



The Popular Tradition

No. 145

YEAR 2003

The Ancestral and Remarkable Tules from San Antonio Aguas Calientes, Sacatepéquez

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Introduction

The production of items made with tule fiber, which is extracted from the Quilisimate Lagoon, located in the Chocojol Juyú Valley, home to the communities of Santa Catarina Barahona and San Antonio Aguas Calientes, along with their villages: San Andrés Ceballos and Santiago Zamora, is currently in danger of disappearing. This is due to the scarcity of tule, a result of the lagoon's gradual drying and the damage caused in recent years by intentional fires.

The Quilisimate Lagoon

It is one of the most important sources of tule harvesting in Guatemala, known for its superior quality compared to the tule found in the lakes of Amatitlán and Atitlán, according to tule harvesters.

In these three lakes mentioned above, tule has been harvested since pre-Hispanic times. In the Quilisimate region, archaeological and historical evidence suggests

that tule was the main product that gave the area its commercial importance. A trade network for items made from tule was established in this part of the central highlands of Guatemala, and it still exists to this day.

The information presented above justifies the need for an ethnographic study on the production of tule fiber items from the Quilisimate Lagoon, given its archaeological and historical significance. Despite the small number of artisans currently dedicated to this craft, they are Indigenous people who continue to make *petates* (woven mats) and *sopladores* (fans), which are traditionally used within their culture. This highlights the craft as an important element of the Traditional Popular Culture of the Kaqchikel region in the department of Sacatepéquez.

This essay describes the studied region and the importance of the Quilisimate Lagoon, its microhistory and the development of tule fiber craft. It covers the processes of harvesting and producing items made from tule. Additionally, it includes biographies of some artisans and the commercialization of the crafted products.



Tule Plantation in the Quilisimate Lagoon

Geographic Description



The Quilisimate Lagoon is located, as previously mentioned, in the Chocojol Juyú valley, which means "Between hills and mountains" in Kaqchikel. It is surrounded to the south by the hills of San Andrés, to the west by Santiago Zamora, to the north by the areas of Parijuyú and San Gabriel, situated on the slopes of El Portal hill, reaching elevations of 7,488 feet above sea level, and to the east by Retana hill. Toward the northwest, on the slopes of El Portal hill, lies the mountain known as "El Astillero," which provides firewood for the residents. (Matas & Esquivel, 1997, p. 9).

The valley is located about 4.35 miles west of Antigua Guatemala. It is composed of Tertiary rocks and pyroxene andesite, biotite-dacite lava, tuff, breccia, and olivine basalt, especially in the hills between San Antonio Aguas Calientes and San Miguel Dueñas. Meanwhile, the pyroclastic lavas from the Agua Volcano appear to be hypersthene-augite andesites (Chinchilla, 1991, pp. 1–2). According to Holdridge’s classification, the surrounding mountains fall under the category of lower montane humid forest, with elevations ranging from 4,921 to 7,874 feet above sea level. Subtropical lower montane very humid forest and very humid (warm) forest are present in the lower areas of the mountains (Chinchilla, 1991, p. 6). According to Chinchilla (1991, p. 4), the region features a geological fault line that runs northwest to southwest, passing through the towns of Santiago Zamora and Santa Catarina Barahona. The soil is nutrient-rich due to its volcanic origin, along with sediments deposited by water or alluvial flows.

Its climate is classified as transitional coastal (Lutz, 1981, p. 65). Winters are mild, and summers are hot. Temperatures range from approximately 58.8°F to 64.4°F. The Nimayá River flows through the valley, its name means “Big River” in Cakchiquel. It originates in Pasiguan, within the jurisdiction of the municipality of Santa Catarina Barahona, and flows into the Quilisimate Lagoon (Gall, 1962, Volume II, p. 126).

According to Chinchilla (1991, p. 3), very little has been written about the lagoon, and chroniclers have referred to it in two ways: some describe it as a lagoon or lake, while others call it a swamp. However, based on descriptions and considerations of its original size, the author suggests that it can be classified as a lagoon. In a description written in 1874, Navarro noted that it measured approximately 10,417 feet or about 1.97 miles in circumference, with a depth of 8 feet at its deepest point. The 1:50,000 scale map of the Chimaltenango region (sheet 2059 IV) shows an irregular shape, with a circumference of approximately 3.1 miles, and a diameter of about 0.6 miles at its widest point. Luján illustrated it in this way around the year 1600.

Chinchilla (1991, p. 5) states that, according to Odum’s classification, the Quilisimate Lagoon falls under the oligotrophic-eutrophic type, due to the increase in its shoreline vegetation and its shallow depth.

Chinchilla estimates that when the Spanish settled in the region, they encountered the lagoon during its eutrophic phase. In 1874, Navarro, cited by Chinchilla (1991, p. 6), described the lagoon from the town of San Antonio Aguas Calientes, saying:

“...From the town square, the lagoon can be seen resting gently on a picturesque and immense green carpet that stretches all the way to the Agua Volcano, forming an

enchanted landscape... The lagoon is approximately 8 feet or 2.5 meters deep at its deepest point. Its bed is somewhat muddy. Its shores are made of a pale ochre-colored earth; very soft and fine to touch, like *tisate* (a fine, soft powder made from ground roasted corn). Its composition is as follows: earthy silicate, lime-based; not soluble in nitric acid or diluted sulfuric acid... It is populated by aquatic birds and very small fish. Tiny leeches are sometimes found, which can be deadly to cattle... The lagoon contains a great deal of tule...”

According to Chinchilla (1991, p. 6), the presence of small fish, the abundance of tule, and the shallow depth confirm that at the time of Navarro’s description, the eutrophication process was still ongoing.

Castañeda (1995, pp. 42–43) states:

“All the towns in the Chocojol Juyú Valley, such as San Antonio Aguas Calientes, Santa Catarina Barahona, and San Miguel Dueñas, which was located to the southwest, were situated near the edge of the lagoon. It was fed by the Nimayá River and, approximately 80 years ago, covered an area of about 300 hectares or 1.16 square miles.”

“Today, it appears as a small swamp surrounded by tule plants and vegetable plots. It is inferred that this was the largest lagoon to disappear in the country during the 20th century” (Castañeda, 1995, p. 42).

Castañeda recounts that, according to chronicles from the time, the Quilisimate Lagoon was a favorite spot for many migratory ducks and served as a traditional area for recreation and fishing, as mentioned by the chronicler Agustín Mencos in 1894. Some residents of the region nostalgically remembered that the President of the country, General José María Orellana (1921–1926), used the lagoon as a personal retreat. For the communities of San Antonio Aguas Calientes and San Miguel Dueñas, it was also an important fishing center. Residents recalled that when the president visited, or during other major events, mass was celebrated along the shore of the lagoon, followed by concerts performed by the band from La Antigua.

According to Castañeda (1995, p. 43), during the presidency of General Lázaro Chacón in 1928, a major malaria outbreak struck the region. As a preventive measure against the spread of mosquitoes, the lagoon was ordered to be drained. A canal was opened at the border with San Miguel Dueñas to redirect the water into the Guacalate River. The surrounding land was then divided and parceled out, each local worker received approximately 1,089 square meters or 11,720 square feet. Some plots were distributed to residents of the village of Santiago Zamora, and others to San Antonio Aguas Calientes. Castañeda explains (*ibid.*) that, over time, some residents sold their small parcels while others kept

them and converted the land to agriculture. In certain lower-lying areas, tule plants continued to grow and spread. These zones have been preserved for the ongoing production of tule-based crafts in the region.

History of the Region



Apparently, the exploitation of tule from the lagoon and the production of *petates* of various types during the pre-Hispanic period were among the main economic activities in the Chocojol Juyu region. For this reason, it is necessary to understand the region's archaeological history and its evolution during the colonial and contemporary periods in order to comprehend the origin and development of tule-based crafts in this geographical area.

Pre-Hispanic Period



The Chocojol Juyu Valley is located in the southeastern border region of Cakchiquel territory and was traversed by an important pre-Hispanic route. This same micro-region of the valley, due to its water sources and lagoon, was a key area that allowed human settlement, as noted by Chinchilla (1991, p. XI), because of the availability of potable water.

This route connected the *Tianguesillo* of Chimaltenango, a very important regional market during the pre-Hispanic era, with the southern coast, the Central Valley region, and the Atitlán area.

According to Chinchilla (1991, p. 78), long-distance trade apparently was not of particular interest to the Cakchiquel people, who instead favored local exchange with nearby communities at specially selected points such as in the case of the *Tianguesillo* of Chimaltenango, which, as a local market, was respected even during times of war as a "land of peace." These were places that allowed for appropriate entry and exit routes to all surrounding areas, hence the existence and continued use of so many paths that cross the mountains toward these exchange points. According to Chinchilla (1991, p. 79), these markets have been identified as fairs attended by large numbers of people, where not only economic transactions took place, but also a wide range of social and religious relationships. It is important to note that commerce was not conducted through buying and selling, but through the exchange of goods, with cacao also being used as a medium of exchange. This is why, in addition to its dual role as both food and a unit of value, cacao was so important, particularly the cacao groves of the southern coast and parts of the highlands. These groves were coveted and carefully guarded, and

this likely constituted one of the initial reasons for the existence of this route to the coast, to ensure access to the cacao-growing region of Escuintla (Chinchilla, 1991, p. 111).

According to Recinos (1980, 53 and 54). In the Annals of the Cakchiquels, it is mentioned that when the Cakchiquel people settled in the "highlands," they descended from Chimaltenango between the Fuego and Agua volcanoes, where they encountered the Ykogami, who had tributaries in Cakixahay, identified by Brasseur as present-day Alotenango (Recinos 1980, p.59 to 61).

This group of Cakchiquel conquerors is, according to Recinos (1980, pp. 59–61), the one that later gives rise to the lineage of the **Zotziles**, from which one of their principal lords would eventually take the name **Ahpozotzil** and rule over this region.

This route represents the penetration path toward the southern region and the Central Valley. Chinchilla notes having found evidence of continuous habitation in the Chocojol Juyu region dating as far back as 300 B.C. and indicates that the valley was continuously occupied by historically distinct groups of individuals who exploited and used it synchronically at each stage.

Chinchilla (1991, p. 37) reports having found 14 archaeological sites in the Chocojol Juyu Valley. Additionally, beyond the valley itself, Chinchilla (1991, p. 19) identified other sites with similar evidence, indicating a continuous presence of dense settlement in the region even prior to the Cakchiquel expansion.

According to Chinchilla, the archaeological remains scattered along the slopes and lower areas indicate a strong occupation throughout the territory, and therefore, intensive use of the land (Chinchilla, 1991, p. 92). The land was likely cultivated extensively, and due to the proximity of rivers and the lagoon, irrigation would not have been difficult (Chinchilla, 1991, p. 116). Likewise, the lagoon likely provided fishing opportunities (Chinchilla, 1991, p. 115), along with the harvesting of tule to produce *petates* and baskets, as well as hunting in the surrounding region.

According to Chinchilla, the micro-region's range of elevations, from approximately 4,600 to 6,900 feet above sea level, and the resulting climatic variations, made it possible to cultivate a variety of crops (Chinchilla, 1991, p. 92), as well as to support a diversity of game animals (Chinchilla, 1991, p. 99).

Among the region's flora is the maguey plant, which, according to Chinchilla (1991, p. 101), may serve as evidence that ropes and nets were likely made from it, and that it was also used for medicinal purposes. In

terms of tule production, this region, according to Chinchilla (1991, p. 102), was one of the main sources of supply in southwestern Guatemala.

The importance of the valley, and consequently, the lagoon, is evident during the pre-Hispanic period, due to the large number of roads interconnecting residential sites in the Parramos region (Matas et al., 2000), all of which lead to the valley. Some of these roads head toward the Almolonga Valley, while others go in the direction of Santiago Zamora, an area where most residential sites reported by Chinchilla were located. This suggests the significance of the region as a center for commercial exchange and as one of the main producers of tule at the time. It may be inferred, as a hypothesis, that the region was a major producer of goods made from this material.

Colonial Period



The region became known to the Spanish in 1525, when Alvarado passed through it on his way to Iscuintepeque and El Salvador. In 1527, with the founding of the city of Santiago in the Almolonga Valley, the nearby lands of the Panchoy, El Tortuguero, and Chocojol Juyú valleys were distributed among the Spanish conquerors. Indigenous laborers from *repartimientos*, a colonial system of forced labor allotments imposed on native communities, were settled on these plots (*milpas* traditional Indigenous agricultural plots typically used for growing maize and other subsistence crops), to work the land. For this reason, as Lutz indicates (1981, p. 66), the indigenous towns of Guatemala either originated from pre-Hispanic settlements or were the result of the forced consolidation of dispersed communities near their current locations, carried out by Spanish civil and ecclesiastical authorities during the first decades following the conquest.

Most of the Guatemalan towns in the Highlands, according to Lutz (1981, p. 73), descend from towns or groups of settlements near the locations where the towns are currently situated. But now, in the Chocojol Juyú Area, the Cakchiqueles, by the end of the 1520s, because of their uprising, had withdrawn from the valleys, seeking more inaccessible refuges from the Spanish. The conquerors were then forced to acquire slaves through capture or purchase to work their *milpas*.

The settlement or relocation (*reducción*) of the Indigenous people on the *milpas* distributed to the Spanish conquerors in the Chocojol Juyú Valley eventually gave rise to several towns in the region, which, according to Lutz (1981, p. 67), represented various linguistic groups. These *milpas*, owned by Spaniards residing in the city of Santiago, had many slaves, most of

whom were likely assigned as agricultural workers on the *milpas*, while others were sent to the mines to extract precious metals. The origins of the slaves settled on the lands or *milpas* of the valley remain unknown. In the years 1549 and 1550, the slaves in that region were freed, and *Licenciado* (Guatemalan degree) Alonzo López de Cerrato, President of the Audiencia of the Confines, attempted to enforce the New Laws. Despite having been freed, the former slaves were soon required to pay rent for the land they lived on to their former masters and their heirs, as the land remained in the property of those former owners.

While land rents (*terrazgos*) emerged almost independently with emancipation, the imposition of tribute payments to the Spanish Crown, decreed in the 1560s, forced the Indigenous population into even more burdensome forms of labor. By the end of the 16th century, according to Lutz (1981, p. 69), the tribute-paying Indigenous people (*tributarios*) of the villages in the Chocojol Juyú Valley were required to send large contingents of men to plant, weed, and harvest the Spanish wheat fields near the city of Santiago. Later, and throughout the colonial period, the Indigenous people of that region were compelled, as part of the *repartimiento* labor system, to provide labor to the city of Santiago in the Panchoy Valley for clearing drainage canals and the bed of the *Pensativo* River before the rainy season, in order to reduce the risk of flooding. They were also required to sweep the government buildings without pay, deliver firewood as tribute to the city, and, due to the lake-rich geography of the region, supply grass (*zacate*) for Spanish horses at a fixed rate of one real per load. They also provided tule for making sleeping mats (*petates*), as well as the mats themselves and other products made from this material (Lutz, 1981, p. 69).

Between 1768 and 1770, the Archbishop of Guatemala, Pedro Cortés y Larraz, traveled throughout the Diocese of *Goathemala*. Referring to the villages in the Chocojol Juyú Valley, he noted that the people spoke Cakchiquel and did not use any other language: “The people go about in the greatest state of nakedness, but they are all very rustic and have lacked instruction, which has caused them harm in temporal matters and even more in spiritual ones” (Cortés y Larraz, 1958, p. 38). He reported that, according to the interim parish priest of those villages, the main vices and scandals observed were drunkenness and concubinage. Most of the Indigenous people did not attend mass, and as for the sacraments, they only called for a priest at the point of death, when the sick person could barely confess.

At that time, none of the villages had schools, so the archbishop ordered the appointment of two teachers to provide religious instruction. Their salaries were to be paid using funds from the vacant parish, so that no costs

would fall on the Indigenous population.

The harvests in these villages yielded only small amounts of maize, but the inhabitants dedicated themselves to making *petates* from the tule that grew in the nearby lake, along whose shores the villages were located. They also cut firewood to transport to the city of Santiago.

Republican and Contemporary Period



In 1874, during the height of the Liberal Reform and under the government of General Miguel García Granados, Father José María Navarro, parish priest of San Miguel Dueñas, described the villages surrounding the Chocojol Juyú lagoon in his *Memoria de San Miguel Milpas Dueñas*, published by *Imprenta Luna*. He noted that, at that time, there were several schools in the region where children received education, the oldest being the one in *San Antonio Aguas Calientes*.

The region's sanitary conditions were poor. There was a lack of hygiene and widespread alcoholism among the population, and the area was frequently affected by malarial fevers. Many Indigenous and *ladino* people slept on the ground, which led to various illnesses. According to Navarro, the Indigenous population was very hardworking. They cultivated all their communal lands (*ejidos*, shared-use lands) and planted crops on other plots they owned in the area. Coffee was cultivated successfully, and it was during this period that the Indigenous people introduced its production in the region.

The agricultural products they cultivated included maize, beans, and chickpeas. They also raised pigs and kept beehives. The people, especially those from *San Antonio Aguas Calientes*, were highly dedicated to commerce and to raising horses and mules, as well as to hunting.

Since there was an abundance of *tule* in the Quilisimate lagoon, the Indigenous women of the region wove large *petates*, which they took to sell in *La Antigua Guatemala* and neighboring villages.

Today, in the towns located in the valleys of San Antonio Aguas Calientes and Santiago Zamora, various products are made from the tule harvested from what remains of the lagoon. These items are crafted by Indigenous men and women, who collect most of the tule from lands they own near the lagoon. They produce *petates* of different sizes, which are used by Indigenous people for sleeping, weaving, cooking, and other purposes, as well as different types of fans. These products are sold in the markets of *La Antigua Guatemala*, *Santiago Sacatepéquez*, *San Juan Sacatepéquez*, and *San Pedro Sacatepéquez*.

Current Production of the Quilisimate Lagoon



To analyze the current production of tule-based items from the Quilisimate Lagoon, ten individuals were interviewed, eight of whom still harvest and work with tule, and two whose families have withdrawn from this activity.

This approach allows us to examine the current process of tule exploitation and understand the reasons why some people have left this traditional craft.

The tule from the lagoon is harvested in the municipality of San Antonio Aguas Calientes, to which the Quilisimate Lagoon belongs. The items are produced in the town of San Antonio Aguas Calientes, the municipal seat, and in the village of Santiago Zamora. In this village, a large portion of the population produces items made from the lagoon's tule.

In San Antonio, the group of producers is smaller, around 28 individuals, according to informants. Of the interview sample, nine participants were from San Antonio and one from Santiago Zamora. Only one person from Santiago Zamora was interviewed due to limited access to the village. However, the information collected allowed for a general understanding of the craft.

The interviews were conducted as case studies, allowing for individual perspectives from the artisans regarding their work with this craft, other uses of the lagoon for cultivation, and how the knowledge is passed down. The information regarding the production process and its markets, being more general and shared across the various stages of production, was treated collectively. According to informants, the lagoon is shared between San Antonio and Santiago Zamora, with each town's residents having access to roughly equal portions of land. At the beginning of the study, there was some confusion because informants mentioned two types of tule: a thinner plant referred to as simple *petate*, and a thicker plant with triangular leaves that they simply call tule.

To clarify, one sample of each plant was collected and analyzed by *Licenciado* Julio Morales Can, curator of the Herbarium at the *Centro de Estudios Conservacionistas* (CECON, by its initials in Spanish), Faculty of Chemical Sciences and Pharmacy at USAC. He classified the locally named simple *petate* as *Typha domingensis*, and the thicker, triangular-leafed variety as *Scirpus californicus*.



Tule plant of the species Typha domingensis.

According to the informants, *Typha domingensis* is the most common and abundant tule species currently found in the lagoon. This is also the same variety present in the lakes of *Amatitlán* and *Atitlán*. However, the most highly valued due to its durability, though less common, is *Scirpus californicus*.



Tule plant of the species: Scirpus californicus.

In the summer of 1996, according to the informants, ill-intentioned individuals set fire to the lagoon, and the tule fields burned down. Faced with such a disaster, the landowners believed that the plants would not grow back in the burned areas. As a result, they began planting vegetables, which yielded good profits.

The following year, to the surprise of the tule artisans, the plants began to sprout again, and little by little, the lagoon was once again filled with both varieties of tule. The landowners resumed harvesting the tule and planting vegetables right afterward, aiming to harvest them before the rains came, when the lagoon floods again and access becomes impossible.

In 1998, due to Hurricane Mitch, the lagoon flooded, and it was not possible to plant any type of vegetable during the summer of 1999. Since then, the water level in the lagoon has receded more slowly, and vegetables can only be planted around March. However, there is always the risk of losing the crops if the rain arrives early.

After the fire, the new tule growth that emerged was affected by a plague that damaged the plants, which reduced their harvest. According to the informants, in addition to the common duck that nests in the tule, there is a duck species in the region known as the *cañetero*, which feeds on and destroys the tule fields.

Case Studies



The case study approach, through interviews conducted with individuals who currently work or have worked in tule crafts from the Quilisimate lagoon, made it possible to learn how they acquired their skills, as well as understand the production processes and commercialization of these crafts.

In the San Antonio Aguas Calientes area, nine individuals were interviewed. They provided insights into the production of *petates*, and in two cases, explained why they stopped engaging in this work. These cases are detailed below, first by providing individual background stories and how they learned the craft, and then more generally, covering the process of tule harvesting, craft production, and commercialization.

The first case studied was the Apen López family, composed by Felisa López Tajtaj and her son, Rigoberto Apen López. Mrs. Felisa López Tajtaj is 73 years old. She is the daughter of Luciano López and Julia Tajtaj de López. Her family consisted of five sisters and one deceased brother. She attended school for a year and a half, which gave her the opportunity to learn to read and write. Her father, who worked with tule harvested from



Mrs. Felisa weaves a petate in the courtyard of her house.

the lagoon, withdrew her from school so she could help with agricultural work and learn to weave tule with her mother to produce *petates*. Mrs. Felisa began learning the craft from her mother when she was a young girl.

In addition to working with tule, Mrs. Felisa also learned to weave *huipiles*, belts (*fajas*), and other traditional garments, as well as to grow vegetables such as carrots, radishes, lettuce, cilantro, mint, squash (*guicoy*), beets, and others. She still engages in this activity, cultivating vegetables on her land. Felisa has a son, Rigoberto Apen López, who is currently 53 years old. He studied up to the second grade of primary school. It was his mother who taught him to work with tule when he was about 8 or 9 years old. According to him, he has now been dedicated to producing tule crafts for about 35 to 40 years.

Mr. Rigoberto got married, but his wife passed away a year and a half after their wedding, leaving him with a three-year-old son. His son, Sergio Apén, is now 10 years old. He currently attends the Parochial School of San Antonio, where he is in the fourth grade of primary school.

Mrs. Felisa is teaching her grandson Sergio the craft of weaving tule so that he can help her with the work and have a means of earning a living when he grows up. She also entrusts him with kitchen duties while she is

weaving *petates*.

Mrs. Felisa and her family live together in their own home, where they grow oranges, limes, *loroco*, cilantro, spearmint, among other crops in their yard. They have a storage room for keeping the tule and a dedicated workspace for weaving. This room is presided over by a home altar adorned with several framed images of saints, including the Holy Trinity, Saint Jude Thaddeus, and Saint Michael the Archangel, among others. Mrs. Felisa prays novenas to them and lights candles in their honor.

In addition to their house, they own two plots of land in the town of San Antonio Aguas Calientes where they grow vegetables, and another plot near the lagoon where Mr. Rigoberto

collects the tule used to make *petates*. He also plants vegetables on this land, aiming to harvest them in May—if the water level recedes in January. If the water does not recede, planting is not possible. According to him, this year the water has not gone down enough, so they were unable to plant. As Mrs. Felisa puts it, “when we’re able to plant vegetables in the lagoon, it’s a good year because there’s money.”

Inocenta Pérez Santos



She is 55 years old. She learned the craft of making *petates* at the age of seven. Her mother was orphaned and was taught by her aunts, who then taught her how



Workshop of Mrs. Felisa López Tajtaj.

to weave *tule*. Mrs. Inocenta recalls that her mother and father owned *tule* fields in the lagoon, and her mother would say to her: "Learn to make *petates*, because that's how you'll support yourself later on, this is our work." So, Mrs. Inocenta quickly learned how to make *petates* in about eight days, as she says weaving them is easy. Her mother also taught her how to make clothing, and she learned to weave on a backstrap loom and can make *huipiles*. She has now been making *petates* for 35 years.

Mrs. Inocenta married Mr. Francisco Gómez Zamora, who is a carpenter by trade and currently makes coffins without upholstery or ornamentation, which he sells in Ciudad Vieja. He also produces all kinds of furniture. In addition, Mr. Francisco also works with *tule* crafts, and Mrs. Inocenta says he is a "master in weaving" it. Together, they bought a plot of land in the lagoon where they harvest *tule*.



Work area of Mrs. Inocenta Pérez Santos.

Currently, Mrs. Inocenta is a catechism teacher at the Catholic Church of San Antonio. She says she studied for a long time to become a catechist and now teaches doctrine to children.

In the past, Mrs. Inocenta says that she used *petates* to sit on the ground and to cook. But over time, the family's financial situation improved, and they began sitting on chairs. Her children bought her a stove so she would no longer have to cook on the ground. She recalls her children saying: "Stop cooking with smoke because it damages your eyes. We're going to buy you a stove." Currently, Mrs. Inocenta still makes *petates* and fans using the *tule* they collect from the plot they own at the lagoon, which they store in a section of their house.

Petronila Santos Gómez



She is 53 years old. She is better known by the nickname "Doña Anacleta" because she was born on April 26, which is the feast day of Saint Cletus, and her mother wanted to name her Anacleta. However, when her father went to register her birth at the municipal registry, he named her Petronila Santos Gómez because his name was Petronilo Santos. Nonetheless, her mother continued to call her Anacleta, and that is the name by which she is known among her friends and many people in town.

Mrs. Petronila learned the craft of working with *tule* as a child from her mother. She mentioned that when she was little, her family was poor, and some people in the town who had large amounts of harvested *tule* could not keep up with the work of weaving it, so they would look for others who could help and pay them for their labor.



Mrs. Inocenta is weaving a large tapete.

Mrs. Petronila said her mother worked for such people, selling her work for the production of *petates*, and would take young Petronila along to help her. That was how she learned to make *petates*.

Mrs. Petronila married Mr. Luis de Jesús Pérez, with whom she had seven children; three of them passed away, and four are still living. None of them learned to make *petates*, as they had the opportunity to study and pursue more profitable trades.

Mrs. Petronila is the sister-in-law of Mrs. Inocenta Pérez Santos, since her husband, Mr. Luis, is Inocenta's brother. He learned to work with *tule* from their parents, who owned *tule* fields and spent their entire lives making *petates*.

When Mr. Luis was a child, he would weave *petates* in the morning because the *tule* fiber is softer to work with due to the dew's moisture. In the afternoons, he devoted his time to studying. As an adult, he completed his military service, and upon returning, he married Mrs. Petronila. After they got married, he began working at a sawmill in San Sebastián, in La Antigua Guatemala. Due to the demanding nature of that job, he developed a hernia. As a result, Mrs. Petronila's father told his son-in-law that "he shouldn't continue with that work and that it would be better to change careers." Currently, Mr. Luis works in textile crafts and makes bags, cushions, bedspreads, rag dolls, and more. They have a handicrafts shop in the Artisan Market located in front of the Catholic church in the town center.

Mrs. Petronila manages the shop, where she sells the products she and her husband make. She also occasionally weaves *petates*. In addition to these tasks, she handles the cooking, laundry, and all the household chores. When she produces *petates*, she buys *tule* from her sister-in-law, Mrs. Inocenta, who has plenty because she owns a plot of land in the lagoon and harvests the *tule* for *petate* production.

Maximiliana López de Sinai



She is 78 years old. Her father owned a plot of land in the lagoon where he harvested *tule*. Her mother would have her work with the *tule*; therefore, she learned to weave it and make *petates* from a young age.

She is married to Mr. Francisco Sinai, and they had eight children, five boys and three girls. All of them know how to weave *tule*.

Currently, Mrs. Maximiliana is very ill, and now she only makes *petates* and no longer works on woven fabrics because her eyesight does not allow it. In addition to this work, she also takes care -of the usual domestic chores performed by the women of San Antonio.

Her husband owns a plot of land in the part of the lagoon that belongs to Santiago Zamora. Mrs. Maximiliana says that before they had this land, they had to buy the *tule*. On this plot, which measures approximately 1,243.5 square feet, after harvesting the *tule*, they have been planting vegetables for the past four years. These include cabbage, beets, carrots, peas, turnips, cilantro, parsley, *guicoy*, *chipilín*, creole lettuce, head lettuce (also known as cabbage lettuce), celery, and any other variety of vegetables they wish to grow.

However, this year, since "the water has gone down," they have not been able to plant any vegetables, and they are still cutting *tule*, as the vegetables are usually sown in the space that becomes available after the *tule* is harvested. Mrs. Maximiliana says that last year, the sale of *tule* went well, besides weaving *petates*, the leftover *tule* that they couldn't weave was also sold. However, this year, there is no demand for it.

Her husband, Mr. Francisco, in addition to cutting *tule* and making *petates*, also grows corn, turnips, and radishes on another plot of land, and he sells the harvest in Guatemala City.

Genaro Sinai López



He is 55 years old. He is married to María Candelaria Pérez de Sinai, and they have five children. Genaro is the son of Mr. Francisco Sinai and Mrs. Maximiliana López. He is Catholic and currently serves as the steward of the brotherhood of the Virgin of the Immaculate Conception.

Mr. Genaro says that each person has their own "little piece" of land in the lagoon. However, in 1996, it burned down. It is not known what caused the fire, but he assumes there was "foul play."

He indicated that *tule* began to reappear after the fire. He believes that some of the *tule* bulbs that were deeper in the swamp were not burned, and over time, new shoots began to sprout. According to his account, "It was hard for them to grow back; the lagoon looked like a desert,

and you could even see the coffee plantations of Santiago Zamora.” After the burning, there was a plague of an insect they called the *picudo*, which, according to him, appeared because “the soil had remained very hot.” Mr. Genaro says, “Each bulb had about fifteen insects on it, and they would eat the roots, that’s how the *tule* got destroyed.”

So, they began planting vegetables in the month of January, which is the time when the waters of the lagoon begin to recede. If it was not possible in January, they would wait until February, in order to harvest the crop around May. However, three years ago, after Hurricane Mitch, it was no longer possible to continue planting in the same way because the water level no longer recedes. In fact, this year (referring to 2003), they were hardly able to plant anything, since they sowed at the beginning of May, and if the rainy season arrives early, the lagoon begins to fill up again and the harvest cannot be collected.

Juan López y López



He is 77 years old. He learned to weave *tule* when he was a child. His parents taught him. He is currently the owner of a plot of land measuring approximately 861 square feet, where he harvests the *tule* used to make *petates*.

María Virginia Apen



She is 49 years old. Her mother taught her how to make *petates* when she was a child, just like all her siblings. Her mother is currently 77 years old, and her father passed away 19 years ago.

She indicated that they stopped working with *tule* when her father passed away, since he was the one who used to collect it from the lagoon. She explained that it is necessary for a man to cut the *tule* because it is difficult to obtain, as it “grows in the water, and you have to go into it to collect it.”

Currently, her mother works weaving clothing, and she and her siblings dedicate most of their time to weaving garments and selling them. Mrs.

María currently has a sales stand at the handicrafts market in San Antonio.

Zoila Hortencia López



She is 49 years old. She is married and has no children. Her father’s name is Constantino López, and he owns a piece of land in the lagoon where *tule* grows. According to her, her father stopped working with *tule* a long time ago. Therefore, her mother dedicated herself to weaving clothing, and that was the activity she learned.

After the lagoon was burned, the *tule* nearly disappeared, and her father began planting vegetables. Currently, her father is dedicated solely to agriculture. However, the *tule* that now grows on his land is “simple *tule*” (*Typha domingensis*), but he does not harvest it because selling it yields no profit, nor does he produce any items with it since it is very inexpensive. Therefore, her father is uprooting it or burning it to make more space for planting vegetables.

Domingo López Sanai



He is 66 years old, a widower, has one son, and is originally from Santiago Zamora. He owns a plot of land in the lagoon from which he harvests *tule* and makes *petates*. He learned the craft when he was six years old. He stated that the *tule* was lost when the lagoon burned, and “everything dried up.”



Mr. Domingo López Sinai cuts *tule* in the lagoon.

According to Mr. Domingo, in Santiago Zamora, there are currently many men and women who make petates. Some do not have their own tule fields, but they buy the tule in order to weave the petates.

Tule Production



Based on the interviews conducted with the individuals mentioned above, it is possible to understand the process of production and commercialization of tule, which can be subdivided, for analytical purposes, into the following sections: collection and harvesting period, durability, storage, production, use of the items, and commercialization.

Collection and Harvesting of Tule



Tule is harvested during the dry season, specifically from January to May, when the water level of the lagoon recedes. Once the rainy season begins and the lagoon refills, it is no longer possible to cut the tule that grows within the water, as that is its natural ecosystem.

According to informants, a plague appears every few years that affects the tule, small black insects resembling “tiny moths.” When this infestation occurs, none of the tule gatherers use pesticides; instead, they “leave it to God’s will” and hope for the water to resolve the problem.

To cut the tule, one must wait until it is neither too pale nor too yellow. If it is too pale (white), it tends to rot; and if it is cut when it is too yellow, it turns black, because, according to the informants, it is “past its prime.”

To cut the tule, a tool called a “sickle” (*hoz*) is commonly used. However, some people prefer a “*cuma*,” a tool like a machete but smaller. The tule leaves are cut about two inches above the water to allow the plant to sprout again.

Tule is harvested while still green and then left to dry directly on the lagoon land. The leaves are flipped and spread out so that the sun turns them yellow. After drying, the tule is bundled into regular-sized bunches, known as *manojos*, which makes it easier for the gatherers to transport them to storage locations.

According to Mr. Rigoberto Apen, the lagoon currently has a surface area of approximately 85 cuerdas (about 146,200 square feet) and is divided into 373 lots. There are quite a few lots, and they belong to private landowners.

Apparently, according to the informants, the amount of tule harvested in San Antonio Aguas Calientes and Santiago Zamora is almost the same, since the lagoon is divided by a boundary between the two towns. This boundary is marked by a line of willow trees, which, according to the tule harvesters, is the only tree resistant to water.

A few months ago, some residents of San Andrés Ceballos purchased lots in the lagoon and are now cultivating grass to feed their livestock. These are landowners who are engaged in raising horses and cattle.

According to the informants, there are two types of tule plants in the lagoon, although they are often mistaken as a single species. They refer to both simply as “tule” or “thick tule” (*tule grueso* or *rollizo*), which, based on scientific classification, corresponds to the species **Scirpus californicus**, characterized by its triangular leaf. The other is “simple tule” or “petate tule,” which corresponds to **Typha domingensis** and is the most abundant in the lagoon.

According to the informants, **Scirpus californicus**, or “thick tule,” is of better quality and more flexible than the tule from Lake Atitlán, which is a variety of **Typha domingensis** as well, but it tends to deteriorate quickly (“*se pica*”) and is cheaper than the tule that grows in the Quilisimate lagoon.

A bundle of harvested tule is sold at a price ranging from Q10.00 to Q15.00, depending on its quality. The stem of



Drying Process of Tule in the Quilisimate Lagoon.

the tule is also used to obtain fiber for tying the bundles and the petates produced. In addition, the stems are sold separately at a price of Q15.00 and are used to make rag dolls.

Durability of Tule



The **Scirpus californicus** variety, also known as “thick tule,” is the most recent and the most flexible. It can be stored for up to two years without the risk of damage, as long as it is harvested at the right time. If it is harvested too late, the tule turns black and becomes brittle.

This thicker and softer tule is preferred for making *petates* used as bedding mats, due to its greater durability, which also makes it the most commercially sought-after. In contrast, **Typha domingensis** is thinner, breaks more easily, and doesn’t last as long.

Tule Storage



There are various ways to store tule. Don Rigoberto Apen, for example, has a shed at his home specifically built for this purpose. According to him, the tule must be completely dry before it is stored to prevent it from rotting. When properly stored and well cared for, tule can last up to two years.

Inside the storage shed, there is a platform approximately 75 centimeters (about 2.46 feet) above the ground, designed to isolate the tule from moisture and rats, as rats destroy it when they build their nests. The bundles of dry tule are placed on this platform because this way they retain their yellow color and look like new.

Petronila Santos says that her husband has a platform made of wooden sticks to keep the tule off the ground and protect it from moisture and rats. The bundles of tule are placed on these sticks and covered with plastic sheeting to keep them stored and dry.

Both informants agree that rats attack and tear the tule into pieces. For this reason, Don Rigoberto sprinkles *gamezún*, a common powdered rodenticide used in rural Guatemala, on the stored tule to kill any rats that might enter. According to Doña Petronila, rats attack the tule because they really like it for building their nests.

Maximiliana López mentioned that they store the tule by

standing the bundles upright against the wall. She said that her husband, Don Francisco Sinai, cuts wooden posts to build a simple roof over the area where they keep the tule stored, in order to prevent it from getting wet. If it rains, water can seep into the core of the tule, causing it to rot.

Production of Petates



According to informants, the only places in the Chocojol Juyú Valley where petates are made are the towns of San Antonio Aguas Calientes and Santiago Zamora; both located in the municipality of San Antonio Aguas Calientes.

The place where the most petates are produced is Santiago Zamora. In this town, the majority of its inhabitants are dedicated to this activity. In San Antonio, it is estimated that around 28 people are currently involved in *petate* production.

Products



With **Scirpus californicus**, the most valued type of tule because it is faster to work with, more abundant, and sold at a higher price, artisans make petates for beds of various sizes, rugs, door mats for *temascales* (traditional steam baths), and mats used to hang woven textiles, so they don’t get dirty on the ground. They are also used for sitting, weaving, making tortillas, and cooking. Additionally, people make fans from it, and with the stem, they craft rag dolls to sell to tourists.

Petates and fans can also be made from the tule variety **Typha domingensis**, but they are rarely sold and tend to fetch lower prices.

Bed mats come in different sizes: large ones measure approximately 6.56 feet in length by 4.92 feet in width; medium ones are about 5.25 feet long by 3.94 feet wide; and small ones measure 3.94 feet in length by 1.97 feet in width. Mats used for hanging clothes are about 5.41 feet long and 3.94 feet wide. Square mats used for sitting measure 5.25 by 5.25 feet. The *vava* mats, which are used as door coverings for *temascales*, measure 2.62 by 2.62 feet.

As observed, *petates* have a wide range of uses among

Indigenous communities, including agricultural tasks, where they are spread out to lay products in the sun. The large square mats, measuring approximately 6.56 by 6.56 feet (equivalent to two *varas* by two *varas*), are made from simple tule (***Typha domingensis***) and are used to thresh beans in the fields. *Petates* are also used by Indigenous people as wall coverings, ceilings to prevent dew from falling indoors, and as partitions to divide spaces within homes.

The *ladinos* use them in restaurants, as rugs, to decorate walls, and to create partitions. *Ladinos* may purchase up to one or two hundred *petates* of each design for the uses mentioned above.

During high-travel seasons, such as Holy Week, lodging owners often provide *petates* to their guests to sleep on the floor when there are not enough beds available.

According to the informants, in the past, Indigenous people used *petates* to sleep on because mattresses did not exist, and since there were no tables either, they would also eat on them. Cooking was done on the floor, with stones arranged to define the size of the fire, and *petates* were used for sitting while cooking. Over time, customs changed. Now, people use a *pozo* or stove, and they also have tables for eating, which is why *petates* are no longer used for those purposes.

During celebrations, when there were no chairs or benches, or not enough of them, *petates* were offered to guests to sit on the ground. These *petates* were usually made from simple tule (***Typha domingensis***), as they were thinner, cheaper, and often used as disposables since they tore easily.

In wakes, it was customary to place *petates* on the ground so people could sit, especially children, who used them to eat during the vigil. Nowadays, according to informants, in San Pedro Sacatepéquez, Indigenous people still preserve the custom of sleeping on wooden beds over a *petate*.

Production Techniques



To make *petates* from the thick tule variety ***Scirpus californicus***, the tule is first moistened to soften it. This process involves sprinkling a few drops of water by hand, just enough to dampen it. This step is necessary because, when stored, the tule becomes dry and the mat, according to the informants, “comes out toasted,” meaning very stiff. If worked dry, the material splits and breaks.

Since this material is thicker, it is pounded with a mallet or a stone to flatten it, making it more pliable when weaving. After this step, a group of tule leaves that are already moistened and softened is placed on the ground. The amount of material can be estimated by eye or measured with a stick used as a guide. Then, the weaving begins, a process the artisans call “*urdir*.” In other words, the tule is woven from the center toward the edges.

Once the mat has been woven to the desired size, the edge is finished using a special technique known locally in San Antonio as “*el trenzar*” (the braiding).

The best fans are made with the thicker tule of the ***Scirpus californicus*** variety due to the strength of the material. To make fans, around twelve tule leaves are needed. These are moistened beforehand to soften them and allow for the folding that gives the fans their distinct shape as they are being woven.

The so-called simple tule (***Typha domingensis***) is worked in the same general way as the thick tule (***Scirpus californicus***), but the preparation differs. This tule is also moistened to soften it; however, instead of being pounded with a stone or mallet, the center of the leaf is scraped with the thumbnail or with the help of a nail. Most of the informants prefer to use their thumb, which is why this nail is often longer than the others.

This scraping process, as they call it, allows the leaf to open up and spread, resulting in a flat, wide, and thick strip. This preparation method makes the production of *petates* with this tule slower than with ***Scirpus californicus***, which requires more physical effort to pound but is woven more quickly.

This has caused the market price of mats made with ***Typha domingensis*** tule to be lower than those made with ***Scirpus californicus***, and they are also less in demand because they break more easily and are less durable. Their production is lower, despite the fact that it is the most abundant species in the Quilismate lagoon.



Regarding the number of *petates* they are able to produce per day, based on the informants who provided data on this matter, it can be said that Doña Felisa Tajtaj, despite being 73 years old, still weaves one large *petate* in half a day. That is, she is able to produce one in the morning and another in the afternoon, in addition to completing her domestic chores. Early in the morning, she prepares breakfast for her son Rigoberto, her grandson, and herself. She also prepares lunch for her son to take when he works in the fields. From 8:30 a.m. to 12:00 p.m., she works on making one *petate*. When her grandson returns from school, she serves lunch, and then at 3:00 p.m., she continues weaving the second *petate*, which she finishes at approximately 6:00 p.m.

Her son, Rigoberto Apen, says that when he focuses on *petate* production, he can make three *petates* a day using either of the two tule varieties. However, they say that the *petate sencillo* (*Typha domingensis*) “doesn’t yield much profit and takes longer to work with, since it needs to be grated.”

Mrs. Inocenta Pérez Santos makes ten small *petates* per day. For *petates* measuring approximately 3 feet 3 inches wide by 1 foot 7 inches long, she can produce six per day. As for the large *petates* used as bed mats, which measure about 6 feet 6 inches long by 8 feet 2 inches wide, she is only able to produce two per day.

Regarding woven fans, she is capable of making two dozen in one day. She usually works on this task at night, because during the day she must take care of other responsibilities besides producing *petates*. According to her, making fans “is hard because you have to keep turning the tule to create the shape that characterizes them, a diamond.”

Commercialization



Petates made with both varieties of tule, as well as the fans produced in the town of San Antonio Aguas Calientes, are sold in the towns of Santiago Sacatepéquez, La Antigua Guatemala, San Lucas Sacatepéquez, and San Bartolomé Milpas Altas in the department of Sacatepéquez; San Pedro Sacatepéquez, San Juan Sacatepéquez, and Guatemala City in the department of Guatemala; and San Andrés Itzapa and Tecpán in the department of Chimaltenango.

The producers from Santiago Zamora also have their own markets where they sell the *petates* and fans they make. These places are located in the towns of La Antigua Guatemala, Santa María de Jesús, and

Sumpango in the department of Sacatepéquez; San Juan Sacatepéquez, Guatemala City, and Amatitlán in the department of Guatemala; and Palín, Puerto de San José, and Escuintla in the department of Escuintla.

For a more in-depth and detailed analysis of the market for tule products from the Quilisimate lagoon, it is most appropriate to individually present the testimonies of the producers from San Antonio Aguas Calientes and Santiago Zamora who agreed to share information.

Felisa López Tajtaj sells the *petates* she produces in the towns of Santiago Sacatepéquez and San Bartolomé Milpas Altas, in the department of Sacatepéquez. In these places, she and her son are well known.

Mrs. Felisa sells the small *petates* at a price of Q1.00 and the large ones at Q10.00. When sales are not good and she doesn’t manage to sell them all, she stores the product at home and eventually sells them to foreign tourists. For his part, Rigoberto Apen López, Felisa’s son, sells the *petates* he makes in San Juan Sacatepéquez. In this town, what sells most are the ones used by locals on the door of the *temascal*. He also sells in Santiago Sacatepéquez, San Pedro Sacatepéquez, San Bartolomé Milpas Altas, and only a few in Guatemala City.

Mr. Rigoberto says that “he no longer wants to keep making *petates* because the profit is too low, and he’s always dirty, both his clothes and his hands.” A bed-sized *petate* made with the simple tule (***Typha domingensis***) sells for Q6.00, and one made with the thick tule (***Scirpus californicus***) sells for Q25.00.

Inocenta Pérez Santos recalls that, when she was a child, *petates* were taken to La Antigua Guatemala to be sold in horse-drawn carriages, ox-drawn carts, and hand-pulled carts, and women accompanied the men who pulled the carts on foot. Later, they sold the *petates* in San Pedro Sacatepéquez by the truckload.

Currently, she sells *petates* in the central park of La Antigua Guatemala and in the market on Saturdays, which is market day. During Holy Week, *petates* are sold in large quantities in that city, because pilgrims come to visit San Felipe de Jesús and buy *petates* to sleep on for one or two nights, and later give them away.

Petronila Santos says that her husband sells *petates* in San Pedro and San Juan Sacatepéquez, and that the time of highest sales is in December, because people use them to make partitions, probably to protect themselves from the cold.

Maximiliana López de Sinai said that she sells in San Juan Sacatepéquez and Guatemala City. She does not sell in La Antigua because producers from Santiago Zamora

sell there.

Her son, Genaro Sinai, sells his products at the bus terminal in Guatemala City, in Chimaltenango, in Tecpán, and on Sundays in Santiago Sacatepéquez; in this place, he says he "sells a lot." The selling price of a petate is Q25.00 quetzales. According to him, the price of a square petate can range between Q3.00, Q10.00, or Q12.00, as the price varies. He says that a petate made from thick tule (**Scirpus californicus**) for use by a woman weaver can cost Q5.00, while one made from simple tule (**Typha domingensis**) costs Q2.00.

Domingo López Sinai, a resident of Santiago Zamora, states that he sells his products in Sumpango, Guatemala City, Puerto de San José, Escuintla, Amatitlán, Palín, and Santa María de Jesús. In addition to selling finished items, he also sells tule to other people who weave it. He says that a long bed *petate* made from simple tule costs Q7.00.

Analysis and Conclusions



The study of tule use from the Quilisimate Lagoon, located in the Chocojol Juyú valley, shows that it is one of the oldest crafts in the region, as the production of petates from this tule dates back to the pre-Hispanic period.

Based on ethnographic evidence, it can be said that the use of petates is tied to the cultural patterns of the Kaqchikel Indigenous groups and that they were used in domestic life during the pre-Hispanic and colonial periods. They served purposes such as sleeping, cooking, eating, weaving, performing agricultural tasks, and dividing living spaces. Even today, their use remains linked to the daily lives of Indigenous communities, insofar as these communities continue to preserve their traditional cultural practices. However, their use is gradually declining as communities adopt patterns associated with new technologies, such as stoves, tables with chairs, and other modern amenities. Petates are now mostly used for specific purposes like weaving, room partitioning, and as decoration in restaurants, this last use typically falling into the hands of Ladinos or mestizos.

It is important to highlight that there are two varieties of tule growing in the lagoon: **Typha domingensis**, known by the tule artisans as "simple tule," which is thin; and **Scirpus californicus**, known as "thick tule," which has triangular leaves and is more in demand due to its stronger and softer leaves. According to informants,

petates made from thick tule are more cushioned and therefore better for sleeping.

Another noteworthy point is that the lagoon, since it has been known by the Indigenous peoples who lived along its shores, was already undergoing a process of **eutrophication**. This process accelerated after it dried up in 1938. Therefore, it can be inferred that the production of tule is currently greater than it was in the past.

Currently, the most abundant tule species in the lagoon is the simple tule, or **Typha domingensis**, which has low demand. For this reason, tule artisans do not harvest it and allow it to grow unchecked. In other cases, it is burned or removed to plant vegetables.

Around 1996, the tule reeds in the lagoon were burned, and no *petates* could be produced for more than a year because there was no tule to harvest. The tule began to sprout again a year later, and the lagoon gradually recovered its tule growth.

As a survival strategy, the people who used to harvest tule began planting vegetables after the burning, which brought them higher profits. As a result, they started to abandon tule harvesting and consequently stopped producing *petates*. When the tule began to sprout again, they cut it and prepared the ground for vegetable cultivation. Fortunately, Hurricane Mitch once again saturated the soil in the lagoon, raising the water table and saving the tule fields.

Because the water receded later than usual last year, this year (2003) it was not possible to plant vegetables. Therefore, they had no other alternative but to preserve the tule.

It was observed that the *petate*-making craft faces several main challenges: the low market value of the product; a domestic, small-scale production system with a very low output that limits greater production; and the seasonal collection of raw materials, which requires considerable effort, making this an unattractive product to work with. Currently, *petates* are primarily made in San Antonio Aguas Calientes, where the study sample is located, composed mostly of adults and elderly individuals. Young people no longer engage in this craft, as they have better opportunities through education and jobs in businesses or factories, which prevents them from dedicating time to *petate* production.

It is important to note that their demand has a strong cultural significance. This is because their market is still rooted in the customs of the Indigenous culture, particularly among the Kaqchikel people. However, as processes of transculturation occur, and with changes in

how people cook, eat, and work, the use of *petates* is transformed, gradually abandoned, and limited to a market made up mainly of ladinos or mestizos who use them for decorative purposes.

The above indicates that the craft of *petate* production in the municipality of San Antonio Aguas Calientes is in the process of disappearing or surviving within a very limited production field, serving primarily as a survival strategy for the poorest groups. Observations showed that in the municipal center, only a few people, mainly older adults and elderly individuals, continue to produce *petates*. No participation from younger people was noted, either in learning or in production. In the village of Santiago Zamora, within the same municipality, there is a larger group involved in the crafting of this artisanal product.

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