## The Tropical Dry Forest of the Huautla Mountains

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n the Morelos towns bordering the mountains of Guerrero survives a popular collective fancy based on the strange animals that live there, a fancy seemingly anachronistic in the twenty-first century. The most widespread and strangest legend is about a serpent local residents call tilcuate. This reptile has the peculiarity of feeding on human milk. The *tilcuate* comes up to a woman nursing her child, exhales a mist that lulls her into a reverie and begins suckling at her breast. To keep the baby from crying and waking her up, the tilcuate puts his tail in its mouth.

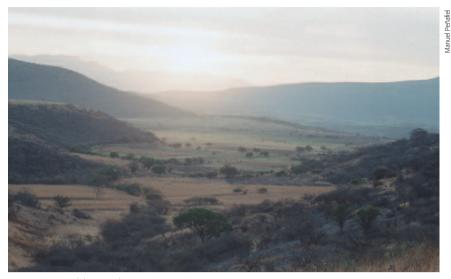
A cousin of the *tilcuate*, the *heloderma*, a relative of the gila monster that the locals call a "scorpion," has a bad reputation linked to its own death. Wherever it dies, so the legend goes, nothing will ever grow, nothing will ever blossom again. And whoever touches the body is to be pitied because he or she will have brought about his or her own demise by doing so.

People say that when the *mazacua*ta snake is old, it grows wings and goes from one corral to the next eating cattle. The chameleon is reputed to be the best cure for a woman who does not know how to make tortillas; if she will only pet its back, she will be able to make any culinary delight her man might require.

These are the Huautla Mountains, a region whose biodiversity merited its being declared a biosphere reserve. "I have picked up a scorpion [*heloderma*]. In fact, I have bathed several of them and I'm still not dead," says Raymundo Castro Trejo, a native of the area, who works as a para-taxonomist at the reserve's center. "We're trying to get local inhabitants and tourists to shake their fear and repugnance for reptiles as part of our environmental education program. We mustn't forget that our country is the world's first in reptile species. Our job is to conserve that," says Belinda Maldonado, assistant director of the Huautla Mountains Center for Environmental Education and Research (CEAMISH), directed by Dr. Óscar Dorado.

This region, soaked in history, where the flag bird or *coa*, a relative of the mythical Quetzal, lives, is almost three hours from Cuernavaca on the Jojutla highway. The ancient Tlahuicas, inhabitants of Morelos, developed

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Panoramic view of the Huautla Mountains.

These cactii are treasures of the ecological reserve.

a vast culture confirmed by the archaeological finds the local residents have discovered in the area. It was here that General Emiliano Zapata made his headquarters and shared a house with his two wives, Luz and Goya Zúñiga. Zapata knew that the government would hesitate to enter this "forest," says 103-year-old Audiaz Anzurez, a Zapatista veteran. It is called a forest because of its diversity, "low" because of the size of its trees, and "caducous" because the trees lose their leaves during the dry months from October to May.

This region boasts 937 species of plants, some unique to the area and unknown to scientists until recently. It also has a number of culturally important plants, among them the ancient copal used in pre-Hispanic ceremonies. According to Belinda Maldonado, there are 125 types of legumes, 325 species of butterflies, 180 bird species, 66 species of mammals (including almost 30 kinds of bats), five of Mexico's six species of felines (the *yaguarundi*, the mountain lion, the bobcat, the *tigrillo* and the ocelot), 52 species of reptiles, 11 of amphibians and 8 of fish, two of which (the carp and the perch) were introduced by men.

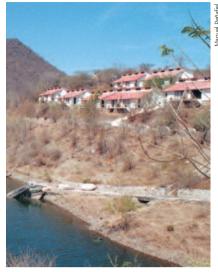
"This kind of forest has been neglected because of the height of its vegetation," says Maldonado. "In Mexico there are only three reserves with these characteristics: Huautla: Chamela, which is smaller than Huautla, in the state of Jalisco; and Sierra Gorda, in the state of Querétaro." In addition to the dry forest, Morelos has other ecological reserves: the Montenegro Mountains; the Tepozteco National Park; the Cacahuamilpa Caves National Park; and the Chichinautzin Biological Corridor, the environs of which are controlled by illicit logging mafias despite its being an ecological area, but where the government is powerless to avert deforestation.

This low forest or caducous tropical forest was declared a state ecological conservation area in 1993.<sup>1</sup>

Since then, the Morelos State Autonomous University has overseen its protection.<sup>2</sup> The CEAMISH has two facilities: one is on the Chamilpa campus in Cuernavaca, and the other is the biological station in the mountains which has infrastructure for housing scientists and personnel, as well as academic and family ecotourism groups. Its mission is to preserve Mexico's dry tropical regions through scientific research, teaching, environmental education and participatory planning.

The conservation of this reserve requires local resident participation. For this, they must become aware of the area's importance and have the means of subsistence they need so they do not fall into over-exploiting the ecosystem. To that end, alternative programs to the cattle ranching that erodes and deforests the area have been developed. For example, local residents have been encouraged to explore their artistic capabilities with a ceramic craft program. Another program that is beginning to see results is the cultivation of edible mushrooms (oreja de cazahuate). These alternative forms of making a living aim to create environmental harmony in the area and improve family incomes, which have been hard hit since the bankruptcy of the Huautla mine.

From the colonial period on, Huautla has had silver, zinc, lead and copper





The mountain biological station.

Don Audiaz Anzurez Soto remembers when Emiliano Zapata came through the Huautla Mountains.

mines. Today these mines have become attractions for the blossoming CEAMISHorganized ecotourism trade. The mines were first run by the Spanish, later by Italians, English, Americans, Canadians and, finally, by a Mexican and an Argentinean who went bankrupt, leaving local residents jobless.

"They never gave us the severance pay they had promised," says Raymundo Castro, a 10-year employee of the mine, who knows the region well. "Then other people came to take away all the iron pilings and metal out of the tunnels to sell it, and they didn't pay us either." That was how emigration to the United States began. Today, not a single family in the area is without a relative north of the border.

Despite their poverty, the inhabitants continue to be very likeable and friendly. Doña Celsa Morán, for example, makes her living by cooking for visitors. We sat down in her kitchen to chat and savor some delicious beans cooked on a wood stove, with red hot sauce, *cecina* (dried, salted meat) and hand-made tortillas. Recalling the legend of the chameleon, we asked Doña Celsa if she had petted one to "make good tortillas," but she said no. She did, however, tell us the *tilcuate's* latest bit of mischief: "A man from Xochipala, a nearby town, was surprised to see that his wife cooked him perch every day. He asked her who brought the fish and she said she had thought he had. The man thought his wife had a lover who was bringing her fresh perch daily, so he decided to hide and wait for his rival to arrive. How surprised he was when he saw the *tilcuate* saunter into the house with a full belly, loaded with perch that he soon spit out on the table. Without blinking an eye, the jealous man killed the reptile with his machete."

"Tell us, Doña Celsa, what did the *tilcuate* have to do with the perch?" asked a rural teacher who was there.

"Oh, perch are good for making milk. Those *tilcuates* are no fools. They know that perch are full of vitamins, and that's why he brought them."

These beliefs have lasted down through the centuries. People enjoy themselves thoroughly telling stories that are highlights in the towns and hamlets where almost nothing ever happens. However, the influence of migrants, who come home bringing customs from our neighbors to the north, plus a plethora of television commercials endanger the survival of these traditions.

The CEAMISH staff are making desperate efforts to preserve them. Given the characteristics of the reserve, deforestation has not been as relentless as in the Chichinautzin Biological Corridor, the famous Zempoala Lagoons area, where little by little loggers have surrounded the area. But both the culture and the ecosystem are in danger of being lost. **MM** 

## NOTES

<sup>1</sup> In 1999 it was declared a biosphere reserve and the 31,000 hectares protected in 1993 increased to 59,030, the size of the current reserve.

<sup>&</sup>lt;sup>2</sup> The university has received support from different organizations, among them, the National Council for Science and Technology (Conacyt), the British Council, the National Council for the Conservation of the Biosphere (Conabio) and the Mexican Nature Conservation Fund (FMCN).