Cassava and the Makushi: A Shared History of Resiliency and Transformation

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For every society, there is no more important set of cultural traits than the one related to subsistence. Food, and its necessary growth, gathering, and preparation, is fundamental to the existence of human life. If one would like to know what lies at the very heart of a people, then surely food must be seen as its visible manifestation. Societies throughout time and the world have developed complex ceremonies, rituals, rites, taboos, and beliefs surrounding the growth, harvest, preparation, and consumption of food. The Makushi of southwestern Guyana and their staple foods are no exception. Cassava (*Manihot esculenta* Crantz, Euphorbiaceae) and its products are inextricably tied to Makushi identity and are the outward expressions of what defines them as a group.

Amerindian (the term used to describe Central and South America’s indigenous people) societies and cultures have undergone profound transformations through colonization, disease, and missionization. Charles Schomburgk, a German explorer, painted a grim picture of the future of Amerindians after his travels through Guyana in the 1830s.

Driven from their lands, now in possession of the Europeans and their descendants, they have wandered from their ancient homes, strangers in their own country, and diseases and vices introduced by the settlers and feuds among themselves, have all but annihilated the rightful owners of the soil. It is a melancholy fact, but too well founded that wherever Europeans have settled, the extermination of the native tribes has succeeded their arrival. (Schomburgk 1840: 48)

The Makushi represent a striking example of Schomburgk’s depiction because they were nearly wiped out themselves by diseases introduced in the years following European contact with South America (DeFillips, Maina, and Crepin 2004). This was not alarming to the colonial regime at the time because, as one British official stated, Amerindians held “little or no social value and their early extinction must be looked upon as inevitable” (Rowland 1892: 56). However, far from disappearing as
victims of “progress,” the Makushi have rebounded to become the second largest Amerindian group in Guyana and the fourth largest in Brazil (Forte 1996b; Conselho Indigena de Roraima 1993). This return from the brink has been nothing short of amazing, and much of their resilience resides in their dietary staple: cassava.

Makushi men and women regularly refer to cassava and its associated products as “we food.” This simple statement encapsulates a complicated history of conflict, colonization, and upheaval that has at times destabilized a people. This chapter will explain the history of the Makushi and their subsistence patterns, and reveal the importance of cassava in their daily lives. In the face of major social and political upheaval, the fact that this food staple has remained integral to what it means to be Makushi is a testament to the importance of cassava to both group livelihood and identity.

The Makushi

The Makushi are a Carib-speaking people living in the Rio Branco-Rupununi Savannahs in northern Brazil and southwestern Guyana. Historical evidence dating back to the early eighteenth century marks the earliest Makushi presence in the region (Hemming 1994). Settlement of the area was a result of their southern neighbors, the Wapishana, an Arawakan group, driving them north (Evans and Meggers 1960). The Wapishana were themselves responding to external forces, pushed north and eastward as Brazilian settlers began populating the area (Riviere 1963). In southwestern Guyana today, the forested Kanuku Mountains, which run east-west, provide a natural dividing line of the Rupununi savannahs with the Makushi generally found in the north and the Wapishana in the south.

Linguistic, cultural, and ethnohistoric evidence places the Makushi in the tropical forest culture complex (Myers 1993), with their origin centered in the Xingu basin of western Amazonia (Evans and Meggers 1960). The groups from this area all share a complex of subsistence traits that include hunting, fishing, and gathering, as well as the cultivation of cassava through shifting (slash-and-burn), cultivation, and a seminomadic lifestyle. Makushi settlements historically were dispersed and politically decentralized (Whitehead 1994). Individuals and households were highly mobile, leading to temporary and distant settlements. A household was a self-sufficient entity in terms of production of food and craft staples and could contain three to four generations under one roof.

Although the Makushi are still alive and well today, much of their way of life has changed since the Europeans first made contact in the Americas. Cassava and its products are still central to the idea of what it means to be a Makushi; however, due to contact a greater reliance has been placed on wage earnings and this has influenced the once strict gender division of labor. Thus, in order to understand how this change came about, as well as to understand the importance of cassava to the contemporary Makushi, it is essential to understand Guyana’s colonial history.
Guyana’s Colonial History

The first Europeans came to the Guianas in search of new trade routes, spices, and gold. Early voyagers initially saw little of consequence in the interior and often felt themselves in an impenetrable and meaningless green blanket as they attempted to explore the rainforest. In stark contrast, Amerindians in the Guianas lived in relative ecological synchrony with the forested surroundings and had a thorough knowledge of plants and animals (DeFillips, Maina, and Crepin 2004). The Europeans mostly stayed out, but they entered deeper into the forests of the interior as stories spread of the golden city of Manoa and King El Dorado. They began working their way into what was, at least for the European, uncharted territory, using rivers as highways into the interior. Although they never did find El Dorado, and Sir Walter Raleigh lost his head for nearly bankrupting King James I in his series of misguided voyages in the late sixteenth and early seventeenth centuries, they did find areas ripe for colonial exploitation through the development of plantations (Gillian 1963).

The Dutch were the first Europeans to develop permanent settlements in Guyana beginning in 1616, putting their knowledge of building levees, canals, and locks to “recover” the earth from mangrove and tidally flooded swamps (Daly 1974). Initial contacts with Amerindian populations were friendly and the Dutch expressed a keen interest and surprise in the amount of food and crafts they could exchange for cheap European goods. However, this relationship quickly changed, as the colonists needed additional laborers to work in the ever-expanding sugarcane fields. The coastal tribes were first enlisted, with force when necessary, but these overtures were eventually met with resistance and abandonment of plantation life. Because of this, the Dutch in 1686 named four tribes they had contact with immune from slavery and employed them as slave-catchers (Forte 1996c). The Arawak, Carib, Warrau, and Akawaio were not to be used as slaves, but they were to bring other men and women from interior tribes to work in their place.

These slave-raiding exploits carried out by the four immune tribes led to what is known to the locals as the “tribal wars.” Stories abound of Makushis being forced to retreat to higher, more remote areas of the Pakaraima Mountains and deeper into the rainforest to avoid the slave-raiding coastal tribes. The Makushi were at a disadvantage as they were not equipped with European goods such as guns and cutlasses (a local term for machetes). Their southern neighbors, the Wapishana, were under the same pressure from the slave-raid ers and there were reports that they were living in the savannahs by day, but at night retiring to cliffs and caves that were defended by palisades (Butt Colson and Morton 1982).

Accounts from Sir Walter Raleigh’s failed expedition in search of El Dorado may have mentioned the Makushi living in the Rupununi savannah as early as the seventeenth century, but the names of tribes and their descriptions are unclear (Gillian 1963). Before the European presence in South America, the Rupununi savannah likely was unpopulated and the movement of people into the area was either as a
consequence of colonizers pushing out tribes from their traditional areas or those seeking refuge from slave-raiding, or both (Williams 1991). In 1793, however, the Dutch government outlawed Amerindian slavery in Guyana and the Makushi subsequently drove the Caribs out of the Rupununi (Forte 1996c). Then, shortly thereafter, the Dutch were themselves driven out by the British at the turn of the nineteenth century. The focus now was wholly on African slaves providing the colonial workforce. This was not to last though as slavery was abolished in 1834 and, without African slaves providing the workforce, the British sought out other plantation workers. Initially the Portuguese were enlisted as indentured servants, but once their period of servitude was completed they quickly began filling the merchant class and expected the same rights as the British. The British had set up a system of social stratification by race in Guyana (as they had in other colonies) and the Portuguese would not stay on as plantation workers after their service period ended. Because the British were not looking to bring in those who would expect equal standing in society, but instead were looking for lifetime laborers, the next experiment was with the Chinese. However, the colony was unable to bring them over in any sizeable numbers and it was at this time that the first boats of indentured East Indians began arriving. In total, over 240,000 East Indians were brought to Guyana (Daly 1974). At this time the colony of India also included Pakistan and as such both Hindus and Muslims were carried over. The Africans had mostly been converted to Christianity (Anglican), as were the Amerindians during the twentieth century, and thus a multiethnic colony composed of multiple religions was produced.

As some colonists moved from the coast and into the interior they saw much that needed changing in terms of the Amerindian population. This sentiment was felt most profoundly by the missionaries. The intimate lives of the indigenous people—childcare, the home, sexuality, marriage, gender relations, and even bodily adornments—came under the scrutiny and condemnation of the colonizers (see Jacobs 2009). This contributed to social and cultural upheaval as missionaries worked to replace many of the local philosophies that formed Makushi social organization with European Christianity. Polygyny (men taking multiple wives) was banned, nuclear settlements were directed, and men were expected to be the head of the family (Myers 1993). This upheaval was further compounded by the new diseases people brought into the area (even throughout the first half of the twentieth century, epidemics were still killing large numbers of Makushi people) (Jones 1952).

Along with the colonists also came new opportunities for subsistence. Because of the expansive savannahs, the Rupununi was looked to as an ideal area for cattle ranching. Initially brought over from Brazil in the late 1800s, grazing cattle in the open grasslands and savannahs became a common sight in the area (Myers 1993). The balata bleeding industry also took off during this time period (Baldwin 1946). Balata is a rubber substitute extracted from the bullet wood tree (*Manilkaria bidentata*), which is generally found deep in primary rainforest. For these two industries, workers were needed and recruited from local villages. Traditionally, men and women stayed close
to their families and homes, but with the advent of wage labor many young adults moved to areas providing jobs. These industries and others had major demographic consequences, affecting cassava demand and production throughout the Rupununi. Balata bleeders, ranchers, and vaqueiros (Portuguese word for cowboys) often spent weeks or months alone or in small groups far from settlements (Myers 1993). As such, they needed a portable food source and this led to a demand for the increased production of cassava. These industries also concentrated the demand for cassava products in new population centers, resulting in many farmers expanding their farms and producing more cassava than needed for their own subsistence for the first time.

Contemporary Guyana and the Makushi

As a result of its colonial history, Guyana today is both a multiethnic and multi-religious state. Of the nation’s roughly 750,000 people, ninety percent live along the urbanized coastlands, which is only about five percent of the country’s landmass. The remaining ninety-five percent of the country is either sparsely or completely unpopulated. Inland from the coast, Amerindians compose the majority of the population. There are currently approximately 24,000 Makushi, with 9,000 living in Region Nine (Upper Takutu-Upper Essequibo, one of ten administrative regions) of southwestern Guyana (Ricardo 1996; Forte 1996b). Throughout the region, there are twenty-seven principle Makushi villages as well as a number of smaller satellite communities (Forte 1996c).

Geographically, Guyana is part of the South American continent but culturally the major population centers on the coast are Caribbean. Much of the interior, including the Rupununi, is more closely connected with the markets and industries of Brazil. Partly this is the result of the inland regions of Guyana being isolated from coastal populations. To this day there is only one road that connects the coast to the interior and it is unpaved and frequently impassable during the rainy season. Because of the interior’s remoteness from the coastland and the close ties to Brazil, much of what happens in the interior is disconnected from the capital.

The racial politics on the coast, created by colonial policies, were (and are) focused solely on the competition between the Afro- and Indo-Guyanese groups for power. After independence in 1966, the paternalism of the colonial government was replaced by a strident nationalism colored by racial overtones (Colchester, Rose, and James 2002). This led to those in the interior, who were neither Afro- or Indo-Guyanese, feeling left out of the political sphere because their needs were not being addressed by the coastally-focused government. A rebellion led by ranchers followed in 1969 and was provoked by many reasons, including “insecure pastoral leases, ambitious government proposals for reallocating land in favor of settlers from the coast, racial suspicions, lack of control of cattle rustling from Brazil, and ill-documented rumors of meddling from neighboring countries” (Colchester, Rose, and James 2002: 125).
This uprising was quickly put down by the Guyana Defense Force, and the cattle heyday of the Rupununi was ended overnight as the livestock that had not been rustled by Brazilians was taken by the government. A military base was installed in the capital of Region Nine, Lethem, and settlements of Coastlanders (primarily Afro-Guyanese) were made in traditional Amerindian lands with the purpose of bringing the coast to the interior (Forte 1996b).

This rebellion fueled suspicions that the Makushi were not loyal Guyanese and it poisoned relations between inhabitants of the interior and the coast in a manner that endures to this day. Many government services were suspended including veterinary, rangeland, abattoir and refrigeration, and air transport. Because these connections with the coast were allowed to deteriorate, the ranching economy went into decline (Colchester, Rose, and James 2002). As a consequence, most of the Makushi of Guyana live in remote communities, removed from the national political and economic power and have much more in common with the Makushi in Brazil than with coastal Guyanese (Vereecke 1994; Forte 1996b). The result has been that the economy of the Rupununi is more focused toward the Brazilian state capital of Boa Vista than to Georgetown. Many Makushi in the region now move to Brazil for work because of the decline in the cattle industry (as well as that of the balata industry around 1970). The Brazilian government has also encouraged this movement of people by recently completing a bridge over the Takatu River connecting the two countries near Lethem, making the trip to Brazil even easier. It is quite the transformation to cross into Brazil over this bridge, leaving behind the dusty (or muddy, depending on the season), red, pitted, two-wheeled vehicle tracks of the Rupununi for the paved, illuminated roads of Guyana’s more industrialized neighbor.

The geographical remoteness of the Makushi, as well as most of Guyana’s Amerindian population, exacerbates their marginal status as a group—socially, culturally, and economically—within a country dominated by other ethnic groups (Henfry 2002). Throughout the Caribbean, indigenous contributions to national identity and cultural diversity are rarely recognized, and Guyana is no exception (Palacio 1995). The attention of the coastal Guyanese generally is focused north in the direction of the Caribbean and North America. Very few ever even visit the interior and as a consequence ignorance and misconceptions of the area abound among the general public (Henfry 2002). From the point of view of the coast, much of what happens in the interior is unimportant and there is a sharp social and conceptual divide between the coastal dwellers and those who live in the “hinterland” as it is known. Those in the interior are generally viewed as poorer, less educated, and uncultured, and as such are viewed as having a lower social status than the average Coastlander. As a Guyanese anthropologist noted, “Amerindians comprise the poorest and most neglected stratum of Guayanese society, both when measured in terms of gross annual earnings and in the popular perception of where they fit in the local hierarchical ranking—in both instances, on the very last rung” (Forte 1996a).
Thus the contemporary Makushi people of Guyana are stuck in a land in-between. They are Guyanese but are viewed as less so than those from the coast. Consequently, most have removed themselves even further from the politics of “Town,” as the capital city is called. There is little chance that a remedy exists even within the current public education system. This system follows a pan-Caribbean curriculum and as such does not hold much relevance to the requirements of interior life. Thus, successful students in this system are more likely to be alienated from their home areas rather than be equipped to help solve problems there (Forte 1996b; Lea 1968). Traditional social organization of the Makushi has been characterized by individualistic tendencies, loose social structures, and lack of formal social groupings and this all lies in contrast to the hierarchical and centralized systems of governmental decision making (Gillian 1963). Thus, because of their lack of conforming to the national model, they are viewed as impediments to development (Forte 1996b).

This coastal view of the Makushi being “impediments to development” can be best described by the word the Coastlanders often use when referring to them (as well as other Amerindians). It is not uncommon to hear the Makushi being referred to as “bucks” or “buck-people.” When asked what this refers to the speaker will quickly point out that he or she is comparing the Makushi with the term for male deer, which are common in the hinterland. The use of this word is not always meant to be an insult; however, it does have the effect of further exacerbating the commonly held belief on the coast of the Amerindian as an uncultured, uneducated being.

Although the Makushi do feel left out of the politics of “Town,” and are aware of the stereotypical view an average coastlander has of them, this has, generally, led to a strong sense of a shared identity both amongst themselves as well as other Guyanese Amerindians. Rather than simply becoming victims to this term, many Makushi now embrace the word “buck” and refer to themselves as “we buck people.” Many will also make statements about the importance of “we food” (as mentioned earlier) and the pride they feel in knowing that their diet is much different from the rice-based foods of the coastal populations (as well as the fact that Coastlanders generally cannot stomach their food). In order to understand the source of this pride that the Makushi feel of their subsistence staple, one must understand the shared spiritual origins of the Makushi and cassava.

**Cassava and Creation**

Cassava is an extremely resilient plant that has many uses. Originally from South America, today cassava is grown worldwide and is the third largest source of carbohydrates in the world. A perennial woody shrub that produces long tapered tubers resembling sweet potatoes, cassava can be classified as sweet or bitter depending of the amount of toxic cyanogenic-glucosides in the tubers (Elias, Rival, and McKey 2000). The bitter variety is quite poisonous and the toxins must be extracted through...
a laborious process before the tubers can be safely consumed. Although potentially toxic, bitter cassava is the staple crop throughout much of the Amazon and has been so for over 3,000 years (Renvoize 1972).

Because of colonization, and especially missionization, much of the Makushi’s original oral histories and folklore have been lost, subsequently transforming Makushi cosmology and notions of spirituality. Indeed, such “traditional” knowledge has been replaced with cosmologies of Western religion and their concomitant cultural norms, despite the fact that these imposed beliefs conflicted with traditional ideas related to gender relations, parenting, the family, and marriage (de Oliveira 1994). However, stories of the spiritual origins of cassava can be pieced together from past accounts detailed by early explorers and ethnographers as well from conversations with those still knowledgeable of these origin myths. This knowledge is needed to appreciate the importance this food crop holds in the psyche of the contemporary Makushi.

Makushi folklore and their conception of creation indicate they were an animistic people who did not believe in or worship a single omnipotent god. They instead saw their world inhabited by spirits and, of these, there was one Great Spirit known as Makunaima (Roth 1915). Makunaima had a twin brother Pia and these spirits were the result of the sun coupling with a woman who had been carved from a tree by Alligator. Because both Makunaima and Pia inhabited the same world the Makushi lived in, the spirits’ influence on people’s lives was both expected and unavoidable. The folklore that surrounds Makunaima and Pia can be viewed in a similar light to the stories from Greek Mythology regarding the gods and their exploits. They were mischievous, fickle, and cunning. The stories of their adventures abound in Makushi folklore; such stories, for example, include: the killing of Tiger in retaliation for him killing their mother, the burning of Tiger’s mother Frog, and the unfortunate hunting accident in which Makunaima lost a leg while hunting Tapir—you can still see the stump of his leg to this day if you look into the night sky at what we know as Orion’s belt (Roth 1915).

However, for the Makushi the most important tale involving Makunaima is their creation story. As the legend goes, one day Makunaima climbed a large tree with his stone ax and began to cut pieces of wood. He then cast these pieces into a nearby river and they, once wet, became animate beings. These newly created people were the Makushi and they began to populate the area. Yet Makunaima did not make their existence an easy one and they and all the other animals were starving because they had nothing to eat. One animal, though, the tapir, always appeared sleek and fat. The other animals noticed this and sent the opossum to follow him. The opossum did what he was told, following the tapir deep into the forest. When he saw the tapir pause, the opossum found himself under an enormous tree bearing all of the food types any creature, man or animal, could want. The opossum went back and reported this and then led the humans to the tree. They picked up all they could, but once this food was consumed the only food remaining was very high up in the branches of
the tree. The tree trunk was too smooth to climb and, after a brief discussion, they decided to cut it down. Yet this was a very large tree and took the people many days of chopping with stone axes. The tree finally fell and, alongside the other animals, the people gathered all that they wanted.

However, the people were novices and had no idea how to propagate and prepare some of the foods they had collected. Many were not poisonous, such as corn, and others were edible raw, such as pineapple, but one in particular, bitter cassava, required special knowledge to become suitable for eating. A most helpful bird explained to the Makushi how to grow each food type they collected and most importantly how to prepare the bitter cassava and extract its toxic juice (Roth 1915).

Since this time, it is said that bitter cassava has been the staple of the Makushi. Although bitter cassava may seem like an odd choice for a dietary staple because it is so labor intensive to process in comparison to sweet cassava, the Makushi and bitter cassava are well adapted to one another. The bitter variety is preferred by the Makushi for a number of reasons but primarily because the processing results in products that are resistant to spoilage in a tropical environment. This is an important benefit because, in general, any food not consumed immediately will spoil and go to waste. And, as will be described in more detail further on, bitter cassava is an ideal crop for the demanding and variable physical environment in which the Makushi live.

Farming

Makushi farming practices are in response to their environment, which is punctuated by two seasons: the rainy and dry. During the rainy season (April through September), rains fall heavily and the savannahs become flooded. During this time the Guiana Shield and the Amazon Basin meet, and along their confluence there is a proliferation of plant and animal life. This is the one time of year that the watershed of the largest river in South America, the Amazon, and the third largest river, the Essequibo, connect, and lead to some of the highest levels and concentrations of biodiversity in South America (Lowe-McConnel 2000). However, during the dry season (October through March), rainfall is low and the temperatures rise, causing the creeks to stop flowing, savannahs to dry, and grasses to brown.

The Makushi generally make their homes in the savannah areas, but because of the poor nature of the grassland soil and its exposure to weather extremes, including flooding in the rainy season and severe parching in the dry, the savannahs are inadequate for growing crops. As such, farming is primarily done at the foot of the jungle-covered Kanuku Mountains as well as in forest galleries along rivers where the soil stays moist year round (Elias, Rival, and McKey 2000). This landscape has remained largely unchanged since colonization and was described eloquently by Charles Waterton:
The finest park that England boasts falls far short of this delightful scene. There are about two thousand acres of grass, with here and there a clump of trees and a few bushes and single trees scattered up and down by the hand of nature. The ground is neither hilly nor level, but diversified with moderate rises and falls, so gently running into one another that the eye cannot distinguish where they begin nor where they end . . . The beautiful park of Nature is quite surrounded by lofty hills, all arrayed in superbest garb of trees: some in the form of pyramids, other like sugar-loaves, towering one above the other, some rounded off, and others as though they had lost their apex . . . and ridges of others resemble the waves of an agitated sea. Beyond these appear others, and others past them, others still farther on, till they can scarcely be distinguished from the clouds. (1825: 30–31)

Farming practices do vary among the Makushi, but each household has at least one bitter cassava field. Each field varies in size but they are generally no smaller than one-half acre and rarely larger than two acres (Elias, Rival, and McKey 2000). The Makushi have historically harvested only what they needed for survival. Today, however, although most are still subsistence farmers, crop surpluses are often carried to the market to be sold. One main benefit of cassava, compared to a crop like corn, is that there is no conflict between what is edible and what is needed for replanting because cassava can be propagated vegetatively (without seeds) and the non-edible stalks are the sources of new plants. In order to replant cassava, the stalks of the cassava plant are cut into roughly twelve inch-segments and are planted at about a forty-five-degree angle one to three inches in the ground. Many farmers have a second field where they grow plantains, bananas, and other fruiting trees such as papaya. This field also commonly includes additional root vegetables, pepper plants, watermelon, pineapple, sugarcane, and pumpkin.

Most cassava fields are only used for two or three years before being abandoned. The reasons for this vary but the most common are that the soil fertility declines and produces smaller and poorer quality cassava; as the forest begins to reclaim the field and pests begin to cause more damage than what the plot produces, weeding becomes an unmanageable chore. One of the dreaded pests of every farmer is known locally as the acoushi ant (leaf-cutter ant, *Atta* spp.). The ants are seen as the number-one threat to any farm and there are a number of natural remedies that range from introducing other ants and wasps that defend against the acoushi ant to the pouring of fish poison made from local plants down their burrows (Forte 1996b, 1996c).

Depending on the size of the household and their occupant ages and associated needs, as well as abiotic and biotic environmental factors, at least one new field is cut every year. This provides each household with several fields of varying maturity at one time. These areas are generally selected in the rainy season and then cut during the dry season. In preparation for the arrival of the rains, farmers begin burning these cut areas. The fire consumes the vegetation cover, reducing the labor time needed to weed the field and resulting in a layer of ash that provides nutrients for the first crop. Some farms also include larger trees that were felled and failed to burn
through. These are left where they lay and act as ground protection from erosion as well continuing to contribute nutrients to the farm as they decay. Some crops, such as watermelon and pumpkin, are preferentially planted near tree stumps and fallen logs to take advantage of this (Forte 1996a).

As mentioned previously, these farming practices ensure that each household has two to three fields at varying stages of maturity. Bitter cassava also comes in a staggering number of varieties and each has varying times of maturity, which further influences crop availability. A recent study found that the Makushi in one community cultivate over seventy-six different varieties and that each farm, on average, grew sixteen different varieties. This may seem like needless variation, but having so many varieties serves quite a few purposes. Environments vary and what at one time may do poorly may do quite well in another set of circumstances (Elias, Rival, and McKey 2000). For example, some varieties are more drought tolerant while others are more flood tolerant. Although there are two distinct seasons in the Rupununi, a year or two of drought may be quickly followed by extensive flooding. In this sense, having only one type of bitter cassava growing at a farm is quite risky in terms of supplying a growing and, often times, multigenerational family with food. Diversity is also good for protection against disease and pests (Elias, Rival, and McKey 2000). Because all varieties vary in their ability to grow and develop in spite of climatic or biotic factors, this variation is important to maintain because at any point in time the environmental factors could change, exposing the farm to new pressures.

Farmers are always on the lookout for new varieties and will willingly trade stalks from their farm for a new variety. Cassava stalks may also be given as gifts to those just beginning their first farm, those new to the area, or those who may have lost their farm to drought, flooding, or pests. Thus, exchange networks are created, often beyond kinship ties, and are reinforced through the reciprocal trade of cassava types. This trade leads to further bitter cassava diversity maintained by farmers throughout their fields. Because of the varying rates of tuber development of the different cassava varieties, as well as varying ages of farms, a family generally has harvestable cassava available to them all year. Tubers of some varieties are ready in as little as three to four months, whereas other varieties require at least a year to develop and will still produce edible tubers for up to two years. As such, the risk of crop failure is low because the risk is spread out over various fields planted at different times of the year with numerous varieties, each with its own speed of development. This adaptability and resiliency of the cassava tuber are a source of pride for the Makushi. Although any one variety is not integral to an individual or shared identity, the intrinsic flexibility of cassava is. An individual Makushi will speak of how much has changed culturally over his or her lifespan but point out that cassava is still “we food.” The pride comes from the fact that as much as everything has changed, they and their food staple have been able to adapt and survive.
Cassava Processing and Gender Specialization

For the Makushi, the process of turning bitter cassava into an edible food product has resulted in a fairly rigid gender-based division of labor. These gender-based differences are a fundamental feature of the social, economic, political, and ritual organization shared among all societies in the Amazon. For most Amazonian groups, relationships between the sexes are generally asymmetrical with the women in a subordinate position (Wilson 1999). Although the Makushi have a well-defined division of labor between the sexes, with men as the primary hunters and fishers and women as the producers of the products of cassava (Myers 1993), this general pattern of gender subordination does not seem to apply. Iris Myers, who conducted the most extensive ethnography of the Makushi in the 1930s and 1940s, described women as having a high level of independence and high standing relative to their contemporaries in other Amerindian societies (Myers 1993). This female independence within the household arguably still holds true to this day. In order to better understand this division of labor as well as the relationship between the sexes, it is important to understand the most fundamental aspect of each household: the processing of cassava.

The most labor-intensive aspect of cassava-related work is the cutting of the field, which is done by the males. Traditionally, this would have been conducted through a collective action of sorts called mayu, or self-help (Elias, Rival, and McKey 2000). In order to get other men to help cut a new farm, the male head of household would have his wife make parakari, a beer-like beverage made from the cassava tuber, and invite local men to participate. The men would gather, consume some of the drink and then begin the work of clearing the farm. At various intervals throughout the day, breaks would be taken and more parakari drunk. Although alcoholic, it is a filling beverage and is quite often used as fuel to keep a farmer going even when not participating in a mayu. Once the farm has been cut, and ideally not before, the men will then put down their tools and celebrate together until the parakari is completely consumed. However, the importance of this collective work has diminished; although it does still occur, because the Makushi have become more market-integrated and many expect to be paid for work provided. Therefore, a man today usually goes with his sons or brothers to cut a new field. Once the area is dried, the men then burn the farm in anticipation of the rains. Either before or after the rains begin, the entire family will clean the farm. The men then hoe the soil into mounds in which the women plant freshly cut cassava stalks generally taken from a recently harvested field. The subsequent weeding and care of the farm is up to the women, but the children help as well. When harvesting the cassava tubers, the men and women work together and, if it is the first or second crop, plant stalks in the same area in freshly hoed banks (field notes 2011). The more fertile the soil, the more consecutive cassava crops can be planted in the same area before moving to another field.

Gender specialization in cassava processing becomes apparent once the cassava is brought home. Women are the processors of the cassava tuber—a labor-intensive
The procedure of extracting the poison and transforming it into edible form. The finished cassava products range in preparation, consistency, and use. However, for all end goods, the initial steps of processing are the same. The tuber is first scraped and washed. The cleaned tuber is then grated using a grater that consists of a board about three feet tall, embedded with small rock chips across one side. More modern graters substitute thin metal strips for rock chips; or, if possible, a household will buy a grater from Brazil that can be powered by a bicycle. This latter method is preferred as it saves hours of back-breaking up-and-down grating motions. In order to detoxify the cassava, the grated pulp is placed into a three- to five-foot-tall woven matapi, or what looks like a giant finger trap. The top is hung from a branch or rafter and the bottom has a loop through which a pole is passed. A woman will then sit on this pole and a container will be placed below the matapi to collect the juice that escapes as the matapi is constricted. From this point forward, further processing techniques are based on the desired product.

Yellow tubers will be made into toasted granules called farine (from the Portuguese farinha, similar in size and texture to Grapenuts cereal). Once squeezed, the pulp from the matapi will be passed through a woven sifter (approximately two by two feet) to remove any larger pieces. The sifted mass will then be placed in a large pan over a hot fire and roasted until all of the moisture has been parched from it. Farine will not spoil unless wet, and acts as the staple for the Makushi. A favorite snack is a quick scoop of farine, a dash of water, and spoonful of sugar.

White cassava tubers provide the base for another essential product: cassava bread. The processing of cassava to make bread differs in that the pulp from the matapi is pushed through a sifter with smaller holes than for farine. This finer flour is placed on a hot pan and is shaped into a circle about two feet across and when cooked resembles a crispy flatbread. This bread, once dried, normally on the thatched roof of the household, has a long shelf-life as well, which is important in the tropics. It is often eaten with a Makushi dish known as tuma pot (described further on).

Parakari, the alcoholic drink mentioned above for the mayu, is made using cassava bread that has been baked until one-half inch thick and slightly blackened. These “loaves” are then torn into pieces and placed on banana or other waterproof leaves, sometimes in the main area of the household. Old cassava leaves that have been dried in the rafters of the house are then crushed and sprinkled on each layer in order to introduce the yeast (Rhizopus spp.) that begins breaking down the starch and producing alcohol. Once a thick layer of cotton white yeast has formed over the bread (approximately forty-eight hours) and the mash is sweet to the taste, the parakari has “woken up” as they say and can be added to water, strained, and drunk. If strong parakari (higher alcohol content) is called for, then this mass will be placed in a container to continue fermenting and will be consumed some days later.

The water collected from the squeezing of the matapi, known as the cassava water, will not be thrown out, but will be further processed. The color is reminiscent of vehicle antifreeze, and if left unprocessed, can be even more deadly. The first step
for processing this water is to let it sit and then separate the liquid from the starch that has settled at the bottom of the container. This starch can be made into tapioca by roasting it in a similar manner to farine. The remaining liquid is not thrown out either and is a favorite addition to two Makushi dishes. The first is known as tuma pot and is regularly served with cassava bread, as mentioned earlier. This dish generally consists of the cassava water, fish, sweet cassava or other root vegetable, and hot peppers. The boiling makes the dish safe to eat and the cassava water helps to flavor the food. The other option is to continually boil down the cassava water until it becomes thick syrup, like molasses, called cassareep. This syrup is a necessary addition for a dish known as pepper pot, which would include meat, hot peppers, and any root vegetables available. Some houses have a constantly boiling pot to which they simply add more food and cassareep to from time to time.

At the beginning of the twentieth century, for the first time, more and more women were now making cassava products not just for their families’ consumption but to sell to others. Although this change may seem minor, it had fundamental cultural consequences. In light of the equitable gender roles of the Makushi, this shift may have been what gave the women more independence, value, and control within the household. Women were the ones who supplied the goods that provided money for the family. Although men still generally acted as the go-betweens for trade, the women made it all possible. More men were also gone throughout the year working, and as a result it was up to women to provide for their families in their partners’ absence. In addition, the men now spent considerable more time processing cassava because of the increased demands for farine. The older generations laugh when asked if men parch farine or make cassava bread, but younger men routinely identify themselves as capable of processing cassava. This work is now seen less as “women’s work” but rather an important source of income for the family.

Summary

The Makushi of today live quite differently than those who came before them. Because of the effects of contact with Europeans, they, as a people and culture, have fundamentally changed. Initially, their population was decimated by disease, even before physical contact with the colonizers. They were then pushed out of their traditional areas because of pressures placed on them by both European settlers as well as from other tribes that were themselves being displaced. For nearly 300 years slave-raiding was also a constant concern, and as a result was culturally damaging as it further scattered a reduced number of Makushi people into ever more remote recesses of the mountains and forests to escape the superiorly equipped coastal tribes. After slave-raiding ended, the Makushi were able to return to a more traditional way of life—living in the savannahs and farming in the wet, fertile soil of the forests along streams and at the foot of the mountains. However, this return to their customary
practices was short-lived, as colonizers began entering the area. New diseases were introduced and epidemics occurred, even up until the 1950s (Jones 1954). Part of this susceptibility to disease was due to the effects of missionization. The Makushi were nearly wiped out as they began clustering around densely populated mission settlements (Forte 1996b). These settlements provided the perfect vectors for diseases to spread quickly through people accustomed to living in dispersed, small, kin-based groups. Because of this decimation due to disease, as well as the conversion process, Makushi culture itself was also nearly destroyed. As missionaries began conversion, they condemned many of their traditional beliefs and practices. The influence of church and mission schools, with their ethnocentric disapproval of “savage” and “pagan” customs, led to the disappearance of much of the Makushi material and cultural life (Forte 1996c). Family composition, childcare, marriage, sex, and many other aspects fundamental to the Makushi identity were also changed under the scrutiny of the missionaries.

Although much has changed since initial European contact, one constant for the Makushi has been the reliance on cassava and its associated elaborate processing techniques. Cassava, the staple of the Makushi, and its resilience helped them weather the various storms that battered them. Although traditional beliefs were replaced with (often conflicting) Christian teachings, and Western family models were imposed, the Makushi never lost the arguably fundamental aspect of any culture—their food. Processing techniques of the bitter cassava are necessary for its consumption and have been reliably passed down, generation to generation. As a result, so have some fundamental stories related to creation, spirituality, and subsistence. The efficient aspects of gender specialization have also remained largely intact. The production of food out of bitter cassava has stayed, for the most part, the work of the women, although men more commonly help now than they once did. As a consequence of the increased importance of the work of women through their increased economic productivity, female status within the household is higher than other Amazonian groups.

Makushi people speak with pride and talk about cassava as “we food,” which lies in stark contrast to the non-Amerindian diet that is rice-based. Most Makushi are proud that their diet differs from those from the coast, as they have done little to endear themselves to those of the interior. Governmental policies have focused on the acculturation of the Makushi, while at the same time belittling them for their faults—faults that were imposed by the very same government and that stem from a lack of infrastructure, land rights, and economic opportunities. Although so much has been lost because of enculturation, missionization, disease, and migration, the ability to process bitter cassava into edible food and drink products has remained—including the associated tools, crafts, and stories. In the face of overwhelming cultural change, the fact that this complex has remained fully intact, while so many other traditional practices and beliefs are fading, is a testament to the importance of cassava to the Makushi in terms of group livelihood and identity.
Author Queries

1. Conselho Indigena de Roraima: In the references this name is spelled Indigena, not Indigena. Which is correct?
2. “Amerindians comprise the poorest and most neglected stratum of Guyanese society. . .”: Can you provide a page number for this quote?
3. In the references the publication date for Waterton is 1925, not 1825. Which is correct?
4. “even up until the 1950s (Jones 1954)”: Please add Jones 1954 to your references. Or, do you mean Jones 1952, for which there is already an entry?