

Ethnoecology of *Achmea Magdalenae* (Bromeliaceae) A Participatory investigation into the Sustainable Harvest and Conservation of a Non Timber Rainforest Product.

It is a concentrated compendium of a very Extensive research thesis of 341 pages prepared in 2000 by Tamara Ticktin between Chinanteca area in Oaxaca and the community of Venustiano Carranza on the Tatahuicapan Municipality of Juarez in the “Sierra de Santa Marta” on the side of the state of Veracruz to obtain the title of Doctor of Philosophy supported by the department of plant SCINCE McGill University in Montreal Canada.

The Sierra de Santa Marta (or Soteapan) is the largest protected area in the region of “Los Tuxtlas” in Veracruz, but also the most marginalized

The History of Ixtle in Mexico.

Achmea Magdalenae known as ixtle or pita in Mexico, is a Perennial herb and terrestrial member of the bromeliaceae.

It has long spiny leaves that grow to 3.5 m in length and is found in dense, and sometimes monospecific clusters along streams in swampy areas and hillsides in lowland neotropical rainforest, from Mexico to Ecuador.

The long white fiber extracted from its leaves is strong, durable, resistant to salt water, and has been employed throughout all the tropical region in a wide range of uses. In Mexico, indigenous groups used Ixtle to make ropes, fishing nets, fishing lines, bags, fans, sandals, sewing thread and strings for musical instruments, especially the famous jaranas of Veracruz musicians. The Nahuas of Veracruz utilized it to make their traditional fajas (Sashes) as well as to make rustic clothes.

In the 19th century, Ixtle fiber was also used to manufacture paper. The majagua, or what remains of the leaf once the fiber has been removed, was braided in order to make hammocks and mats. The thorns of ixtle leaves were employed as needles and pins and the juice from the leaves was used as a caustic for wounds.

Ixtle fruit, which has a taste similar to pineapple, was also consumed. In both Mexico and Guatemala, a variety with longitudinal stripes of red white and green (*Achmea Magdalenae* var. *quadricolor* M.B. Foster) was cultivated as an ornamental.

Depending on the region and on the indigenous group, Ixtle fiber was either extracted by rasping the leaves with a sharp bone by retting the leaves in weather for a period of about 20 days, or by pounding the leaves with rocks.

In Mexico into the chinantla region of Oaxaca was the main seat of a flourishing ixtle cottage industry from pre-colonial times until the 20th century. Reports dating from the

1500s recount that the fiber produced in the Chinantla's Rainforest was valued and bought in cities as far away as Oaxaca and Veracruz.

In fact some historians make reference to the existence of over 1000 Plantations in 1831 in just one region of the southern region some others historians make reviews of the early reports of ixtle in the literature and they find descriptions reports of ixtle and described the chinantla's vibrant ixtle industry in the 1930's nothing that most of the fibers produced was sold to Zapotecas merchants. These merchants employed ixtle for stitching leather work and sold it in Zapotecas centers and cities.

In others parts of the Chinantla, the fiber was sold and used locally until the 1970's the primary economic activity of many lowland Chinantenco was the production and elaboration of ixtle fishing nets. These were sold to Upland communities where the fiber could not be produced.

History of commercial extraction was developed because the importance of ixtle as a high quality, marine salt water resistant fiber was not lost on the Europeans who employed it to make rope on the ships that crossed the Atlantic Ocean. During the colonial era and into the 19th century, "Colombian pita" or "silk grass" as it was known in Europe, was extracted in vast quantities from lowland tropical forest along the Caribbean coast of Latin America, especially from British Honduras and Colombia, and exported to Europe.

In Mexico the industry become so important that by the mid 1800's it was the most important export product of Veracruz. Although reports from both the Chinantla and from Veracruz indicate that cultivation had decreased the quantity of spines on the leaves such export production was extracted from wild populations.

The Europeans discovered Ixtle's potential as an industrial hard fiber in the early 1900's after experiments showed the fiber to have exceptional breaking strain, tenacity and resistance to alkaline hydrolysis.

It was thought it would be a premium fiber for fine twine and cordage as well as for textiles.

During The First World War it was reputed to be used in the construction of the wings of German airplanes.

Because ixtle grew so abundantly in Latin America, in 1918 a syndicate of English companies put the trade name "Arghan" on the plant in an attempt to conceal its identity and market it as a new fiber plant that could only be produced in the English Colonies.

This syndicate was given large concessions of land by governments of the Malay Peninsula and later of Ceylon, but plantation in both regions failed apparently because they could not produce fiber of the same quality as in Latin America.

In any case by 1923 American Botanists had discovered that Arghan was actually Ixtle, and with the failure of the plantations and the introduction of synthetic fibers by the middles 20th century, the demand for ixtle fiber fell. In the early 1970's local trade of

ixtle commonly known as "Pita" in American territories, and with the failure of the ixtle plantations accelerated for practical options in search for synthetic materials starting the introduction of synthetic fibers in the mid-twentieth century, which reduced demand for sisal fibers .

In the early 1970's main ixtle business focused is only attributed to a small portion of leather shops and saddlers that used for embroidery onto leather items needed for such purposes the same fiber but more refined in washing up to a bright bleached silver pearl to highlight the embroidery where is grafted into cow leather purifying the piteado art activity that was used on those works since the colonial period were was exported to Europe for its beauty especially thru Spain. Then after the 1940 this art work is highly appreciate in valued among the growing Hispanic community in the United States of America.