 25 lots," says Francisco Montalvo of the Noh Bec *ejido*. "We know how many trees there are in each one, and what type and size they are. Every year, we only cut down trees from one lot."

A forest inventory enables one to estimate the volume that can be used in each logging cycle. At the same time, work has begun on growth studies of the most important species

An amorous tree



Fulvio Ecardi.

Gum collectors make a zigzag cut to obtain the latex.

"The chewing-gum tree is a very choosy lover, it doesn't offer its gum to just any man," says Don Esteban, a gum collector for more than forty years. Chicle or chewing-gum tree (*Manilkara achras*, formerly *Achras sapota*) is the name given to the tree from which gum is extracted. Native to the Yucatan peninsula, Belize and Petén, Guatemala, it is one of the most common species in these jungles. In some areas, it is possible to find more than seventy-five trees per acre, with some growing to a height of more than 130 feet, with diameters of over 3 feet.

Harvest time coincides with the rainy season, beginning in July and ending in February. The gum collectors use a sharp knife to make a zigzag cut from the base of the trunk to its first branches. The latex flows down these channels and is collected in a hemp bag. "Gum is very tricky. If you've got hot hands, it doesn't flow," warns Don Esteban.

At the end of the day, the latex is collected from the bags, filtered and boiled in large shallow metal pans, where it has to be stirred constantly. The moisture gradually evaporates and the mixture grows sticky until it is finally cooked. Once it has cooled, it is poured into wooden molds covered in soap to prevent sticking. The resulting bricks are known as cakes. Each gum collector puts his initials on the cakes he makes.

Gum collectors have undoubtedly made the greatest contribution to the history and culture of the region. Excellent naturalists, they know the uses of an infinite number of plants, animals' habits, where to find sweet water supplies, and of course the whereabouts of archaeological sites still covered by vegetation.

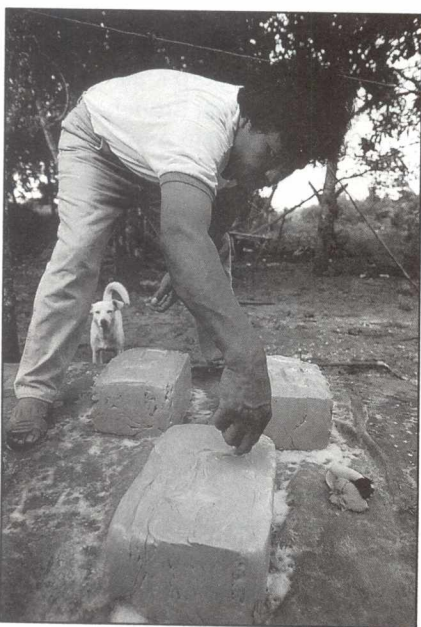
Independent in their working habits, nearly five thousand gum collectors roam through these jungles every season. Watching how they approach the trees and touch them, how they climb up and make a cut for the latex to flow down gives one a glimpse of a close and not always easy relationship between man and nature.

in the region, such as mahogany, and tree nurseries of various species have been created to produce saplings for reforesting the clearings left when mature trees are cut down.

This type of forestry management has won the producers international recognition for the preservation of the jungle and Green Cross certification for products obtained using sustainable methods.

Grass-roots participation in the management and exploitation of the forests has yielded results. Nine thousand peasant families have grouped together into five civil partnerships, in which there is a system of technical forestry assessment that also facilitates the commercialization of the area's various products. The profits obtained thanks to this organization have enabled several *ejidos* to build their own sawmills, purchase heavy machinery to extract wood and pave streets, acquire telecommunications equipment and build parks in the towns.

"The problem we have to solve at the moment," explains Alfonso Argüelles, technical director of these



The bricks of gum are known as cakes.



Piling up mahogany boards.

partnerships, "is the lack of a market for the great variety of wood."

The forests of Quintana Roo are home to more than 120 different timber-yielding species, with a broad range of consistencies and colors. There are extremely hard woods, such as the *katalox*, very soft ones such as the *sac chaka* and others with red sap, such as the *chaká rojo*. Out of this great diversity, mahogany and cedar continue to corner the market.

"Something we have tried to do for some time now is to increase the value of the wood by transforming it into manufactured goods," continued Alfonso. "But to do so, we need machines and tools as well as training for *ejido* members. This takes time, and people need to eat while they are being trained."

New social players

Nowadays it has become almost fashionable to talk about sustained development. But who is implementing it, and where? The International Tropical Timber Organization (ITTO)—based in Yokohama, Japan—calculates that of all the world's tropical timber, less than 0.2 per cent is extracted using sustainable methods. In fact, one of ITTO's aims is for all

the tropical wood commercialized in the world to be harvested using sustainable methods, and so certified, by the year 2000.

It has been proven that in the Latin American tropics, extensive cattle raising is the principal cause of deforestation and the loss of these areas' immense biological diversity. Numerous Indian peoples on this continent have taught us that a more diversified use of these ecosystems is the most efficient means of maintaining tropical forests.

The more than 120 tree species in the Quintana Roo forests, the 100 species in every two and a half acres of the Lacandon forest, gum and other products that also have a market—such as allspice and the Camedara palm—are only part of the cornucopia of raw materials that the jungles offer. The Indian descendants of the Maya are aware of this potential and have used it for a long time.

In this rebirth of the Indian peoples, the groups that already have use and control over their natural resources will emerge as new social players in the search for sustained—or equitable, as it is called in Chiapas—development. We have a lot to learn from them ✘