

Running Head: GROWING HERITAGE

Growing Heritage: The Home Gardens of San Jose Succotz

Zoe Zaroff & Dr. Filiberto Penados

Grand Valley State University

Torrents of hot Belizean air burst through the open bus window as I surveyed the passing scenery through wincing eyes. Upbeat reggaeton music blared as we rounded another bend in the curving western highway, revealing colorful houses dotting the right-hand landscape. I hastily collected my belongings as the bus drew to a halt. Once the bus was motionless, I alighted at the concrete pagoda-style bus stop perched on the bank of the Mopan River. As the bus once again rolled into motion, continuing its journey down the winding road, I was presented with the steep streets leading into San Jose Succotz. Hiking up the narrow, occasionally paved streets, I was struck by the wide variety of the gardens accompanying the brightly painted cement houses lining either side of the road. In some, great trees towered above the houses, in others there were a few ornamental plants surrounding a house, placed within a clear lawn. I mused on the gardens as I made my way to my place of residence for the following two months. Through my time in Succotz, I would come to understand the great significance of these gardens, as they became the focus of my research.

Succotz is a village with a population of a little over 2,000 that is located on the western border of Belize with a topography and climate considered to be part of the Maya lowlands. The population of Succotz are descendants of Yucatec Maya refugees from the Caste War of the Yucatan which lasted from 1847–1901, however Succotzeño lifeways now more closely resemble those of urban Belizeans than traditional Yucatec villages. As a result, most Succotzeños identify as being “of Maya heritage” meaning they recognize the cultural changes in the community, but also

claim Maya ancestry (Medina 2003). The acculturation of Succotz was central to my research, however, I chose to investigate this cultural process through the lens of the home garden. Maya peoples have a way of maintaining home gardens referred to as forest gardening. Forest gardens are aptly titled considering they utilize the rain forest already growing in the area, useful trees are kept while the others are cleared. The gaps are then filled in with more trees and shrubs that assist in home life.

The holistic account of modern Maya home gardening in Succotz in this paper relies on its comparison to the historic home gardens in Succotz. By assessing modern Succotzeño gardens in the context of past gardens that are more indicative of traditional Maya gardens, a greater understanding of concurrently unfolding cultural processes is garnered. The change in species and layout exemplify the processes of acculturation and adaptation to a new cultural and economic reality while the continued use and praxis of home gardening facilitate cultural heritage retention.

Literature Review

The literature regarding modern Maya forest gardens tends to focus on one aspect of modern gardens, either mechanics, cultural retention or economic global influences, but not the overarching interchange between all three. Only after these factors are analyzed in dialog with each other the opposing processes of culture retention and cultural change that are coexisting within the home gardens are revealed. The anthropologic holistic lens I used when conducting my research analyzing home gardens in San Jose Succotz allowed me to understand the way these

processes are intertwined because it required that I explore all aspects contributing to the current reality of Maya home gardening.

The documentation and study of the mechanics of traditional forest gardening counts for a significant portion of the literature surrounding modern Maya home gardening. For the sake of clarification, in this context “traditional forest gardening” refers to modern home gardeners that practice more traditionally Maya methods of home gardening, such as, focusing on plant species that are useful in daily life and having very few cleared spaces. The layout and use of these traditional gardens are extensively recorded by Corzo-Márquez and Schwartz in their 2008(a) paper. Coming from a background in ecological conservation, the pair focused on providing a detailed account of the mechanics and function of traditional gardens in the Petén region of Guatemala. After surveying 94 gardens, Corzo-Márquez and Schwartz found that there are five vertical strati of vegetation in Maya gardens. Horizontally, vegetation of taller strati were located towards the perimeter of the garden, with shorter strati towards the house, with middle strati spread between. By having middle strati vegetation dispersed between gaps in taller strati trees, traditional Maya gardens utilized sunlight very efficiently.

The resourceful use of space and sunlight was corroborated by a study conducted by Geilfus, Gillespie, and Knudson, who measured the percentage of unutilized sunlight, in four gardens in central Petén (1993). In addition to recording sunlight, Geilfus, Gillespie, and Knudson also surveyed the species and uses of the plants within the section selected (1993). Through surveying the trees and plants

maintained in gardens, Geilfus, Gillespie, and Knudson identified 5 categories of use: food supplementation, construction wood, shade implementation, herbal medicine and decoration (1993). Corzo-Márquez and Schwartz similarly categorized the uses of species and found that food producing species, medicinal plants, decorative plants, and carpentry wood were the most prevalent categorizations (2008a).

Globalizing forces have brought development to many Maya communities, as a result aspects of Maya lifeways are being modified to accommodate for the new urbanization. The influences of globalization and wage-based labor on Maya home gardening has been understudied, but it is touched upon by Corzo-Márquez and Schwartz in their paper on income supplementation through garden produce sales in the Petén of Guatemala (2008b). The reasons for garden change cited by Peteneros is that there are high paying wage labor jobs in urban centers which requires Peteneros to commute and therefore spend more time away from their home and garden (Corzo-Márquez & Schwartz 2008b). Real estate prices have skyrocketed in Peten and as a result, many young Peteneros live in subdivided houses or lots, a living condition that does not allow for the space required for a traditional garden (Corzo-Márquez & Schwartz 2008b).

Where Corzo-Márquez and Schwartz (2008b) showcased the effects of development and wage labor-based economy on the prevalence of traditional gardens, Poot-Pool et al (2012) illustrate the effect of monetary wealth on plant species density, diversification, and use in the small Maya community in Pomuch Mexico. The data Poot-Pool et al collected shows that monetary wealth influences gardens to be less

traditional because the family is not relying on their garden for food or income supplementation. Poorer individuals maintain more traditional gardens because they rely on them to survive, more similar to the historic reliance of the Maya on their gardens.

Poot-Pool et al (2012) examined a much less acculturated population than Corzo-Márquez and Schwartz (2008b) because the Maya of Pomuch farmed communally held land and did not have wage-labor jobs. As a result, the data from the study conducted by Poot-Pool et al (2012) only showcased the impact of monetary wealth and a currency-based economy on traditional gardens whereas Corzo-Márquez and Schwartz's (2008b) discussion revolved around the influences of wage labor and privatized land. In comparing the two, it is clear that wage labor and privatization is far more detrimental to traditional gardening because the differences in the gardens of Pomuch were subtle, but in Petén gardens were vastly different and, in some cases, nonexistent.

The relationship between Maya cultural heritage and the practice of keeping a home garden is the next subsection in the literature. On the matter, Keys posits that Maya home gardens actively reproduce culture rather than just reflect (1999). Through his working with the Kaqchikel Maya in highland Guatemala, Keys found that home gardens served as sites of intergenerational cultural knowledge transmission (1999). Children learned traditional ecological knowledge (TEK) through working in the home garden with their mothers, where they were often told

traditional folklore alongside learning the technical aspects of forest gardening, thus the practice of home gardening reproduces TEK and cultural heritage (Keys 1999).

Keys's (1999) theory that intergenerational cultural transmission occurs primarily in the home garden is corroborated by Zarger's (2002) doctoral thesis, in which she investigates the intergenerational transmission of TEK among the Q'eqchi' Maya of San Miguel in Southern Belize. Through participant observation and interviewing Zarger concludes that TEK acquisition is informal and begins working in the home following along with their family members. The learning then continues through experimental practice where children test what they have observed in the garden (Zarger 2002). The freeform knowledge acquisition means there is no formal or homogenous lesson in gardening for Maya children.

The literature regarding modern Maya home gardens supplied three general postulates: first, Maya forest gardening involves a layout similar to the wild rainforest where plants with multiple uses, such as food supplementation, medicinal qualities, and carpentry are maintained. Second, monetary wealth and labor-wage based economies lead to TEK degradation. Third, Maya home gardens are not just reflections of cultural heritage, but active sites of retention, reproduction, and intergenerational TEK transmission. Previously these postulates have remained separate from one another due to the diversity of fields and the lack of a holistic analysis. This paper seeks to rectify this oversight in the literature by engaging both conflicting processes defining modern Maya home gardens.

Methodology

The overarching inquiry of my research was how acculturation is impacting home garden use and traditional ecological knowledge in Succotz. To fully account for each facet of this question I had to know how gardens were maintained historically, how they are being maintained currently, and why Succotzeños are electing to garden in the fashion they currently are. To obtain this knowledge I devised three methods of formal data collection. The first is a qualitative method where participants identify plants and list their uses as they guide me through their garden. The next two methods were both semi-structured interviews, one regarding modern garden use and the other historic garden use. Beyond these formalized methods, I also engaged in participant observation over the course of my two-month stay in Succotz from May 24th to July 24th through living with a Succotzeño family and participating in daily home life.

I worked with a team of locals that decided which households to select for interviewing and to assist in interpreting informants. We made sure to pick localities from different areas throughout Succotz to ensure the data would holistically reflect the gardening practices of the entire village, not only one specific area. In total the interpreter and I visited 17 households and conducted 15 garden inventories, 15 interviews regarding modern garden use, and 3 regarding historic garden use. Once we would arrive at a participant's home, they would take us on a tour of their garden and would identify each plant and provide a description of its use. A photograph of each plant was taken so they could be scientifically identified later.

Following a tour of their garden, I would ask participants if they would be willing to be interviewed, these interviews were then recorded and transcribed. I asked questions regarding how often they used the foods and herbs from their gardens, and how they learned to garden. Interviews were coded for each category of plant use, those being, medicinal, decorative, and food-bearing plants. I also had codes for cultural change and cultural retention, and how participants learned to maintain their gardens.

To collect data on how gardens functioned in the past I interviewed three elder community members, who's ages ranged from 70-90 years old, about their memories of gardens of the past. I coded these interviews similarly to those of the garden tours so the differences between the present and past were easily observable. To get a more technical understanding of historic gardening practices I consulted Corzo-Márquez and Schwartz's 2008a work. The Petén of Guatemala has a very similar climate to Succotz, so the vegetation between the two is comparable. Corzo-Márquez and Schwartz's study focused on traditional gardens, so the gardens documented there will be very similar to the historic gardens of Succotz.

History

Contextualizing the data within the unique history of acculturation in Succotz is imperative to properly understand all of its implications. Succotz was founded by Yucatec Maya refugees fleeing the Caste War raging in the Yucatan of Mexico from 1847-1901 (Medina 2003). Bringing their traditional ecological knowledge to their

new home, the first Succotzeños planted and maintained lush forest gardens. If one were to walk down the streets of Succotz during this time, roughly 100 to 150 years ago, the gardens would scarcely be distinguished from the surrounding rain forest. On either side of gravel streets, trees loomed, dwarfing the dwellings of Succotzeños nestled within the foliage of the lush shrubs and bushes filling the shaded spaces between the sturdy trunks.

While Geilfus, Gillespie, and Knudson identified 5 categories of plant use (1993), in this paper there will only be three categories, food, medicine, and ornamentation because the others were not mentioned by participants. According to the ethnographic data of village elders, food production took priority as people sustained themselves off of farming in the monte and their gardens. Women tended the garden and used the plants there to supplement the harvest from the monte that their husbands would bring back. Popular produce bearing plants mentioned by elder participants included multiple varieties of beans and sweet potatoes, cassava, chaya, cucumbers, tomatoes, chico sapote, mango and pumpkin. Occasionally rice or small plots of corn were planted although both were more likely to be grown in the milpa.

After food-production, Succotzeños were most concerned with medicinal plants as I was told that there were very few available doctors. Therefore, in those times, the pharmacy was one's backyard. The life history account of Torres, a healer from a neighboring village, corroborates this claim as he explained how his mother would mend his ailments with medicinal herbs (Dickerson 2008, p. 30-31). The women had a wealth of herbal knowledge that they used to treat their children or husband if they

were sick. However, if her knowledge didn't suffice there were herbal healers which community members would be treated by (Medina 2003).

Ornamental plants have always been maintained by women, however, there wasn't a large emphasis on them three generations ago. They were seen as more of a hobby of wives, plants that they tended to make themselves happy and to beautify their yards. Ornamental plants, while boasting high species diversity, generally occupied the least space in the garden. Typically, they were only planted in front of and around the house and did not extend into other areas of the yard.

Home gardening in Succotz continued with little modification until the mid-1900s when development came to the doorstep of the sleepy village and brought with it an exponential rate of cultural change. Two main phenomena ushered in this rapid change. The first was the urbanization of the sister cities of San Ignacio and Santa Elena, located roughly fifteen minutes east of Succotz on the Western Highway. The construction of the Hawksworth Bridge in 1949 brought a boon of economic development to the sister cities, which led many Succotzeños to seek jobs there, particularly in construction as urbanization continued in the area. The second influential change was in 1970 when Belmopan became the capital of Belize after hurricane Hattie destroyed much of Belize City. Belmopan is roughly an hour away from Succotz, so the capital change brought more governmental wage working jobs to the area. These developments introduced wage-labor and greater currency-based wealth into Succotz. Wage labor subsequently became popular in Succotz and in turn,

the economy is now a consumeristic capitalist system as little grocery shops popped up throughout the village (Medina 2008).

The changes to the lifeways of Succotzeños can be attributed to the process of acculturation. I would now like to clarify my use of the word acculturation within the context of this paper. I am using it in the terms of a fluid and uneven process, in some places the current of acculturation flows swifter and shapes the cultural riverbed to a greater degree than other sections of river, it brings with it sediment and builds up, or develops, certain areas quicker than others. Acculturation, like any cultural change, is a gradient because culture never changes all at once, it is always in the process of becoming through practice. However, cultural change through acculturation is the result of contact with a dominant culture that involves active and passive pressure to assimilate. Over the years Succotzeños have felt both pressures, the active pressure taking place in the schools two generations ago where children were beaten for speaking Yucatec according to a participant of mine. Passive pressure came from the aforementioned urbanization of San Ignacio and Santa Elena, which led to the economic transformation to wage-based labor and currency. Currently, the pressure manifests as continued development.

My point of using the word acculturation is to communicate that the way of life in Succotz more closely mirrors the urban center of San Ignacio rather than the other more isolated Maya communities. Furthermore, Succotzeños, in general, identify themselves not as being Maya but being of Maya heritage. It would be disingenuous to claim that the stream of acculturation has not swept through the lifeways of

Succotzeños, but it would be just as inaccurate to claim that Succotzeños have no connection to their ancestors. Instead, an analysis of modern home gardening reflects acculturation and reveals that the praxis of home gardening preserves components of Maya lifeways.

Modern Data

As has been established, home garden layout and species composition were greatly influenced by the new economy and labor system. Upon inquiry, an elderly community member informed me that they remembered cleared lawns becoming prevalent roughly around the same time Belmopan became the capital of Belize. The logic follows that wage working jobs would contribute to smaller gardens with more cleared space because they require long hours away from the home, leaving little time and energy to maintain a large garden. In fact, 40% of participants said that their jobs made it hard to maintain their gardens. This percentage becomes more significant with the additional context that another 40% of participants were retirees and therefore would not comment on a job-related time constraint, meaning that the number of those who feel their job keeps them from their garden would most likely be higher if working households were separated from retired ones. One participant specifically identified jobs as being the main cause for smaller gardens saying, “gardens used to be bigger before, but now there is not as much time to garden because people started working”.

Not only has the size of gardens been impacted but also the composition of species within the home garden. By analyzing food-bearing species grown in contemporary gardens in Succotz, a clear shift in the type of food produced in gardens becomes evident. Table 1 illustrates this shift by representing the food-bearing species found in home gardens with a frequency of over one third or 33%. The two left columns contain the species colloquial and scientific name, the final column represents the percentage of gardens housing the species.

<i>Colloquial Name</i>	<i>Scientific Name</i>	<i>Percentage</i>
<i>Chaya</i>	Cnidocolus Aconitifolius	80%
<i>Banana/Wild Banana</i>	Musa Acuminata	67%
<i>Key Lime/Persian Lime</i>	Citrus aurantifolia/Citrus × latifolia	67%
<i>Soursop</i>	Annona Muricata	53%
<i>Mango</i>	Mangifera Indica	53%
<i>Orange</i>	Citrus x Sinensis	47%
<i>Plantain</i>	Musa x Paradisiaca	47%
<i>Coconut</i>	Cocos nucifera	40%
<i>Kinnip</i>	Melicoccus bijugatus	40%
<i>Craboo</i>	Byrsonima Crassibolia	40%
<i>Avocado</i>	Persea Americana	33%
<i>Golden Plum</i>	Spondias Dulcis	33%

Table 1

With the exception of chaya, all of the species present in table 1 are fruit producing plants. This is vastly different from the popular plants of the past which included heartier starchy vegetables that provided more sustenance than fruit producing plants. This change in popular species is indicative of the advent of grocery stores, where most Succotzeños get their food. Therefore, food grown in the garden

isn't a primary source of sustenance, it is more supplementary to store-bought food. 93% of interviewees said they buy most of their food at the store. fruit producing plants also allow for income supplementation as many Succotzeños sell the produce from their gardens to the community. Like food bearing plants, medicinal herb use has changed as well, in large part due to the introduction of pharmacies to the area as a result of the urbanization in the sister cities. Succotzeños no longer solely rely on their herbs as they did roughly three generations ago (Dickerson 2008). This decrease in necessity led to a deemphasis on medicinal knowledge, therefore many herbal remedies have been forgotten over the course of two generations. Even though there is a deemphasis in herbal knowledge, herbs are still often used in Succotz, all participants but two said they used herbs for minor ailments but went to the pharmacy if the illness was more severe and outside of the scope of herbs known to them. Diabetes and prolonged fever were two examples of ailments that participants said they would go to the pharmacy for.

In the following table, I have cataloged all of the medicinal herbs that participants identified as well as their frequency within the home gardens. In addition, I included the cures that participants said the herb was used for. The numbers following a statement within the "Uses" category refer to how many times I was told a specific cure.

<i>Name</i>	<i>Scientific Name</i>	<i>Frequency</i>	<i>Uses and the Number of Times Participants Mentioned Them</i>
<i>Chaya</i>	Cnidocolus Aconitifolius	80%	Raises blood count (3)
<i>Local Lime</i>	Citrus aurantifolia	67%*	Heals bumps and bruises and stomach pain (1) Reduces blood pressure (1)
<i>Ixcanan</i>	Hamelia Patens	60%	Heals burns, rashes, or small wounds (3) or to disinfect a woman after birth (1) Cures athlete's foot (2) Soothes the stomach (2) Reduces allergies (1), inflammation (1), and to help diabetes, and prostate problems (1)
<i>Oregano Grueso</i>	Plectranthus amboinicus	60%	Takes down inflammation (1) Cures swollen ears/earache (3) Used to take down foot swelling (1) Used to alleviate cough (2)
<i>Soursop</i>	Annona Muricata	53%	Treats cancer (1) Heals headaches and inflammation (1) Cures stomach infection and alleviates diabetes (1)
<i>Aloe</i>	Aloe Vera	46%	Used to heal minor wounds (4)
<i>Ruda</i>	Ruta Graveolens	33%	Used to wash babies (4)
<i>Peppermint</i>	Mentha x Piperita	33%	Made into a tea to help settle the stomach (2)
<i>Lemongrass</i>	Cymbopogon citrate	26%	Boil leaves in milk and drink hot to heal coughs (2)
<i>Gumbo limbo</i>	Bursea Simaruba	20%	Heal rashes (1) Cures fever and headache (2)
<i>Pasote</i>	Dysphania ambrosioides	20%	Gets rid of parasites (3)
<i>Siempre Viva</i>	Bryophyllum pinnatum	20%	Takes down swelling (2)
<i>Ortiga</i>	Urtica urens	13%	Heals headache and cough. (2)
<i>Poleo</i>	Mentha Requienii	13%	Relieves stomach pains (1) stops vomiting (1)
<i>Moringa</i>	Moringa oleifera	13%	Cleans the system (1) Treats diabetes and is good for overall health (1)
<i>Ix tu pu</i>	Tagetes erecta	13%	Used wash babies to get rid of bad spirits (1) Repels bugs (1)
<i>Ginger</i>	Zingiber officinale	13%	Reduces pain (1)
<i>White Sage</i>	Artemisia Ludoviana	6%	Cure cough and upset stomach (1)
<i>Chu-chu</i>	Solamum Mammosum	6%	Relieve sinus (1)
<i>Suelda con Suelda</i>	Anredera vesicaria	6%	Takes down swelling (1)
<i>Santa Maria</i>	Tanacetum parthenium	6%	Alleviate menstrual cramps (1)
<i>Cancerina</i>	Semialarium mexicanum	6%	Treats cancer (1)
<i>Benbena</i>	Stachytarpheta jamaicensis	6%	Alleviates gastritis (1)
<i>Sorrosee</i>	Momordica charantia	6%	Strengthens and increases blood count (1)

Table 2

*Number may not be accurate as some participants didn't distinguish between lime varieties and only referred to the plant as "lime".

Interestingly there is a great diversity in the cures that participants used the herb for. Herbs often have many medicinal properties so it within reason to suppose all these cures are correct, however the variations on medicinal herb use illustrate diverse familial gardening praxes. The range in familial praxis can be attributed to the informal transference of the traditional ecological knowledge (TEK). As discussed in the literature review, Keys (1999) and Zarger (2003) conclude that TEK is transferred informally through praxis as children assist their parents in the garden. This process of TEK transmission is similar in Succotz according to my participants, 80% said they learned gardening techniques from spending time with their parents in the gardens. The informal nature of knowledge acquisition means that Succotzeños garden in the style of their parents, which would lead to each family having a distinct garden praxis. The differences in familial praxes result in the great diversity in home gardens because there is no centralized curriculum to draw the knowledge from, therefore, a Succotzeño's TEK is reliant on the particular gardening praxis of their family.

Considering that a household's TEK transmission is based on their own familial circumstances, it follows that a change to a neoliberal capitalist economy would lead to greater diversity in familial habitus and therefore modern gardens. Land privatization, a wide variety of wage working jobs, and access to new commodities based on wealth create wider differences in habitus between community members than in the past where land was communally held, and everyone was a subsistence farmer. A similar habitus means community members will have similar

TEK, therefore a new capitalist economy that introduces a wider variety of jobs and greater divisions in wealth will cause differences in TEK, especially because the transmission of TEK is family specific.

In addition to explaining differences in TEK between participants, informal TEK transmission showcases the way in which Maya heritage is reproduced in home gardens. Considering that all plant knowledge is acquired through working in the garden with the one's parental figure from the previous generation, ancestral knowledge is passed down through the continued praxis of home gardening. Beyond the continued use of herbal medicines, and food production, evidence of the reproduction of ancestral knowledge is found in the use of Yucatec Maya within the garden. The Yucatec language is almost entirely absent from the daily vernacular of Succotzeños, however, Yucatec names of garden plants are still used despite the lack of fluency. In table 3 I list all the plants referred to in Yucatec, I include the English, Scientific and Yucatec names for the plant. I also record the number of participants that used the Yucatec name and how many used another language to identify it.

<i>English Name</i>	<i>Scientific Name</i>	<i>Yucatec Name</i>	<i>Yucatec Used</i>	<i>Other Lang.</i>
<i>Polly Redhead</i>	Hamelia Patens	Ixkanan	8	0
<i>Elephant Ear</i>	Xanthosoma Sagittifolium	Macal	3	1
<i>Marigold</i>	Tagetes erecta	Ix tu pu	2	0
<i>Purple Yam</i>	Dioscorea Alata	Piak'	2	0
<i>Gumbolimbo</i>	Bursea Simaruba	Chaka	2	1
<i>Chili</i>	Capsicum frutescens	Maxik	2*	2
<i>Craboo</i>	Byrsonima Crassibolia	Chi'	1	5
<i>Titty Fruit</i>	Solanum Mammosum	Chu chu	1	0
<i>Cherry</i>	Pseudolmedia oxiphillaria	Manax	1	1

Table 3

*One participant called it Chile Maxi which is a hybrid of the Yucatec and Spanish names.

Although there are comparatively few plants referred to in Yucatec as English and Spanish, it is still a significant number when one factors in the fact that Yucatec use in Succotz is virtually nonexistent. Therefore, modern Succotzeños would have no knowledge of Yucatec names unless they were generationally passed down.

While the river of acculturation lopsidedly etches the countryside, in the case of Maya home gardening, it must contend with the lattice of roots jutting out of the riverbank, that is the praxis of gardening, creating niches and shielding pockets from the relentless current. In this way, the home gardens are a quiet battleground where new realities meet old lifeways, each attempting to shape the other. Which process dominates a garden depends on many factors of the particular household's habitus, but there is one key factor that often gets overlooked when discussing acculturation, personal agency and preference. Some have embraced the flood, like one participant who enjoys outfitting her ornamentals in colorful handmade pots fashioned from recycled materials. As we traversed across her well-trimmed lawn, from one carefully maintained ornamental bed to another, my participant said to me with a jovial laugh that she had found many of her planter ideas on YouTube, which her daughters urged her to try. Chuckling again, she excitedly said technology and change should be embraced.

Others choose to nestle in the niches along the riverbank, where the current only slightly tugs at the sediment, like one family I interviewed where the older members of the family stressed the importance of heritage retention, stating that their primary reason for gardening was to teach the new generation traditional

garden practices. The fruits of their labor were apparent as the children of the home enthusiastically guided me beneath the tall trees of their garden, spouting off names and uses of the plants. The children ran around collecting seed pods and flowers which they proudly displayed as examples, occasionally taking a break to chase the chickens, all while the adults tagged along filling in the gaps of knowledge with similar enthusiasm.

The goal of including the above vignettes is to illustrate the role agency plays in TEK transmission and the dual opposing processes of acculturation and heritage retention. While these decisions are informed by familial habitus, they are conscious and deliberate decisions in how to garden in regard to TEK and heritage. Agency is a significant contributing factor to the diversity of gardens in Succotz, Succotzeños make knowledgeable decisions in how to garden so they most benefit their families. For this reason, I believe that revitalization efforts need to account for and circumvent some of the phenomena of acculturation that has been obstructive to traditional gardening because Succotzeños have not changed gardening practices illogically, but instead have adapted to rapid change. In addition, revitalization efforts should be community led and organized with outside support when requested, because no one will know better than Succotzeños themselves how to implement effective programs.

As a final note, all participants, no matter their style of garden, felt that maintaining a garden connected them to their heritage. Answers revolved around the idea that gardening and farming was something their ancestors had incredible

expertise in and by continuing to love and care for their gardens they were carrying on that legacy. If there was one unanimous trait between all the participants of this study, it would be their love and passion for their gardens. How home gardening changes or remains the same has yet to be seen, however, I believe home gardens will be a prominent component of Succotzeño lifeways for many generations to come.

Conclusion

In the past three generations, Succotz has undergone monumental changes due to the development of the area, both through the sister cities and Belmopan. The development sparked the switch to a currency and wage labor-based, capitalist-consumer economy. The new economy and further development introduced pharmacies and grocery shops into the area which had a great effect on the praxis of Maya home gardening. The pressure for Succotzeños to become acculturated to the Belizean culture and economy is reflected within the home gardens as hearty food-bearing plants are making way for fruits and medicinal herbs are being used less and becoming unnecessary.

The changes to Succotzeño lifeways have resulted in great diversity in species composition and garden layout. The informal way that TEK is taught facilitates the diversity in the face of acculturation because TEK transmission and use are dependent on individual familial habitus. The new variety of jobs and growing economic inequality has led to greater diversity in familial habitus which has, in turn, led to greater diversity in home gardening practices.

While informal TEK transmission has led to greater garden diversity, it also reproduces TEK through praxis which has been passed down from familial ancestors. The heritage reproduction is evident in the continued use of certain herbs, food production, some layouts and in the use of Yucatec Maya to name plants within the garden.

Both processes of acculturation and heritage reproduction are present and co-occurring within the modern home gardens of Succotz. While these processes inform familial habitus, the extent to which they influence familial home garden praxis is determined by the agency of those within the household. Succotzeño households garden according to their needs and wants in the face of rapid change. Despite the change, Succotzeños feel gardening connects them to their ancestors in addition to being sources of pride and joy. The passion Succotzeños have for gardening ensures that home gardening will continue to be central to Succotzeño lifeways for many future generations.

Acknowledgments

I would like to thank my co-author and advisor, Dr. Filiberto Penados for giving me the idea, providing expertise on the village as well as guiding throughout the venture. I am very grateful to Mrs. Bertha Penados for aiding me where my Spanish failed, putting participants at ease, and being excellent company throughout the interview process. I would like to thank Ms. Olivia Pat, for opening her house to me and making it feel like home while I stayed in Succotz. Finally, I

am incredibly appreciative of all the participants who welcomed me into their gardens and took time out of their lives to show me around.

Works Cited

- Corzo-Márquez, A. R., Schwartz, N. B. (2008a). *Los cercos: Huertos de traspatio del Petén tradicional*. Flores, Guatemala: ProPetén Press
- Corzo-Márquez, A. R., Schwartz, N. B. (2008b). Traditional home gardens of Petén, Guatemala: Resource management, food security, and conservation. *Journal of Ethnobiology*, 28(2), 305-317. DOI:<https://doi.org/10.2993/0278-0771-28.2.305>
- Dickerson, C. M., (2008). *A look at bush medicine in a pharmaceutical world: Three traditional healers in Belize face globalization* (Unpublished doctoral dissertation). Texas State University, San Marcos Texas.
- El Pilar Maya Forest Garden Network. (2007). *Forest Garden Database* [Data file]. Retrieved from https://www.mayaforestgardeners.org/db-plant.php?sort=p_scientific
- Geilfus, F., Gillespie, A. R., & Knudson, D. M. (1993). The structure of four home gardens in the Petén, Guatemala. *Agroforestry Systems*. 24(2), 157–170. <https://doi.org/10.1007/BF00706889>
- Keys, E. (1999). Kaqchikel gardens: Women, children, and multiple roles of gardens among the Maya of highland Guatemala. *Conference of Latin Americanist Yearbook*, 25, 89–100.
- Medina, L. K., (2003). Commoditizing culture: Tourism and Maya identity. *Annals of Tourism Research*. 30(2), 353–368. [https://doi.org/10.1016/S0160-7383\(02\)00099-3](https://doi.org/10.1016/S0160-7383(02)00099-3)

Poot-Pool, W. S., Esparza-Olguin, L., Flores-Guido, S., Pat-Fernandez, & J. M.,

Vanderwal H., (2012). Economic Stratification Differentiates Home Gardens in the Maya Village of Pomuch, Mexico. *Economic Botany*, 66(3), 264–275.

<https://doi.org/10.1007/s12231-012-9206-3>

Zarger, R. K., (1995) *Children's Ethnoecological Knowledge: Situated learning and the cultural transmission of subsistence knowledge and skills among Q'eqchi' Maya* (Unpublished doctoral dissertation). University of Georgia, Athens Georgia.