USE OF MEDICINAL PLANTS BY THE VILLAGERS OF TAPOTZINGO, NACAJUCA, TABASCO, MEXICO.

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Abstract

Health services are one of the most pressing needs in the communities of Mexico and Tabasco, this is because in various rural regions do not have affordable health care or economic resources to access this service in particular. These problems occur primarily the indigenous groups Chontals of Tabasco. From 2009 to 2011, we conducted an ethnobotanical research in five villages in the municipality of Nacajuca among which the village of Tapotzingo, where is concentrated the greater presence of indigenous groups, Tabasco Chontal.

Keywords: Medicinal Plants, villagers, Mexico

Background

The use of traditional medicine in the treatment of diseases, a practice that has been carried out since ancient times. These activities have undergone profound changes and the values that people have in relation to plants is disappearing with dizzying speed [2]. At present, the use of medicinal plants gradually decreases, while traditional knowledge is affected by the scientific revolution, losing much of the cultural heritage and natural resources. This is generated by various causes of socioeconomic that affect the continuity and reproduction of knowledge. Currently there is a strong tendency to change traditional ways of collecting information, developing methods that allow the researcher to describe and quantitatively analyze the patterns of use of medicinal plants.

This paper is a contribution to the knowledge of medicinal plants of Tabasco providing information on Nacajuca Tapotzingo village, Tabasco. Taking aim to identify and inventory the medicinal species used by the people and traditional healers in a region Chontal Maya Nacajuca Township as well as gather information from each species (common name, use, part used, preparation methods, routes of administration).

Methods

The research was carried on the town Tapotzingo Nacajuca, which is located within the path of the Chontal, northwest of the capital city, a distance of 6 km. It is located at 18 ° 12 '15"north latitude and 93 º 01' 04"west longitude from Greenwich. The municipality of Nacajuca is located within the region of the Chontalpa characteristic of agricultural regions and cultures of straw (*Cyperus canus*), this community has the climatic limits an average

temperature of about between 30 and 64 ° C, an average annual rainfall of 1800 to 2000 mm per year and recorded an altitude 10 m. msn [7]. In Tapotzingo there is a wide variety of fruit trees, high quality timber and medicinal plants which are a huge potential in the region.

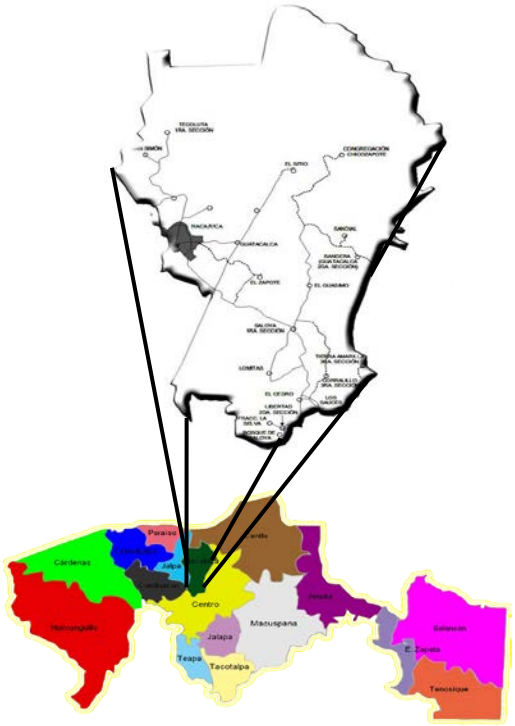


Figure 1. Location of the study area

A) Sample selection

To carry out this research related to knowledge and traditional use of medicinal plants by the Chontal Maya, it was necessary to analyze the state of Tabasco municipalities had the largest presence of ethnic groups who spoke the Chontal language, using as criteria are the people who may have more knowledge about medicinal plants.

Then he began to select informants with whom we worked through the snowball technique [6], which consists of selecting an initial sample of individuals or basic in every interview and establish what new people in the study population must meet in order to integrate the full sample.

The methodology applied is a model of Ethnobotany method, which consists of the population get more information from its active participation in data collection stage.

B) Fieldwork

The first step was the initial introduction to the community to establish contact with the informants of the population and give reasons for our presence at the scene explaining the purpose and duration of work. Were selected and interviewed persons recommended only for their knowledge in the use of medicinal plants for maximum quality and reliability of knowledge.

The first talks with informants was developed according to the proposed by Gimenez [5], where the interest was approaching the sense that they have observed actions in an attempt to approach the interpretations do people every day.

Interviews were conducted open type, closed or directed interview using a questionnaire as a guide where biological data are presented both as an ethnobotanical.

The collection of plant material was performed with the company of at least one of the informants to identify the medicinal plants he knew, all the information referred to each was recorded and completed the interviews.

Results and discussion

This study found that both men and women differ in their knowledge about the use of plants, since in talks conducted with the interviewees mentioned that people Tapotzingo most frequently used medicinal plants their diseases are women. However, men provided more information in relation to medicinal plants, suggesting a knowledge linked to their daily activities, something that agrees with [1] and [4]. The lack of medical care at night in Tapotzingo, high costs thereof, the side effects of chemical drugs and natural tendency to make the community come to medicinal plants and continue to believe in folk medicine. According [8], as they grow older fans of the popular alternative treatments, revealing limited access to health services for people who do this to be affordable for your pocket, or the massive response those who distrust conventional medicine.

We identified a total of 106 plant species, grouped into 50 families, the most important according to the number of genera and species: Asteraceae, Euphorbiaceae, Fabaceae, Lamiaceae and Rutaceae among others. The best represented genera are *Citrus* (3 spp.) *Cassia* (2 spp.) *Cucurbita* (2 spp.) *Kalanchoe* (2 spp.) *Lippia* (2 spp.) *Tagetes* (2 spp.) *Tradescantia*(2spp.).

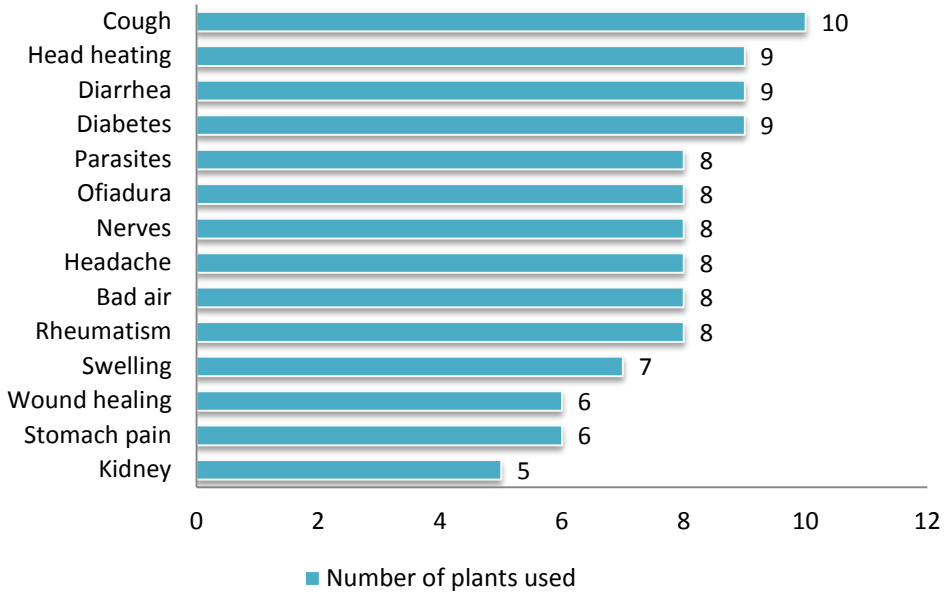
Interestingly, the best represented families are also consistent with the most important of the so-called ‘‘Weeds’’ (10) which indicates that many of the species found thrive in disturbed areas. This is logical if we consider that the habitat in which they were collected has precisely these characteristics. 35% belong to this group, 49% are domesticated or encouraged, and the rest 16% is species that are purchased in the market because they are not in the area. Esto coincide con lo que menciona [3] en su informe sobre la biodiversidad.

Recorded flora of the Asteraceae family was predominant it is not surprising as this is the largest family of vascular plants in the number of genera and species are concerned [9] and are the predominant element of a large number of secondary communities also known secondary metabolites present in a large number of species in this family.

a) Classification of species according to their medicinal use

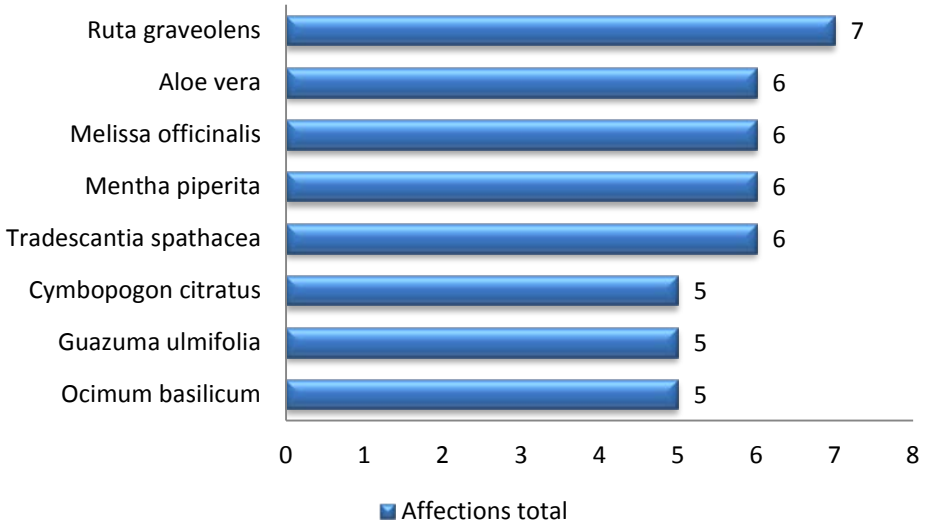
Information was obtained on the medicinal uses of species, the same that are used in 93 conditions, among which are cough, diabetes, ofiadura, heating, headache, diarrhea, headache, stomach pain, nervousness, rheumatism and bad air as the most common in the village.

Graph 1 displays the number of species for each disease category being among most common species cough, *Plecthranthus amboinicus*, *Cassia occidentalis* and *Epaltes mexicana* among others. For heating head *Hybanthus attenuatus, Hampea macrocarpa* and *Ocimum basilicum*. For diarrhea *Annona muricata, Psidium guajaba Guazuma ulmifolia* and Diabetes *Cecropia obtusifolia, Tabebuia rosea* and *Citrus sinensis.*



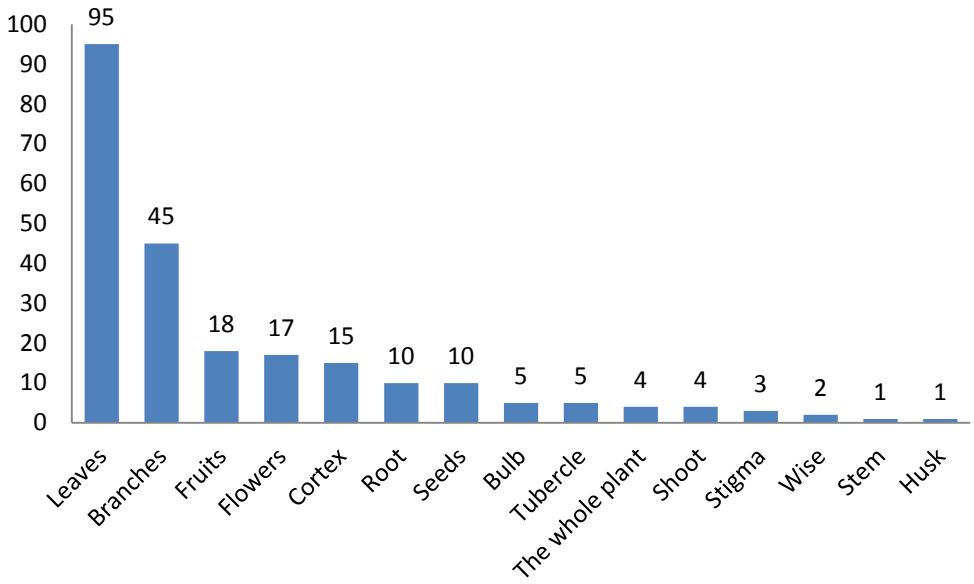
Graph 1. Affections can be treated with different plants

Similarly, there are species that are used to treat different affections, such as the red maguey (*Tradescantia spathacea*), lemon balm (*Melissa officinalis*), rue (*Ruta graveolens*) and peppermint (*Mentha piperita*), among others (Graph 2).



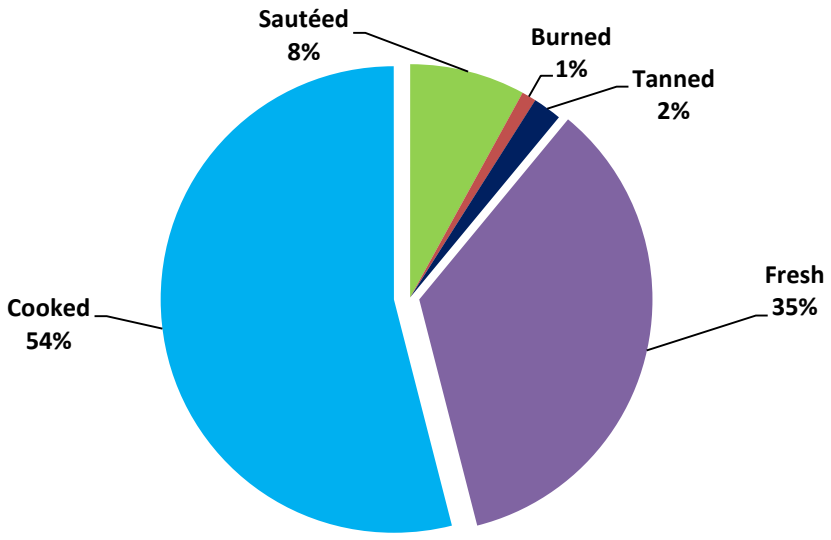
Graph 2. Species that can be used for different affections

Of organs and secretions mentioned by informants to the preparation of remedies, the leaves are the most used with 95 spp, branches (which consists of a fragment composed of part of the stem, leaf and / or fruit) is the ranks second with 45 spp, followed by fruits with 18 spp and flowers with 17 spp. (Graph 3)



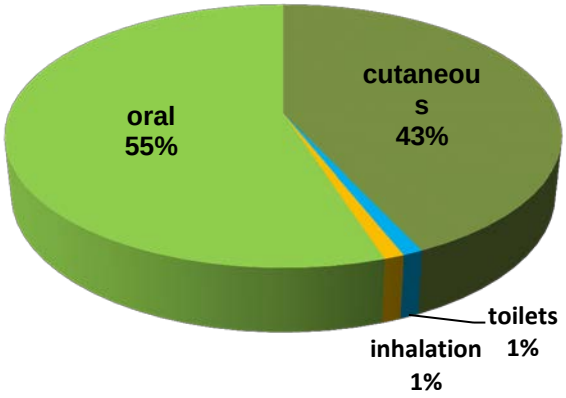
Graph 3. Parts of medicinal plants used in the Tapotzingo town.

The most common way to prepare remedies to manage the cooking (54%), which is boiled for a period of 5 to 15 minutes the appropriate organ of the plant, the fresh organ (35%) and sauteed (8%) are the most common forms of preparation, although there are also those who tan and others burn them (Graph 4).



Graph 4. Method of preparation of medicinal plants found in the town Tapotzingo

With regard to the route of administration stands intake (parenteral administration) with 55% and local topical application on skin"Poultices, fomentations, etc. "With 43%, the rest are administered in a wide variety to a lesser extent, those shown in graph 5.



Graph 5. Route of administration of medicinal plants found in Tapotzingo

Finally a way to get the medicinal plants by people of Tapotzingo is very diverse, with 48% cultivate their plants in their yards or backyards, however another 28% are bought in markets or with the neighbors because they do not have them at home. A 23% collected in the field, either on roadsides or in acahuales and only 1% get them gifts from their neighbors or family members

Conclusion

The information obtained in this study is a source of basic knowledge that are the basis for the domestication, conservation and management of vegetables resources.

It was found that knowledge about the use of medicinal plants is found mainly in people over 50 years, except in rare cases, where women play a key role.

The highest proportions of medicinal species reported in this paper are used to relieve respiratory and gastrointestinal ailments bronco.

Importantly, even though above mentioned that some species possess certain compounds and thus perhaps also some pharmacological effects, phytochemical studies are needed for certain species

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