



October 2007

## Maya Ethno-Botany Field Trip

Mucbilha' (Chisec area, Alta Verapaz)



Dr. Nicholas Hellmuth





Eduardo Sacayon (officer of FLAAR Mesoamerica and manager of FLAAR projects involving botany, ecology, natural resources, photography, printing), Silvia Sevilla Nebot, a volunteer from Spain who worked at a village cooperative organization outside Coban, Dr Nicholas Hellmuth (FLAAR), and Jennifer Costanza volunteer from Brown University who worked with Guatemalan NGO's in the Highland area.



Since it was a hike of about two kilometers, we had to decide which equipment to bring, and which to leave in the car.



As you can see, the vegetation is high tropical rain forest. This is the path that zig-zags down one of the steep hills to the valley where the village is located. The road did not reach the village.



The children of the farmer were very helpful in harvesting cacao pods. The one child (on the front cover) climbed up every tree to harvest cacao for us. That's his younger brother and sister in the lower photo.





The highlights on Silvia's face is not some terrible jungle disease, its just sunlight coming down through the leaves. We are under the shade trees that protect the cacao trees. You can see more sunlight on Nicholas' arm and on the rock behind Silvia.



The container at the left holds ground up cacao. This is technically not yet chocolate, but cacao only. There are four Cacao species in Guatemala reported by the Flora of Guatemala, *Theobroma angustifolia*, *T. bicolor*, *T. ovatifolia* and *T.cacao* or cacao criole which was the one used by the mayas.



The young man at the right is the guide, Ricardo Coc Choc. In the bottom photo he is pulling open the pod to reveal the sweet pulp that surrounds the seeds. This pulp is the most delicious part of the fruit (and it tastes nothing like chocolate, remember, the chocolate taste is only from the seeds, and only after they are processed).





Here are the bright red seeds of tzite, arbol de pito, coral tree (*Erythrina corallodendron*, Eduardo Sacayon, biologist who is the manager of field projects at FLAAR, indicates that although a “tree” this is a member of the bean family.

These seeds are used for divination by the Highland Maya still today, and are conspicuously mentioned in the saga of the Popol Vuh.





The Popol Vuh, the sacred book of the Maya, clearly indicates that the head of the defeated ballplayer is hung in a calabash tree. That would make it a jicaro *Crescentia cujete* or morro *Crescentia alata*.

But if you look at painted scenes of Preclassic and Classic Lowland Maya times, the tree with the sacred bird deity perched in it appears more like a cacao tree. Cacao also has fruits from the trunk.

The even more common tree that has fruits from the trunk, and which is of a size closer to that of a human head, would of course be the papaya tree.

My conclusion is that each area of the Maya cultures selected a slightly different tree. Cacao, for example, is not commonly grown in the Highland Quiche area, so it's natural that the "decapitated head tree" would be a calabash (*Crescentia cujete*).

The tree here is a morro, with a fruit that Wikipedia aptly describes as the size and shape of a cannonball.





Palo-jote, muliche, indio desnudo, so called because the “skin” is peeling off. This is the typical appearance of this common tree. It grows in many parts of Guatemala and adjacent tropical Central America. This tree also produces an incense, indeed there are about five trees in Guatemala that produce incense in addition to copal (Pom in the Maya languages).



A vanilla orchid plant starting up a tree; this vanilla orchid is about two years old. It will take four years before the vanilla can be harvested.





If you are a visitor to Guatemala we highly recommend you visit this village to experience both natural beauty, to learn about Maya ethno-botany, to see the caves (that's a separate FLAAR Report), and to enjoy being in a peaceful friendly part of Central America



The Mucbilha´ community manages a small hotel offering bungalows to spend the night, all the money is used to support the well being of the villagers so they can continue with the eco-tourism activities. This is part of the community development program of the area.





Museum-like display. This is what causes FLAAR to spend so much time studying wide-format inkjet printers. We hope to be better able to assist NGOs and village community organizations such as this with how to do museum displays and exterior signage for explaining things to tourists. Tourists represent income for the people of this region.



The owner of the cacao grove showed us how he made baskets.  
These you can buy and take home as souvenirs.

If you would like to visit Mucbilha´ please contact Ricardo Coc Choc at: [reservasiqmuc@yahoo.es](mailto:reservasiqmuc@yahoo.es)  
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Or also you can contact AGRETUCHI (Asociacion Gremial de Turimso de Chisec), at: [info@puertamundomaya.com](mailto:info@puertamundomaya.com)  
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