

Progress report of the research project

The chamal (*Dioon edule* Lindl.) in the state of San Luis Potosí

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Introduction

Dioon edule is a widely distributed species in the Huasteca zone, state of San Luis Potosi, Mexico, where its habitat has become deteriorated and populations reduced since crops and cattle breeding incursion. The purpose of the present study is to know what the situation of chamal habitat and natural populations is, what ethnobotany categories can be recognized, how traditional seeds cooking process is developed and how toxins could affect people that eat them. In this order, we will perform the chamal localities situation, habitat characterization and populations' structure analysis; ethnobotanical exploration with male key informants and interviews with housewives, and; neurotoxic effect experiment and neurological tests with Wistar rats in the laboratory. The project officially started in August, and the activities and financial progress occurred as follows.

Activities

In the first period, we explored La Palma region to locate chamal (*Dioon edule*) populations in an altitudinal range. At this time, there have been located five sites with different habitat conservation scale, between 400 and 1200 m of elevation: Agua Buena, Rincón de los Naranjos, Gamotes, Santa Catarina and Santa María Acapulco. The vegetation in the study area ranged from tropical dry forest in the lower elevations to oak forest in the higher elevation. Once located, we started population structure characterization in Gamotes site (~1200 m elevation) and later population structure was characterized in Agua Buena site (~400 m elevation). Three enthusiastic students from the University joined the project in order to help us with the populations structure characterization field work and at the same time they are carrying out their social service. They are Gabriel Rubio, Efraín Hernández and Raymundo Mora; the first two are native from the region, even they are not *xi'oi*, but this have been very useful and interesting because they know a lot of vernacular names of the plants. Characterization of the sites flora have been carried out collecting species that will be placed in the Instituto de Investigación de Zonas Desérticas herbarium "Isidro Palacios" (SLPM) after their identification by the curator, Mr. José García, that is collaborating with the project. Besides, soil samples have been collected to be characterized in the Instituto de Investigación de Zonas Desérticas soil and water pollution laboratory. Updated climate data have been collected from meteorological specialized literature donated by the National Institute of Forestry, Agricultural and Animal Research.

In October, we did attend the Mexican Botanical Congress where we met some researchers that are developing projects in the states of Chiapas and Oaxaca about population structure of *Zamia* and *Dioon* pollinization.

Ethnobotanical data collection will begin in January 2008, because this is the time of cone harvest for meal purposes. Another social service student will join the project in this period in order to help data collecting. Once traditional seeds cooking process have been described, the toxicological experiment will be carried out.

Activities report:

August 2007

Exploration of region to locate *D. edule* populations. Five sites were located.

September 2007

Population structure characterization in Gamotes site (~1200 m elevation). Revision of literature.

October 2007

Population structure characterization in Agua Buena site (~400 m elevation). Revision of literature.



Gamotes site. Laura Yáñez is explaining how to measure chamal plants to Gabriel Rubio.



Agua Buena site. Our fieldwork team: Efraín Hernández, Gabriel Rubio and Raymundo Mora.

Financial report:

Activity	Amount (US\$)
Expenses for field routes exploration and populations' measurements	240
Garmin® GPS	380
Measurement equipment (leather globes, stakes, string)	30
Total Amount	650