Progress report of the research project

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

Contact:

Laura Yáñez Espinosa (TCS member)
lyaneze@uaslp.mx

Javier Fortanelli Martínez
fortanel@uaslp.mx

Erika García Chávez
erika.garcia@uaslp.mx

Universidad Autónoma de San Luis Potosí
Instituto de Investigación de Zonas Desérticas
Altair no. 200
Col. del Llano
San Luis Potosí, San Luis Potosí,
78377 MEXICO
Ph: +52(444)8422359
Fax: +52(444)8422359 ext. 106

February, 2008.
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 second period it was necessary to return to the Gamotes site to verify some species from the local flora. The research project was presented in the Instituto de Investigación de Zonas Desérticas Symposium for research proposals and advances held every half-yearly, with success. During the first two weeks of December, Dr. Fortanelli explored *xi’oi* and mestizo villages where there are evidence of utilization of Chamal and made contact with people from there. Two weeks in December and one week in January holiday season at the University interrupted the project activities during this month, because vehicles were not available by the University administration office. During January, we carried out population structure characterization in Rincón de los Naranjos site (~350 m elevation). First ethnobotany informant interviews were carried out in *xi’oi* villages with direction of Dr. Fortanelli assisted by a female student to facilitate the interviews with housewives during the last week of January. Information recorded is now being processed to select the most useful to design the toxicology procedure for the neurotoxic experiment. It will be necessary to return during April to collect female cones to reproduce the *xi’oi* and mestizo recipes and start the neurotoxic experiment. We obtained an official permission from the Mexican authorities last January to collect female cones for the toxicology experiment and, additionally we collected female cones in the Rincón de los Naranjos and Agua Buena sites to analyze the seed production as a complementary activity for population structure. In the Gamotes site mature cones production was present in September and during January there were only seeds with
disintegrated female cones on the floor. During the next three months we will finish the interviews with housewives and other informants in other villages and the chamal population structure sites characterization. Particularly, Laura Yáñez will submit the population structure characterization research proposal to the Universidad Autónoma de San Luis Potosí annual financial support announcement. If the proposal result is positive next March, we will try to extend the sites number for characterization.

Activities report:

**November 2007**
Return to the Gamotes site to verify some species from the local flora. Data results integration and description of the study sites with the help of literature.

**December 2007**
Presentation of the research project in the Instituto de Investigación de Zonas Desérticas Symposium for research proposals and advances. Exploration and contact with Xi’oi and mestizo villages where chamal is consumed in the form of tamales and atole. Two weeks holiday season.

**January 2008**
Population structure characterization in Rincón de los Naranjos site (~340 m elevation). Female cones collection in the Rincón de los Naranjos and Agua Buena sites. First ethnobotany interviews with male informants and housewives.

Financial report:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Amount (US$)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expenses for field routes exploration and populations’ measurements</td>
<td>240</td>
</tr>
<tr>
<td>Garmin® GPS</td>
<td>380</td>
</tr>
<tr>
<td>Measurement equipment (leather gloves, stakes, string)</td>
<td>30</td>
</tr>
<tr>
<td><strong>August 2007 - October 2007</strong> Subtotal</td>
<td><strong>650</strong></td>
</tr>
<tr>
<td>Expenses for field routes exploration and populations’ measurements</td>
<td>300</td>
</tr>
<tr>
<td>Expenses for accommodation and interviews with informants</td>
<td>500</td>
</tr>
<tr>
<td><strong>November 2007 – January 2008</strong> Subtotal</td>
<td><strong>800</strong></td>
</tr>
<tr>
<td><strong>Total Amount</strong></td>
<td><strong>1450</strong></td>
</tr>
</tbody>
</table>