

Rice and Memory in the Age of Enslavement: Atlantic Passages to Suriname

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This article examines the geographical corridors for the establishment of rice in seventeenth-century Dutch Guiana. One corridor of introduction is associated with the expulsion of Dutch planters from Brazil in 1644, whose slaves reestablished longstanding subsistence preferences with their exodus to the colony. Another corridor links its introduction to the African Gold Coast, where rice developed as a commodity during the 1600s. The oral histories of maroons offer an additional perspective on rice beginnings in South America, attributing its diffusion to the deliberate efforts of enslaved women.

Introduction

A notable fact from the era of plantation slavery is that Suriname, about the same territorial size as the state of Georgia in the United States, imported as many slaves as the entire U.S. South over a similar time span. Slavery in Suriname was notorious for its brutal demands on labor and the attenuated life expectancies of enslaved Africans. No less cruel were the punishments meted out to those who attempted escape (exemplified by the thoroughly mutilated slave encountered by Voltaire's *Candide*). Yet, many Africans enslaved in Suriname took the risk. By the 1670s, official commentaries complain about the presence of Maroons in the rainforest interior. Finding or growing food was the key to any fugitive's survival. Paramount among the crops the Maroons grew for food was rice. This article is concerned with how rice, an introduced grain, became the preferred subsistence staple of the Maroons and their descendants.

Rice was introduced to Suriname early in its settlement history. By the end of the seventeenth century, attempts had already been made to export the cereal to Holland. Rice served the dual capacities of subsistence and export. In this sense, the Dutch colony resembled two other plantation economies of the Americas, Portuguese Brazil and English South Carolina. Within the initial period of the settlement of each

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of these colonies, rice was introduced, first for subsistence and later for export. It is not coincidental that all three colonies relied upon enslaved Africans for labor.

This examination of rice origins in Suriname contributes a comparative study to research on the history of the cereal in the Americas.¹ Rice was not planted in Portugal, England or Holland at the time when Brazil, South Carolina and Suriname were made colonies. Nonetheless, plantation owners have traditionally been credited with the crop's introduction and establishment.² Descendants of runaway slaves in the Guianas, however, hold a contrasting view. They attribute the introduction of rice to an enslaved African woman.

An analysis of the subsistence role of rice provides one way to appraise these contrasting perspectives on the cereal's beginnings in Suriname. Early archival documents refer to the potential of rice as a plantation crop, mentioning the grain among the many commodities Europeans introduced for export. Most modern scholarship focuses on the role of rice as a commodity. But this view does not engage the cereal's prior importance as a subsistence staple. Subsistence in the history of the Black Atlantic represents something more than the food grown on plantation provision fields and the garden plots allotted slaves. Subsistence also pertains to the sustenance of generations of Africans, mariners, slaves, plantation fugitives, soldiers and colonial officials. The feeding of these multitudes – all involved in the globalizing economy by consent or coercion – is not readily visible from the vantage point of the plantation export economy. In shifting the perspective from commodity to subsistence, this article draws attention to the early presence of rice in the Black Atlantic and the context that shaped its adoption as a foodstaple in the Americas. It illuminates the role of the initial, founding generations of enslaved Africans, who established African subsistence preferences and food systems in diverse plantation economies. The manner in which they did this and the environmental and social conditions that encouraged their success remains little explored.³

This article examines the historical-geographical antecedents that guided the introduction of rice to Suriname in the early colonial period. Divided into four parts, the discussion begins with a review of early documentation of the cereal's presence in colonial Suriname, which is principally concerned with its potential as an export commodity. Examination of the role of rice in subsistence, however, shifts the focus to enslaved Africans and plantation fugitives. The second section presents key features of rice culture among the Maroons, which facilitates comparison in the next section with African rice culture. The third section discusses the two geographical corridors for the cereal's introduction to seventeenth-century Suriname. Discussion focuses on the arrival of planters and their slaves from Brazil as well as the importation of enslaved Africans who came from the Gold Coast where rice was also grown. The botanical evidence for the establishment of African rice in the Guianas is reviewed in the fourth section.

Rice as Commodity, Rice as Subsistence

Rice has long been grown in Suriname. The earliest evidence for its presence in the region derives from documents that refer to rice as a marketable commodity. The

cultivation of rice was surely underway before 1665, when Major John Scott declared it among the chief commodities of Guiana.⁴ Over the same decade that rice was emerging as a plantation commodity in South Carolina, Dutch Guiana experimented with growing the cereal for export. The crop may have been planted on the reclaimed coastal land that Governor Sommeldijck promoted for polder development in the 1680s.⁵ This initial experiment with commercial rice cultivation in the colony resulted in the shipment of 200 ox-heads of the grain to Holland in 1687. But the export initiative was soon abandoned, and rice did not again appear on the colony's export ledgers until 1783.⁶

Efforts to cultivate rice for export developed, as it had elsewhere, from previous knowledge and experience growing the crop for subsistence. When Virginia planters experimented with the cereal as a potential commodity in the 1640s, they turned to their African slaves for advice, as rice was the primary food staple in the countries where many of them originated. The adoption of rice as a plantation crop depended upon several considerations: appropriate environmental conditions for growing the cereal as well as laborers skilled in the grain's cultivation. Even enslaved Africans who attempted to establish a dietary preference as a plantation food crop at times found their efforts undermined by the work they already endured. An attempt by slaves in Jamaica (c. 1687–89) to grow rice for subsistence failed because the laborious demands of milling the crop by hand burdened their bodies already exhausted by work in the sugarcane fields. This labour demand favoured other food crops more easily prepared.⁸ A similar process appears to have influenced subsistence options in Suriname. Tubers (cassava, yams, plantains), relatively easy to produce, dominated the plantation crops grown for food. Yet rice cultivation also made a contribution to subsistence. Among the colony's estimated 500 plantations in the mid-eighteenth century were some specialized in growing food for sale to others. On some of these smaller estates, rice was planted. It is not clear to what extent the cereal was provided as food to slaves.⁹

By the early nineteenth century, the lowland areas surrounding Paramaribo produced some marketed rice. One plantation list from mid-century suggests an emerging focus of commercial rice cultivation in wetlands along tidal rivers and estuaries, perhaps as a consequence of the development of a water-driven mechanical mill that efficiently processed rice for market.¹⁰ The influx of immigrants from South and South East Asia to Suriname during the second half of the nineteenth century also encouraged the internal market demand for rice. Over the twentieth century increasing emphasis was placed on mechanized large-scale production on tidal lowlands near the Atlantic coast, where rice continues to be grown commercially to this day.¹¹

Credit for rice history in Suriname is typically attributed to Dutch and Asian settlers. This follows from the emphasis of historical research on rice as an export commodity. When attention turns to subsistence, however, another history comes into view, one based on oral accounts. The oral history presents rice as a African crop, attributing its presence in the colony to the deliberate efforts of enslaved Africans. Suriname's Maroons, whose forebears fled plantation slavery in the seventeenth and

eighteenth centuries, and for whom rice remains an indispensable dietary staple, commemorate rice as food from Africa. Their contention found new credibility in the second half of the twentieth century when scholars concluded that West Africans domesticated an independent species of rice (*Oryza glaberrima*) some 4,000 years ago. Originally domesticated in the inland delta of the Niger River in Mali, the red-grained cereal diffused westward to Senegal and south along the coast to Côte d'Ivoire and inland to Lake Chad in the country by that name.¹² Thus, today we now have compelling confluence between the oral history of Suriname Maroons and recent findings in botany, archaeology and historical linguistics.

Lack of food and political instability plagued early efforts to establish a permanent European settlement in the Guianas. Sir Walter Raleigh claimed the region for England in 1595. The first successful settlement was that of the Dutch at Essequibo (c. 1616) in present-day Guyana. In the 1660s Major Scott reported the cereal as one of the region's chief commodities. When the English established the colony of Barbados, this concern was foremost, especially as many European foodstaples were not suitable for cultivation in the tropics. In 1627 the leader of the Barbados settlement petitioned fellow Protestant and Dutch governor of the older colony of Essequibo for 'roots and seeds for planting.'¹³ Rice could easily have figured among these unidentified food stocks, especially as peoples from African rice-growing societies had already been forcibly migrated to the Americas. It is interesting to note that the colony of South Carolina was founded in 1670 by planters from Barbados and enslaved Africans. Documentation on the first rice exports from the Carolina colony in 1690 refer to rice cultivation there at least a decade earlier.¹⁴

Evidence for rice cultivation in Suriname follows the arrival of refugee Sephardic planters from Brazil, who lost their religious freedom granted with Dutch rule when Portugal retook the colony in 1654. Some of these planters relocated to the upper Suriname River, at that time under English control, with the assurance that they could freely practice their faith.¹⁵ They brought key features of the Brazilian sugar plantation system to Suriname, including the convention of allowing slaves a personal garden plot.¹⁶

The extension of the plantation sector into Suriname's rainforested interior provided enslaved Africans opportunities to escape. By the 1670s, reports indicate growing numbers of fugitive slaves in the colony. Militias were repeatedly organized to return them to captivity. Maroon settlements were attacked, torched and razed, with dogs used to track fleeing fugitives (Figure 1). Even so, many plantation runaways eluded recapture. The 1760s witnessed the signing of peace treaties with some Maroon groups (Ndyuka, Saramaka, and Matawai) while military manoeuvres intensified against others.¹⁷ Written confirmation of rice as a Maroon subsistence crop dates to this period.

However, Maroon oral histories indicate an even earlier involvement with rice cultivation. Two accounts, collected among the Saramaka by anthropologist Richard Price in the 1970s, indicate the importance of rice to the Maroons in the late seventeenth century. The Saramaka situate their founding as a people to the decision by a group of slaves to flee the ill-treatment they received on a plantation located



Figure 1 Detail of the Alexandre de Lavaux map of Suriname, 1737, with section showing colonial militia, enslaved porters, razing of a Maroon hamlet, fleeing Maroons with dogs in pursuit, and women possibly carrying bags of seed. Racial distinctions between whites and Blacks, enslaved as well as Maroons, are depicted with cross-hatching. Source: Bubberman et al. 1973.

along the upper Suriname River. In this telling, rice symbolizes the abrogation of their subsistence rights in bondage.

They whipped you. . . Then they would give you a bit of plain rice in a calabash. . . And the gods told them that this is no way for human beings to live. They would help them. Let each person go where he could. So they ran.¹⁸

Price draws upon archival sources to tie this episode in Saramaka oral history to a slave revolt in 1693 at Providence Plantation on the upper Suriname River, during which many successfully escaped into maroonage.¹⁹

Rice also figures in Saramaka accounts that show the slave's knowledge of subsistence abetting the free Maroon's struggle for survival in the rainforest. The tale of Paánza reveals how the Saramaka first obtained seed rice as well as the grain's significance as a food. As the tale unfolds, a runaway slave one day appeared to Paánza in the plantation field where she was harvesting rice, beckoning her to leave. In one motion, she picked up some grains of rice, stuffed them in her hair, and fled. With the seeds Paánza carried to freedom, the Saramaka planted rice.²⁰

Paánza's story is instructive for several reasons. First, the account draws attention to the central role of an African woman in rice introduction. It echoes an even broader foundation narrative held by Maroons across northeastern South America that claims

a woman introduced the cereal from Africa by hiding grains in her hair as she disembarked a slave ship.²¹ Not insignificantly, the cereal remains to this day a woman's crop. It is considered the most important material contribution that women make to Saramaka life.²²

Finally, as the mulatto daughter of an African-born woman, Paánza formed part of the founding generation of slaves in Suriname, whose food preferences likely shaped subsistence conventions. Through skilful use of archival records, Richard Price places Paánza's birth in the colony about 1705 and her escape to the period 1730–40.²³ Her African-born mother likely arrived in Suriname in the late seventeenth or early eighteenth century.

Accounts from the mid-eighteenth century also reveal the special significance of rice to the black population of Suriname. Hartsinck (c. 1770) mentioned its use in funeral rites practiced by the enslaved. The cereal formed the basis of two offerings consumed during the extended period of mourning. Maroon rice cultivation is also noted in the accounts of Moravian missionaries, sent to Christianize them after peace treaties recognized the freedom of some groups in the 1760s.²⁴

Rice was even included in the food rations of soldiers recruited to military expeditions launched against Maroon groups who were not yet pacified. European mercenaries, supported by slave porters, were provisioned in part by the rice they stocked as well as the surpluses they found in abandoned Maroon hamlets.²⁵ Scottish mercenary John Stedman, who participated in these missions during the years 1773–77, noted the prominence of rice among the subsistence crops planted by the Maroons. He fought in the colony's northeast interior – the area between the Cottica, Commewijne, and Marowijne Rivers – where settlements of maroons proliferated. Stedman's sketch of one hamlet shows the location of several rice fields (Figure 2). The military campaigns in which Stedman participated destroyed 21 Maroon settlements and over 200 agricultural fields, many ripe with rice. Stedman writes of Maroons fleeing the combat zone with hampers of milled rice that they cast aside when the militia closed in on them. One vanquished Maroon settlement was even named Reisse Condre, 'from the quantity of rice it provided.'²⁶

Rice Culture in Suriname

Rice is an indispensable food item to the Maroons.²⁷ Written accounts reveal that subsistence rice culture in Suriname has not much changed over the past 200 years of observations by westerners. Rice cultivation among the Maroons exhibits many features typical of its production in West Africa.

The earliest descriptions of rice culture in Suriname indicate that the cereal was grown in rainforest clearings.²⁸ In a pattern similar to West African practices, men clear the land during the principal dry season (August to November). After the trees are felled and burned, the plot becomes a woman's agricultural field. Cultivation of the primary rice crop commences after the rains, between March and May. The seeds are sown by broadcasting, and the grain harvested some four months later.²⁹ When Stedman and his militia pursued Maroons in the Marowijne region in late

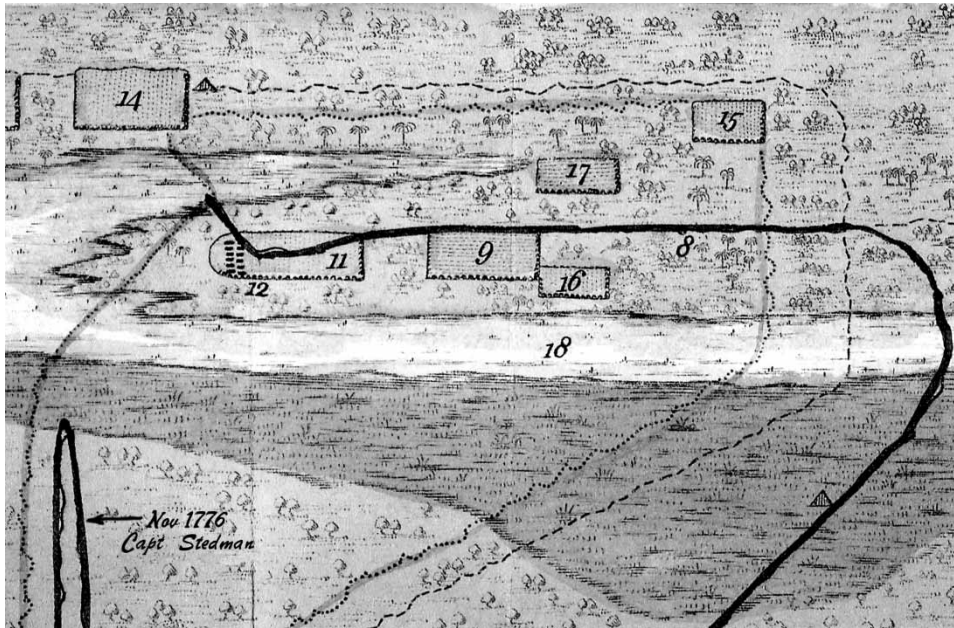


Figure 2 Maroon settlement of Barbacoeba, located in northeast Suriname between the Cottica and Marowijne Rivers, destroyed by the militia of Captain John Stedman in November 1776. Legend (in modified form): 9, 11, 16 – rice fields, 12 – maroon hamlet, 14 – old settlement, 15, 17 – agricultural fields (manioc, yams, plantains), 18 – protective swamp. Source: Stedman 1813, vol. 2:128–129.

August the grain was nearly ripe.³⁰ This is consistent with cycles observed in the twentieth century. A second crop is often planted between January and February. The grain is usually intercropped with cassava.³¹

Frances and Melville Herskovits, who visited the Saramaka in 1928 and 1929, present the general features of Maroon rice culture in Suriname. From the field to the kitchen, rice is a female crop. Women sow the seed, weed, and harvest the plot, cutting the grain-bearing panicles with a small knife. The sheaves are then placed in bundles that they head carry back to the village. There, women mill the cereal with a mortar and pestle, and cook the prepared product in the manner of their ancestors.³² When the Maroons market rice, it is women who do so, a pattern that has characterized the grain's sale in West Africa since the earliest European observations.³³

Rice still figures prominently in the rituals surrounding Maroon food offerings to their ancestors.³⁴ Many varieties are planted, each one differentiated by the grain's red or white color, its growing cycle, and milling problems. Hurault placed the number of varieties planted by the Ndyuka and Aluku Maroons of French Guiana at about a dozen.³⁵ Among the types planted by Saramaka women are a red variety and another known as 'forest rice,' grown solely for ritual purposes.

Slaves and plantation fugitives grew rice for subsistence in the early period of the colony's settlement. How did a minor plantation food crop for slaves become the

leading subsistence preference for Maroons? At the outset, the cultivation and consumption of rice recalls Africa and African identity. An escapee's ability to survive in the wild is remembered in the rice seeds Paánza sequestered. Rice underscores African identity in the widespread Maroon belief that a female forebear actually introduced the seed from Africa. The Saramaka remember the brutality of slavery in the meager rice rations they received. Rice is present during key transitions in the cycle of life. The dead depart life with offerings of rice cooked by the bereaved. When discussing periods of 'hunger,' the Saramaka are referring specifically to a poor rice harvest. Throughout West Africa's indigenous rice region, people similarly contend that they have not eaten if rice is absent from a meal.³⁶

The Dutch and Rice in West Africa

Rice and other indigenous African foodstaples (millet, sorghum, and yams) supported the birth of the Atlantic trading economy, which was based on the cultivation of sugarcane. As the plantation system diffused to the Western Atlantic, sugar was increasingly produced by enslaved African labor. The Atlantic economy first gained a foothold in the Canary Islands and Madeira in the 1460s before leapfrogging to the Caribbean and Brazil over the following century.³⁷ It depended vitally on Africa for the work force as well as for surplus food that sustained Portuguese mariners and resident traders.³⁸

South along the Atlantic archipelago are the Cape Verde Islands. The Islands assumed a prominent role in the making of the Atlantic economy for their location astride favorable maritime currents to the Americas and proximity to one of West Africa's most densely settled regions. They are located five hundred kilometers from Senegambia, one of the continent's ancient regions of cattle and cereal production. Geographically proximate to Europe and the Caribbean, Senegambia lay at the crossroads of the Atlantic trading system. The region provided skilled tropical farmers and subsistence staples to the emerging Black Atlantic.

The introduction of Amerindian maize to the region in the sixteenth-century added another significant foodstaple to African-Atlantic cereal supplies. Demand for foodstuffs produced in Africa grew over the second half of the sixteenth century with the deepening of the transatlantic slave trade and the arrival of ships from other European nations. The Atlantic contours of the region where rice was available for purchase, south from the Gambia River to Cape Mount in Liberia, became known as the 'Rice Coast,' an indirect acknowledgment of West Africa's indigenous 'rice bowl.'

Like their Portuguese predecessors, Dutch merchants purchased African food surpluses for provisions. By the final decades of the sixteenth century, Dutch trading posts were present along the West African coast.³⁹ The growing Dutch participation in the transatlantic slave trade was accompanied by considerable attention to areas of African food availability. Pieter de Marees, who traveled to the Gold Coast in 1590, observed the brisk regional trade in African foodstuffs. He described and illustrated the rice market in a settlement just outside Elmina (not yet under Dutch control), where peasant women sold their surplus production.⁴⁰ His engraving of the spices and grains that grew in the Gold Coast captures the significance of plants



Figure 3 What spices and grains grow in this country, and what qualities or virtues they have, plate No. 13, Pieter de Marees, c. 150. Legend A – sugar cane, B – maize, C – rice, D – millet, E – cowpeas/black-eyed peas, F – fonio (*Digitaria exilis*), G – ginger, H – nééré (*Parkia biglobosa*), I – meleguetta pepper. Source: van Dantzig and Jones trans. 1987 [1602], p. 158.

grown in Africa for the expanding European presence in West Africa (Figure 3). Included are the African meleguetta pepper, plants introduced to West Africa (sugar cane, ginger, maize), and the key African subsistence staples, rice, millet, cowpeas (black-eyed peas), fonio (*Digitaria exilis*), and nééré (*Parkia biglobosa*).

A closer examination of Marees' engraving indicates that the rice plant he illustrated (item 'C') is the African species, *Oryza glaberrima*. His drawing reveals several features that are typical of *glaberrima*. These include the species' distinctive upright branching pattern. The grains of African rice grow off the main stem (panicle), which gives the plant an erect appearance. In Asian rice, the grains form on multiple stems, a feature that causes the plant to bow or slightly bend. Additional features of *glaberrima* manifest in Marees' drawing are the grain's dark color and spiked husks. African rice is usually of a red to black hue and its husks 'awned', a characteristic that makes the grain appear spiked or barbed, as shown in his image. A comparison of Figure 3 with Figure 4 illustrates these broad species differences.

Marees' discussion and depiction of rice along the Gold Coast in 1590 indicates that at the end of the sixteenth century the cultivation of *glaberrima* was no longer confined to West Africa's indigenous rice region. It was grown near Elmina. The increasing European presence along the Gold Coast littoral and the concomitant demand for African

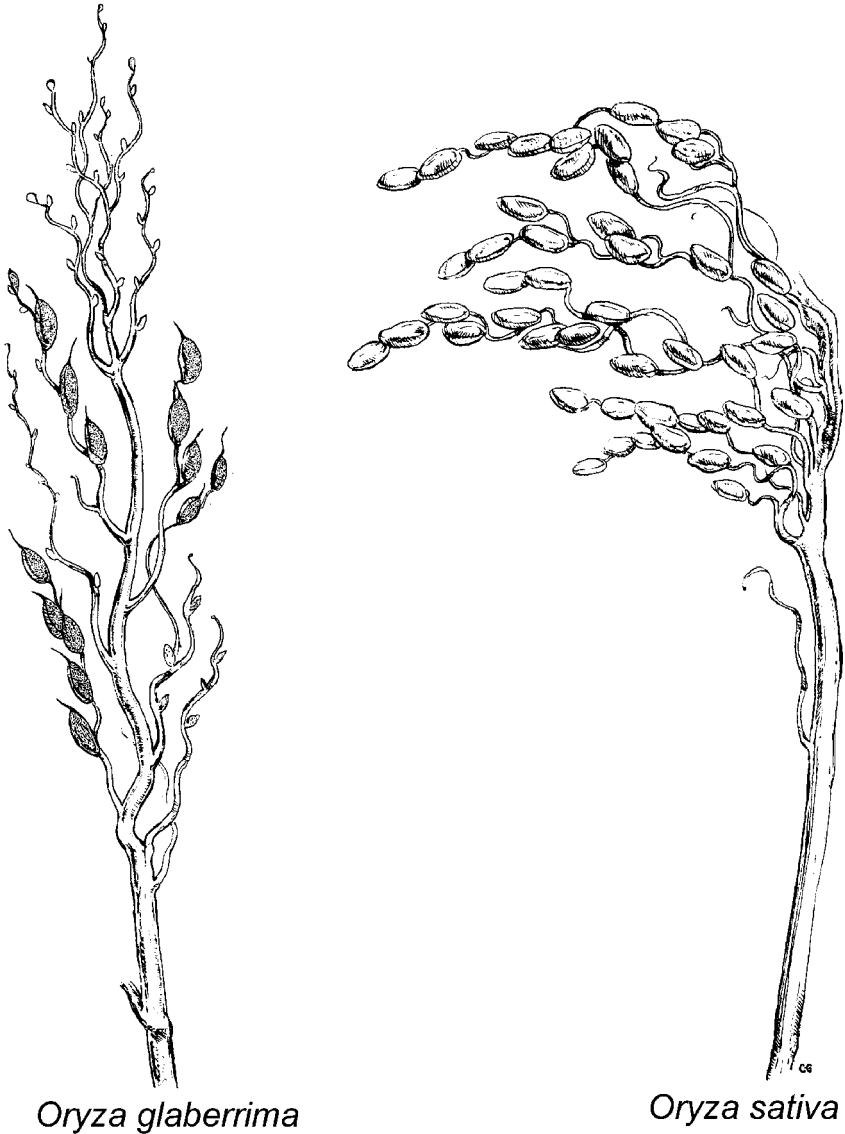


Figure 4 African and Asian rice. Courtesy of Daniel C. Littlefield.

foodstuffs likely encouraged the expansion of the cereal's cultivation eastward from its traditional locus. Certainly, in the seventeenth century no other area along the West African coast experienced such a concentrated European presence. Along a mere 300 miles of coastline, the Dutch and other Europeans established some 50 outposts to facilitate the transatlantic slave trade.⁴¹ African-grown food surpluses were in great demand.

With the proliferation of forts and slavers along the Gold Coast in the first half of the seventeenth century, Dutch accounts offer salient details on the cultivation of rice

in the geographical locales where it was grown. The area around Cape Mount in north-western Liberia (and part of West Africa's indigenous rice region) generated a number of commentaries on indigenous rice culture and marketing. Swiss physician Samuel Brun, who made three voyages in Dutch ships between 1611–20, reported a brisk trade in meleguetta pepper, ivory and gold while noting the availability of surplus rice for sale, which he observed was a woman's crop.⁴²

Dutch reports on rice cultivation systems from Cape Mount in the early seventeenth century additionally provided the source material for Amsterdam geographer Olfert Dapper, who described indigenous African rice farming practices circa 1640. Dapper detailed how the cereal was planted and drew attention to its cultivation in distinct environments along a landscape gradient. We know today that this practice eases labor constraints while reducing subsistence risks should production in one rice microenvironment fail in any given year.⁴³ Dapper's account, like those that preceded it, underscores the significance of rice for European economic ambitions.

A Dutch report in 1626 provides further insight into how the external demand for food was affecting the social organization of African rice cultivation in the Cape Mount area. The anonymous author notes a considerable expansion in the area cultivated to 'peas and rice, which people are beginning to cultivate there in quantity. Since the [local] king perceives that there is profit to be gained from it, he has had a whole stretch of bush cut down and rice harvested there, serving the needs of the inhabitants and providing foreigners with fresh provisions.'⁴⁴ The account suggests that rice no longer represented the surplus of peasant households but was being grown under some form of coercion by the king. The result, in this instance, was the availability of large quantities of rice, purchased cheaply by the crew of the Dutch ship on which the author sailed.⁴⁵

While the specialization of Cape Mount in rice production inspired Dutch commentaries on African rice culture, the focus of their activities was the extraction of gold and slaves from bases established farther to the east along the Gold Coast. The Dutch presence in the African Atlantic had strengthened when they gained a territorial foothold at Moree (Fort Nassau) along the Gold Coast in 1612.⁴⁶ Their sphere of influence in the region grew with creation of the Dutch West India Company (WIC) in 1621. Granted a monopoly on the West African slave trade, the WIC established trading forts and castles along the Gold Coast.⁴⁷ With the capture of Brazil from the Portuguese in 1630, the Dutch gained direct control over Brazilian sugar production, of which a substantial amount had long been refined in Holland.⁴⁸ Dutch expulsion from Brazil 24 years later did not bring an end to their involvement in the Atlantic slave trade. The Brazilian sugar plantation system found a new footing in the Dutch colony of Suriname while the island of Curaçao served as an entrepôt for enslaved Africans awaiting sale by the Dutch to their mainland colony and Spanish America.⁴⁹

The Gold Coast contributed a smaller percentage of slaves to Suriname than Dahomey, Nigeria and Angola in the period prior to 1700; yet this entire region falls well to the east of West Africa's indigenous rice region.⁵⁰ How is it that rice became an important commodity crop in the Gold Coast in the seventeenth century when prior to this period historical records indicate little or no presence?

An understanding of the geographical corridors of the cereal's trajectory to Suriname demands consideration of two historical antecedents. One addresses the prior importance of rice as a subsistence staple in the Brazilian plantation economy while the other builds upon the changes in West African agricultural production that were occurring over the seventeenth century. Both considerations address in different ways the early ascendancy of African rice in the Atlantic economy.

Rice cultivation had been underway in Portuguese Brazil for at least a century before settlement of Suriname. Seed rice – the grain with its husk still attached – was deliberately introduced to Bahia in 1530 by a ship that departed the Cape Verde Islands, where rice cultivation had been introduced from the Senegambian mainland. This rice was undoubtedly African *glaberrima*.⁵¹ By the 1550s, rice is listed as a marketed item in Brazil, with the sale of the unmilled cereal recorded near Rio de Janeiro. There is unambiguous reference to the cultivation of rice in Brazil in 1587, when planter Gabriel Soares de Sousa noted slaves growing the grain as a food crop on Bahian sugar plantations.⁵² Rice had become a key Brazilian subsistence staple by 1618, when plantation owner and sugar merchant Ambrósio Fernandes Brandão ranked it second in dietary consumption after the indigenous staple, cassava.⁵³ Long before the Dutch conquered Brazil (1630), enslaved Africans were growing rice on plantations for food.

Rice culture in Portuguese Brazil was most likely initiated by Africans experienced in its cultivation and for whom the cereal served as a dietary preference. At the time of New World colonization, Portugal did not grow rice. The nation had long been a cereal-deficit country whose principal import was grain. Only in the nineteenth century, after rice had become a dietary fixture in Brazil, did Portugal develop the cereal's cultivation along its own rivers. In fact, Lisbon had occasionally imported rice from West Africa, with the metropole recording deliveries of Guinea rice in 1498, 1506, 1510 and 1514.⁵⁴ The first shipment was undoubtedly *glaberrima*, as it took place before Vasco da Gama returned from his epochal journey to India, which would have brought him into contact with *sativa* rice. In purchasing African agricultural surpluses, fifteenth- and sixteenth-century Portuguese mariners and resident traders established food-procurement patterns that other European nations would follow.⁵⁵

Slaves from West Africa's Rice Coast were disproportionately represented among those enslaved in Brazil's early settlement period. Africans originating in the Guinea-Bissau region alone accounted for at least 25 per cent of those brought to Spanish and Portuguese America over the sixteenth century.⁵⁶ The food systems and conventions established by the initial, or founding, generations of Atlantic slavery left a profound legacy. They influenced plantation dietary preferences and the right of the enslaved to a subsistence plot. A significant percentage of the founding generation of Africans enslaved in Brazil were thus familiar with the cultivation of rice in West Africa.⁵⁷

When the Portuguese reasserted control over Brazil in 1654, not all the Dutch planters returned to Holland. Some of them, among them Sephardic Jews of Iberian origin, relocated to the Guianas, where they were allowed to practice their faith without

persecution.⁵⁸ Key features of the Brazilian plantation system transferred to Suriname (an English colony until 1667), which led it to become known as the 'second Brazil'. These included the right of a slave to an individual garden plot as well as control over income derived from sale of produce grown on it. The 'Brazilian system' of plantation slavery expanded beyond Suriname into many areas of the Caribbean such as Jamaica, where slaves were allowed to grow rice on their individual plots.⁵⁹

Rice cultivation was thus underway during the colony's early settlement period. Major John Scott's manuscript, written in 1665, listed rice as a trade item in Guiana some 20 years before Suriname experimented with exporting the cereal to Holland.⁶⁰ This first consideration of colonial rice origins thus draws attention to the Luso-African influence, namely, the role of the founding generation of slaves from Africa's Rice Coast in pioneering subsistence conventions in Brazil that subsequently diffused to Suriname with the exodus of Dutch planters. Rice was established as a food crop and commodity, even if Dutch ships did not carry many enslaved Africans from West Africa's indigenous rice region to the colony.⁶¹

However, a second corridor for rice introduction also demands attention. This consideration returns our attention to the agricultural changes that were taking place in the Gold Coast over the seventeenth century. The growing presence of European traders and slavers had resulted in a remarkable demographic transition along the littoral. The Dutch trading post at Moree, for example, grew from a village of 200 in 1598 to a population of 1,500 in 1612; by the end of the eighteenth century, its population reached 5,000–6,000. Similarly, Axim, a settlement near the Ankobra River in the western Gold Coast, held a population of 500 in 1631; some 60 years later, its population figured 2,000–3,000. Elmina, founded by the Portuguese in 1482, became Dutch in 1637. A population of 15,000–20,000 made it the largest European outpost in all of Africa. In the sixteenth century only Elmina maintained a large daily produce market; by the late seventeenth century there was a thriving market at all the Dutch trading enclaves.⁶²

The concentration of population that was developing around Gold Coast forts accelerated the demand for food. In a process similar to what Dutch traders had observed at Cape Mount in the first quarter of the seventeenth century, agriculture was being reorganized for the market. The expansion of European trading establishments, and the escalating deportation of enslaved Africans, stimulated agricultural development in the immediate hinterland behind the seaboard towns. Areas 3 to 15 miles wide developed into zones of specialized food production that provisioned the coastal concentrations of population. Some of these agricultural areas exported great quantities of food surpluses to settlements along the entire Gold Coast littoral. Historian Ray Kea suggests an annual regional trade that involved thousands of tons of provisions. Rice and millet dominated the grains that were traded.⁶³

Figures from the West India Company (WIC) reveal the importance of African foodstuffs to Dutch traders stationed in the Gold Coast at the end of the seventeenth century. Agricultural surpluses were consumed by WIC officials and purchased as provisions for enslaved Africans and crews on ships bound for the Americas. While records from the Company's first phase (1621–74) are not available, rice is listed as

a secondary trade item purchased by the WIC from 1699. However, as an edible commodity that was consumed regionally, purchases of rice and other African foodstuffs may have occurred on a much larger scale than that indicated on WIC export manifests.⁶⁴

What was the source of the rice that was being produced and exported over such a broad area? As noted above, by the late sixteenth century, cultivation of the cereal had vaulted eastwards from the Cape Mount area (which inspired the initial Dutch commentaries on indigenous African rice systems) to the Gold Coast.⁶⁵ One area of specialized rice production had developed by the mid-seventeenth century. Its focus was near the Dutch entrepôt at Axim, in proximity to the Ankobra River. The transformation of agricultural production in the Axim region had been especially dramatic, occurring in just a few decades.⁶⁶ A Dutch report from 1659, for instance, notes that the African inhabitants of Axim were devoted to trade, not farming. By the 1690s, Willem Bosman, who spent 14 years on the Gold Coast as a WIC factor, observed (in his 1704 memoir) that nearly the entire population was 'engaged in Agriculture, chiefly in the cultivation of Rice, which grows here above all other places in incredible abundance, and is transported hence all the Gold Coast over.' Bosman added that other than at Axim, cultivation of the cereal was not common.⁶⁷

While annual agricultural production from the Axim area is not known, it was considerable. Kea regards a yearly export of 100 tons as feasible, given the volume of trade in foodstuffs reported between Axim and the Dutch forts of Moree.⁶⁸ Rice accounted for more than half the value of the trade in salt, canoes, and food goods out of Axim at the end of the seventeenth century.⁶⁹ In response to the increasing momentum of the transatlantic slave trade and concomitant food demand, surpluses of rice were generated and traded. Given the scale of production, it is quite likely that enslaved Africans produced part of them.⁷⁰

At some point over the period of the transatlantic slave trade, a secondary focus of rice production developed in the eastern Gold Coast. Rice became an important crop among people living in the highlands east of the Volta River, such as the Avatime. Even when development projects introduced high-yielding Asian varieties of the cereal in recent decades, the Avatime were still cultivating rainfed African *glaberrima* in the 1980s.⁷¹ Complex rituals surround Avatime rice culture in all phases of the grain's planting, harvest and consumption. The link between ritual and cultivation appears to have characterized *glaberrima* rice culture over a broader area.⁷²

The ethnographic research carried out among the Avatime by Lynne Brydon contributes several details that inform our understanding of the history of rice along the Gold Coast. The Avatime claim they are the descendants of people originally from Ahanta (also known as Anta) in the western part of the country. These are the people who continue to inhabit the area near Axim, where commercial rice production developed over the seventeenth century.⁷³ Since the Avatime were still planting the African species in the 1980s, little doubt remains that the rice planted centuries earlier near Axim had been *glaberrima*. As observed among Suriname's Maroons, it was a four-month variety that was planted by broadcasting and often grown intercropped with cassava. The rituals that surrounded Avatime cultivation among the

Avatime likely contributed to the continuity of the African species, despite twentieth century policy interventions to grow the more productive Asian varieties.

While the Dutch did not deliver many slaves from West Africa's indigenous Rice Coast to plantations in Brazil and Suriname, by the end of the sixteenth century the cultivation of African rice had expanded from its traditional geographic location to the western Gold coast near Axim.⁷⁴ A traditional dietary staple of many West African societies had now become a commodity as resident European traders and ship captains increased demand for food surpluses. The cereal became a prominent foodstaple of the transatlantic trading economy.

Europeans purchased rice in different forms. At the end of the seventeenth century, Bosman reported that at Cape Mount 'it grew in such prodigious plenty, that it is easy to load a Ship with it, perfectly cleaned, for one Penny of less the Pound.' Meanwhile, at Axim rice was purchased unmilled, where it sold at the same price.⁷⁵ When the cereal was sold in the husk to slave ships, African women on board were put to work cleaning the rice with the hand-held African mortar and pestle.⁷⁶ Bosman made these observations of Axim in the same decades that Paánza's mother and other Maroon forebears were being forcibly deported from Africa. Significantly, any unprocessed grains remaining from the slave ship's provision could have served as seed rice, thus making credible the Maroon claim that a female ancestor brought rice in her hair from West Africa. The grain's arrival in the Americas as surplus provender provided the first generations of enslaved Africans with the seed for growing a subsistence preference on plantation food fields.⁷⁷ Their expertise and efforts laid the foundation for colonial experimentation with rice as an export crop.

African Rice in the Guianas

Anthropologists Melville and Frances Herskovits, who worked in both Suriname and Dahomey in the years between World Wars I and II, were the first outsiders to suggest that the rainfed rice the Maroons planted was African. 'The rice is planted on a hillside, for the Bush Negro does not grow irrigated rice, but the dry African variety that thrives on the slopes.'⁷⁸ In noting the ritual significance of rice offerings to their ancestors, anthropologist Jean Hurault posited that the ethnic origins of Maroons lay in West African countries where the cereal formed the basis of the diet: 'But rice is regarded by the Bush Negroes as an indispensable food. The importance that it takes in offerings to the ancestors leaves one to think that the African ancestors of the maroons in part come from the countries of West Africa where rice is the basis of the diet.'⁷⁹

In these words Hurault captured an important aspect of rice in the Guianas when he noted its importance in Maroon commemorative events. Richard Price has also drawn attention to a Saramaka rice variety, used solely for the preparation of meals at religious shrines.⁸⁰ In West Africa, where the Asian and African species are grown, only *glaberrima* rice is used in offerings to the ancestors.

In 1938 French botanist M. Vaillant collected rice in communities descended from Maroons in the Marowijne River region that divides Dutch and French Guiana, the general area where Stedman's militia fought the Maroons in the 1770s. He recorded

the widespread Maroon belief that women introduced rice culture from Africa by hiding the grains in their hair.⁸¹ Vaillant also discovered, to his surprise, grains of *glaberrima* among his collected specimens. A four-month, rainfed variety, it grew with ample precipitation and produced a husk red to black in color. The rainfed Guiana variety showed remarkable similarity to one still cultivated at the time in the tropical forest zones of West Africa's indigenous rice region, between Guinea and Liberia. This led Roland Portères to claim the Guianas as a secondary center of *glaberrima* domestication.⁸² French botanical expeditions after World War II also found African rice growing in a semi-wild state on the perimeter of a former sugar plantation in El Salvador in the 1950s. The *glaberrima* found in Guiana additionally shared similarities with one planted in the state of São Paulo in Brazil.⁸³ Collections made since then in communities descended from Maroons and freed slaves in Brazil and Suriname have not been tested for the presence of *glaberrima*.⁸⁴

Conclusion

The establishment of African rice culture in Suriname followed several different historical pathways. Some Africans who were forcibly removed from West Africa's indigenous rice region may have introduced the cereal. Or its cultivation may have followed the subsistence preferences previously established in Brazil's plantation sector. Another corridor of diffusion evolved in the western Gold Coast, where agriculture was being reorganized in the seventeenth century to increase rice cultivation for European demand. In any case, the African species made it to the Americas.

The founding generations of slaves in Suriname established many foodstuffs of African origin. Eighteenth-century sources indicate that in addition to rice the Maroons cultivated okra, millet, pigeon peas (also known as Angola peas), oil palms, tamarind, and watermelon.⁸⁵ Other crops of Asian origin, but grown in Africa prior to the transatlantic slave trade, included ginger and sesame. Another African species introduced to Suriname over this period was the Guinea fowl (*Numida meleagris*; in Sranan Tongo: *totje* or *toke*), one of several types of poultry raised by slaves. Enslaved Africans established and propagated desired African species on their garden plots through their own initiative. The diffusion of the Brazilian system of plantation slavery, with its convention of granting slaves a garden plot, facilitated the efforts of the founding generation of African slaves to establish African species in Suriname.

But it is rice that continues to have special significance for Maroon identity. Through ritual offerings of the grain to their ancestors, Maroons symbolize and commemorate the gifts it conferred: freedom from hunger and freedom from bondage. Each handful of rice recalls the legend of Paánza and the founding generation of African women, whose smuggled seeds made that hope possible. But perhaps the underlying significance of the Maroon narratives is that across each social and environmental frontier, women provide the bridge to Africa and African identity, as agents of culture as well as agriculture. Maroon women, in the manner of generations before them, continue to plant rice in the African way: by sowing the seeds directly, performing the weeding, harvesting the panicles with a small knife, hand milling the cereal with

mortar and pestle, and cooking it so that all the grains are separate. Such are the key features of African rice culture wherever the cereal was planted in the Black Atlantic.

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Notes

- [1] See, for instance, Wood, *Black Majority*; Littlefield, *Rice and Slaves*; Carney, *Black Rice*; Carney, *With Grains in Her Hair*.
- [2] Salley, *Introduction of Rice into South Carolina*, Ribeiro, *Aspectos e Problemas da Expansão Portuguêsa*; Grist, *Rice*.
- [3] This idea builds upon Ira Berlin's notion of the charter generation of Atlantic slaves in mediating transatlantic cultural relations. He includes the first generation of enslaved Africans, their children, and sometimes, their grandchildren. My emphasis is on the plant knowledge systems that slaves brought to the Americas, specifically their prior familiarity with tropical farming and botanical resources. Berlin, *Many Thousands Gone*, 12.
- [4] Harlow, *Colonising Expeditions*, 135.
- [5] In the early settlement period, the colony's plantations concentrated on the upper reaches of rivers like the Suriname, where the soil was sandier and less fertile. Political instability prior to the Anglo-Dutch territorial settlement of 1667 frustrated the development of coastal alluvial areas. A map of the colony in that year shows no plantations along the lower reaches of the Suriname River, which the Dutch eventually developed for sugar and cotton cultivation. Bubberman et al., *Links with the Past*, 127, Plate 7; Ostindie and van Stipriaan, *Slavery and Slave Cultures*, 78–99, esp. 79.
- [6] Oudschans Dentz, *De geschiedenis van de rijstbouw*, 491–92.
- [7] One letter sent to England in 1648 records: 'The Governor Sir William [Berkeley], caused half a bushel of Rice (which he had procured) to be sowed, and it prospered gallantly and he had fifteen bushels of it. . .for we perceive the ground and Climate is very proper for it [rice cultivation] as our Negroes affirme, which in their Country is most of their food. . .' Littlefield, *Rice and Slaves*, 100.
- [8] Hans Sloane documents attempts by slaves in Jamaica to grow rice on individual plots. 'This grain is sowed by some of the Negroes in their gardens, and small plantations in Jamaica, and thrives very well in those that are wet.' But their rice-growing efforts were frustrated by the burden of hand milling after an exhausting day in sugar cane fields. '[B]ut because of the difficulty there is in separating the grain from the husk' [rice cultivation] 'tis very much neglected, seeing the use of it may be supplied by other grains, more easily cultivated and made use of with less labour.' Sloane, *The Natural History of Jamaica*, I: 103. Twenty years earlier a large group of English planters had left Suriname for Jamaica. See n. 59 below.
- [9] Rice was planted as the chief crop on one former sugar plantation, *Des Tombesburg*, located along the upper Commewijne River (A. van Stipriaan, pers. com., 8/23/04). van Lier, *Frontier Society*, 26–27; Cohen, *Jews in Another Environment*, 68, 94; van Stipriaan, *Surinaams Contrast*, 350–57.

- [10] Oudschans Dentz, *Geschiedenis*, 491; van Sijpesteijn, *Beschrijving van Suriname*, 112. This was almost certainly Asian rice, as the African species is notoriously difficult to mill mechanically. The only way to avoid excessive breakage is to hand mill with a mortar and pestle.
- [11] Rice production remains concentrated on the fertile Nickerie River floodplain, where the Dutch colonial government developed some 15,000 acres of mechanized cultivation. Reclamation involved diking and the creation of polders, with pumps for drainage and irrigation. Grist, *Rice*, 195; Lunig, *The Economic Transformation of Family Rice-Farming*, 3.
- [12] Portères, *African Cereals*, 409–52; McIntosh, *Paleobotanical and Human Osteological Remains*, 348–53; Ehret, *The Civilizations of Africa*.
- [13] Harlow, *Colonising Expeditions*, lxxxii, xxx. The rice-growing region of the upper Guinea Coast contributed fifty percent of slave exports to the new world in the second quarter of the sixteenth century. Barry, *Senegambia*, 39. In one survey of Peru taken between 1648–60, seventy-four percent of the slaves originated in this region. Over the period from the late sixteenth to mid-seventeenth century, exports likely reached 3,000 annually. Hawthorne, *Planting Rice*, 68–69.
- [14] Wood, *Black Majority*.
- [15] Founded in 1651 by the English, Suriname became a Dutch colony in 1667. Prior to this date, the Guianas or Wild Coast as it was then known, shifted hands between the English, French and Dutch. Many religious groups persecuted in Europe (Huguenots, Jewish, Protestant sects) migrated to the region and nearby islands. Jewish settlement in Suriname began in 1536, when a group fled the Inquisition in Brazil. Other early migrations occurred in 1639, and in 1652, under the English governor of Barbados. When Brazil returned to the Portuguese in 1654, a number of Jews joined those already present in Suriname. Others who had migrated to Cayenne arrived in the Dutch colony in 1685, when the French outlawed the practice of Protestantism and Judaism. Ezratty, *500 Years*; Arbell, *The Jewish Nation*, 29–30, 83, 91.
- [16] Pierre Moreau, describing Dutch Brazil in 1646–48, noted the individual garden plots of slaves and their marketing of produce harvested from them. Writing in 1667, Jean Baptiste Du Tertre observed similar practices in the French Caribbean, where it was known as the Pernambuco system, brought by refugee Jewish and New Christian planters from Brazil to other areas of the Caribbean. Cardoso, *The Peasant Breach*; Thornton, *Africa and Africans in the Making of the Atlantic World, 1400–1680*, 172–4; F.W. van Amson, *A Review of Agricultural Crops in Suriname. Part 1: Rice*, 20.
- [17] Nassy, *Historical Essay*, 56–7; R. Price, *Maroon Societies*.
- [18] R. Price, *First-Time*, 17.
- [19] This plantation was operated by the utopian Labadist religious sect. Davis, *Women on the Margins*, 172–5. Most of the enslaved on Suriname's plantations in this period were born in Africa, which remained the case well into the eighteenth century, as slave mortality rates on the colony's sugar plantations remained extremely high. R. Price and S. Price, *Stedman's Surinam* (Baltimore: Johns Hopkins University Press, 1992), xii.
- [20] Price suspects that the Maroons were already growing rice before Paánza's escape and that the seeds commemorated in her story represented a new variety. R. Price, *First-Time*, 129–34.
- [21] Vaillant, *Milieu cultural*, 520–29; Price, *First-Time*, 129; Carney, *With Grains*, 1.
- [22] M. and F. Herskovits, *Rebel Destiny*; S. Price, *Co-wives*, 27.
- [23] R. Price, *First-Time*, 130.
- [24] Hartsinck, *Beschrijving van Guiana*, 912; R. Price, *Subsistence*, 107–27.
- [25] Stedman, *Narrative, II*, 108–9, 332.
- [26] *Ibid.*, 104; Price and Price, *Stedman's Surinam*, 303.
- [27] Hurault, *La Vie Matérielle*, 27, 92.
- [28] Oudschans Dentz, *Geschiedenis*, 491; Stedman, *Narrative, II*, 109, 128.
- [29] S. Price, *Co-Wives*, 27.
- [30] This is the river the French call Maroni. Price and Price, *Stedman's Surinam*, 210, 218, 236.

- [31] Hurault, *Africaines de Guyane*, 12; S. Price, *Co-Wives*, 30, 92.
- [32] Herskovits and Herskovits, *Rebel Destiny*, 93; Hurault, *Vie Matérielle*, 38; Counter and Evans, *I Sought My Brother*, 167, and images, 168–9; S. Price, *Co-Wives*, 28; Stedman, *Narrative*, II, 122; S. Price, *Co-Wives*, 32.
- [33] van Dantzig and Jones, 63.
- [34] Hurault, *Vie Matérielle*, 27.
- [35] Sally Price's interviews with elder Saramaka, born in the 1920s indicate that only 4–5 varieties were planted when the women were younger. However, she reports that they differentiated some 74 varieties and sub-varieties in the 1970s as a result of introductions with rice development projects in Suriname. Price, *Co-Wives*, 31; Hurault, *Vie Matérielle*, 38.
- [36] R. Price, *First-Time*, 17; S. Price, *Co-Wives*, 27; Carney, *Black Rice*.
- [37] Initially sharecroppers of European origin provided the field labour for the expansion of sugar production into the Atlantic islands with enslaved labour limited to the sugar mills. Fernandez-Armesto, *Before Columbus*, 200 Vieira, *Sugar Islands*, 42–43, 57.
- [38] Following Barry, the term Senegambia refers to the region extending south to the Senegal River to the Southern Rivers area of Guinea. Barry, *Senegambia*. Especially significant were millet and rice. Millet remained important in the Portuguese cereal trade, as the cereal provided a substitute flour for wheat in bread and Catholic liturgical practice. Vogt, *Portuguese Rule*, 71, 86, 155.
- [39] Jones, *Sources on Early Sierra Leone*; Brooks, *Landlords and Strangers*, 200.
- [40] Dantzig and Jones, *Pieter de Marees*, 62–3.
- [41] Fage, *A New Check List*.
- [42] Jones and Hair, *Sources on Early Sierra Leone*; Jones, *German Sources*, 44–96.
- [43] Dutch translation and excerpt drawn from Olfert Dapper's manuscript, *New Description of Africa*. See, Richards, *Culture and Community Values*, 209–29; Jones, *Decompiling Dapper*, 171–209; and Thilmans, *Le Sénégal*, 508–63.
- [44] Jones, *Sources*, 53.
- [45] Jones and Hair, *Brun*, 60.
- [46] Fage, *Check List*.
- [47] Jones, *Sources*, 43.
- [48] Postma, *The Dutch*, 14.
- [49] Lieber, *Frontier Society*, 24; Klooster, *Illicit Riches*.
- [50] Of the Africans brought to Suriname prior to 1700 only 2% are estimated to have come from the Gold Coast. The numbers of forced migrants from this region, while relatively modest, certainly provide a critical mass for effecting the transfer of the knowledge and skills necessary to the cereal's introduction. Vos, Eltis, and Richardson, Table 2; Price and Price, *Les Marrons*.
- [51] Ribeiro, *Aspectos*, 147.
- [52] Ribeiro, *Aspectos*, 153–4.
- [53] Hall, Harrison and Winters, *Dialogues*, 9–10, 197–9.
- [54] Vogt, *Portuguese Rule*, 71, 207; Unger, *Portuguese Shipbuilding*, 43–63, esp. 50; Vianna e Silva, *Elementos*, 7; Magalhães Godinho, *Os descobrimentos II*: 390–93.
- [55] By the 1450s Portuguese traders were already present in Senegambia. Unger, *Shipbuilding*, 52.
- [56] For a review on slaves exported from the Upper Guinea Coast, and their representation from coastal rice-growing societies in the formative period of Brazilian settlement, see Hawthorne, *Planting Rice*, 67–9; Barry, *Senegambia*, 61–65.
- [57] On the influence of African foodways on Brazil, see Bernardo Pereira de Vasconcelos, of the Brazilian Chamber of Deputies, quoted in Suret-Canale, *Essays on African History*, 67. For the role of the Upper Guinea Coast on Brazilian material culture, including plantation housing styles, see Mark, 'Portuguese' Style, 65–6.
- [58] Bloom, *The Economic Activities of the Jews*. Nassy, *Historical Essay*; Cohen, *Another Environment*.
- [59] When the Dutch exchanged Manhattan for Suriname in 1667, a large contingent of English planters left for Jamaica with their slaves. Klooster, *Illicit Riches*, 38.

- [60] Harlow, *Colonising Expeditions*, xc, 135; Oudschans Dentz, *Geschiedenis*, 491.
- [61] However, there was an illicit trade in slaves through piracy in the period prior to reorganization of the WIC in 1621, which may have led to more representation of slaves familiar with rice culture. Postma, *Atlantic Slave Trade*, 21.
- [62] Kea, *Settlements*, 38, 57.
- [63] African foodstaples included the indigenous cereals (millet, sorghum, and rice), legumes (black-eyed peas and pigeon peas), and root crops (yams) as well as Amerindian maize. *Ibid.*, 301.
- [64] Food purchases of millet, yams and palm oil are additionally mentioned on bimonthly accounts but do not appear on the list of WIC exports. Records from the Royal African Company along the Gambia River over the five-year period 1684–88 provide a useful comparison. Curtin estimates that the cost of holding and shipping slaves represented 80% of their purchase price, the remaining 20% spent on provisions for their subsistence while awaiting transatlantic shipment. Postma, *West-African Exports*, esp. 65, 73; Curtin, *Economic Change*, 230.
- [65] The Bandama River in Côte d’Ivoire traditionally defines the geographical limit of West Africa’s indigenous rice region and Mande cultural influence. Yams dominate foodstaple production to the east, where the cultural influence of Akan speaking peoples is evident. Brooks, *Landlords and Strangers*, 188.
- [66] Bosman, *A New and Accurate Description*, 6–7, 298–9.
- [67] Axim’s inhabitants in turn depended on other enclaves along the Gold Coast for ‘Millet, Jammes [yams], Potatoes, and Palm Oyl,’ Kea, *Settlements*, 84; Bosman, *New and Accurate*, 298–9.
- [68] Foodstuffs found in the markets of the seaboard towns included maize, millet, sorghum, yams, plantains, legumes, [Guinea] fowl, palm oil, palm nuts, pepper, beer, and palm wine. Kea, *Settlements*, 301. A similar pattern was evident over the same period along the Upper Guinea Coast, Carney, *Black Rice*.
- [69] Kea, *Settlements*, 84–5.
- [70] The use of enslaved Africans awaiting sale to slave ships as temporary agricultural workers was a common practice along the Upper Guinea Coast. Enslaved Africans were often set to work near the coast growing their own food, with the surpluses frequently marketed to slave ships. Enslaved females, disproportionately retained in indigenous slavery on the continent, also performed agricultural work. See n.63, and Klein, *Women and Slavery*.
- [71] Brydon, *Rice, Yams and Chiefs*.
- [72] Linares, *Power, Prayer and Production*; Paulme, *Les gens du Riz*.
- [73] Brydon, *Rice, Yams*, 559; Kea, *Settlements*, 27.
- [74] Prior to 1700, the African Rice Coast contributed less than 5% of slaves carried on Dutch vessels to the western Atlantic. Vos *et al.*, *Dutch in the Atlantic World*, Table 2.
- [75] Bosman, *New and Accurate*, 298.
- [76] Enslaved women were often deployed in the processing and milling of food aboard slave ships. The topic remains under-researched but preliminary work suggests it was common. For archival references, see, Carney, *Out of Africa*, 204–20. Also see, the commentary of a slave ship captain in 1704, who wrote from the Gambia that ‘he hath not been able to purchase a woman and there must be at least 12 Women to dress the Victuals’ on board the slave ship. Eltis, *The Rise of African Slavery*, 106.
- [77] If rice is not milled, it serves as seed rice and can be planted.
- [78] Herskovits and Herskovits, *Rebel Destiny*, 100.
- [79] Hurault, *Vie Matérielle*, 27.
- [80] Price, *First-Time*, 129
- [81] Vaillant, *Milieu cultural*, 522
- [82] Portères, *Présence ancienne*, 680.

- [83] Vaillant, *Milieu cultural*; Portères, *Présence ancienne*; Portères, *Un problème Ethnobotanique*, 538–42; Portères, *Riz spontanés et riz sauvages*, 441–6; Hurault, *Vie Matérielle*, 37.
- [84] A field visit to rice-growing Maroon communities by researchers from Suriname's national rice centre in 1998, turned up about two dozen rain-fed types planted by the Saramaka. Among them was a red variety, but the seeds were not examined to determine if *glaberrima* was present. Baumgart *et al.* *Visit to Rice Growing Sites*. Rice collections in Brazil have similarly failed to test for the presence of African rice. Author conversations with rice agronomists at CENARGEM, Goiânia, Goiás, Brazil, in August 1997.
- [85] Stedman, *Narrative*, II: 220–21, 338; Price, *Stedman's Surinam*; Postma, *The Dutch in the Atlantic Slave Trade*, 233.

References

- Arbell, M. *The Jewish Nation of the Caribbean*. Jerusalem: Gefen Publishing House, 2002.
- Baumgart, I. R., D. HilleRisLambers, M. R. Khodabaks, W. Wildschut. "Visit to Rice Growing Sites on the Upper Suriname River." Research report, 1998.
- Barry, B. *Senegambia and the Atlantic Slave Trade*. Cambridge: Cambridge University Press, 1998.
- Berlin, I. *Many Thousands Gone*. Cambridge: Harvard University Press, 1988.
- Bloom, H. *The Economic Activities of the Jews of Amsterdam in the Seventeenth and Eighteenth Centuries*. Williamsport, Penn.: The Bayard Press, 1937.
- Bosman, W. *A New and Accurate Description of the Coast of Guinea*. New York: Barnes and Noble, 1704/1967.
- Brooks, G. E. *Landlords and Strangers: Ecology, Society, and Trade in Western Africa, 1000–1630*. Boulder: Westview Press, 1993.
- Brydon, L. "Rice, Yams and Chiefs in Avatime: Speculations on the Development of a Social Order." *Africa* 51, no. 2 (1981): 659–77.
- Bubberman, F. C. et al. *Links with the past; the history of the cartography of Suriname 1500–1971*. Amsterdam: Theatrum Orbis Terrarum B. V., 1973.
- Cardoso, C. F. S. "The Peasant Breach in the Slave System: New Developments in Brazil." *Luso-Brazilian Review* 25, no. 1 (1998): 49–57.
- Carney, J. "'With Grains in Her Hair': Rice in Colonial Brazil." *Slavery and Abolition* 25, no.1 (2004): 1–27.
- "Out of Africa: Colonial Rice History in the Black Atlantic." In *Colonial Botany: Science, Commerce, and Politics in the Early Modern World*, edited by L. Schiebinger and C. Swan. Philadelphia: University of Pennsylvania Press, 2005.
- *Black Rice*. Cambridge: Harvard University Press, 2001.
- Cohen, R. *Jews in Another Environment: Surinam in the Second Half of the Eighteenth Century*. Leiden: Brill, 1991.
- Counter, S. A. and D. L. Evans, *I Sought My Brother: An Afro-American Reunion*. Cambridge: MIT Press, 1981.
- Curtin, P. *Economic Change in Pre-Colonial Africa*. Madison: University of Wisconsin Press, 1975.
- Davis, N. *Women on the Margins. Three Seventeenth-Century Lives*. Cambridge, Mass.: Harvard University Press, 1995.
- Ehret, C. *The Civilizations of Africa: A History to 1800*. Charlottesville: University Press of Virginia, 2002.
- Eltis, David. *The Rise of African Slavery in the Americas*. Cambridge: Cambridge University Press, 2000.
- Ezratty, H. *500 Years in the Jewish Caribbean*. Baltimore: Omni Arts, 2002.
- Fage, J. D. "A New Check List of the Forts and Castles of Ghana." *Transactions of the Historical Society of Ghana* 4, no. 1 (1959): 57–67.

- Fernandez-Armesto, F. *Before Columbus: Exploration and Colonization from the Mediterranean to the Atlantic, 1229–1492*. Philadelphia: University of Pennsylvania Press, 1987.
- Grist, D. H. Rice. London: Longmans, Green and Co., 1968.
- Harlow, V. T. *Colonising Expeditions to the West Indies and Guiana, 1623–1667*. London: Hakluyt Society, 1925.
- Hartsinck, J. J. *Beschrijving van Guiana; Part II*. Amsterdam: S. Emmering, 1770/1974.
- Hawthorne, W. *Planting Rice and Harvesting Slaves*. Portsmouth, New Hampshire: Heinemann, 2003.
- Herskovits, M. and F. Herskovits. *Rebel Destiny: Among the Bush Negroes of Dutch Guiana*. New York: McGraw-Hill, 1971.
- Hurault, J. La Vie Matérielle des Noirs Réfugiés Boni et des Indiens Wayana du Haut-Moroni. Guyane Française. Paris: ORSTOM, 1965.
- *Africaines de Guyane: La Vie Matérielle des Noirs Réfugiés de Guyane*. Paris: Mouton, 1970.
- Jones, A. *German Sources for West African History, 1599–1669*. Wiesbaden: Verlag, 1983.
- “Sources on Early Sierra Leone: The Visit of the Dutch Fleet in 1625.” *Africana Research Bulletin* XV, no. 2 (1986): 43–64.
- “Decompiling Dapper: A Preliminary Search for Evidence.” *History in Africa*, 17 (1990).
- Jones, A. and P. E. H. Hair, “Sources on Early Sierra Leone: 11. Brun, 1624.” *Africana Research Bulletin* VII, no.3 (1977).
- Jonkheer van Sijpesteijn, C.A. *Beschrijving van Suriname historisch-geographisch-en statistisch overzigt uit officiele bronnen bijeengragt*. S Gravenhage: Van Cleef, 1854.
- Kea, R. *Settlements, Trade, and Politics in the Seventeenth-Century Gold Coast*. Baltimore: The Johns Hopkins Press, 1982.
- Klein, M. “Women and Slavery in the Western Sudan.” In *Women and Slavery in Africa*, edited by C. Robertson and M. Klein. Madison: University of Wisconsin Press, 1983.
- Klooster, W. *Illicit Riches. Dutch Trade in the Caribbean, 1648–1795*. Leiden: KITLV Press, 1998.
- Linares, O. *Power, Prayer and Production*. Cambridge: Cambridge University Press, 1992.
- Littlefield, D. C. *Rice and Slaves*. Baton Rouge: Louisiana State University Press, 1981.
- Lunig, H. A *The Economic Transformation of Family Rice-Farming in Surinam*. Wageningen: Centre for Agricultural Publishing and Documentation, 1969.
- Magalhães Godinho, V. *Os descobrimentos e a economia mundial*. 2 vols. Lisbon: Editora Arcádia, 1965.
- Mark, P. “Portuguese” *Style and Luso-African Identity: Precolonial Senegambia, Sixteenth-Nineteenth Centuries*. Bloomington: Indiana University Press, 2002.
- McIntosh, S. K. “Paleobotanical and Human Osteological Remains.” In *Excavations at Jenne-jeno, Hambarketolo and Kaniana in the Inland Niger Delta, Mali*, edited by S. K. McIntosh. Berkeley: University of California Press, 1994.
- Nassy, D. *Historical Essay on the Colony of Surinam, 1788*. Cincinnati: American Jewish Archives, 1974.
- Ostindie, G. and A. van Stipriaan, “Slavery and Slave Cultures in a Hydraulic Society.” In *Slave Cultures and the Cultures of Slavery*, edited by S. Palmié. Knoxville: University of Tennessee Press, 1995.
- Oudschans Dentz, F. “De geschiedenis van de rijstbouw in Suriname.” *Landbouwkundig Tijdschrift*, 691, 1944.
- Portères, R. “Un problème Ethnobotanique: relations entre le riz flottant du Rio Nunez et l’origine médinigérienne des Baga de la Guinée française.” *Journal d’agriculture tropicale et de botanique appliquée* 11, no. 10–11 (1955): 538–42.
- “Présence ancienne d’une variété cultivée d’ *Oryza glaberrima* en Guyane française.” *Journal d’agriculture tropicale et de botanique appliquée* 11, no. 12 (1955): 680.
- “Riz spontané et riz sauvages en El Salvador. Amérique Centrale.” *Journal d’agriculture tropicale et de botanique appliquée* 7, no. 9–10 (1960): 441–6.

- “African Cereals: Eleusine, Fonio, Black Fonio, Teff, Brachiaria, Paspalum, Pennisetum, and African Rice.” In *Origins of African Plant Domestication*, edited by J. Harlan; J. De Wet and A. Stemler. The Hague: Mouton, 1976.
- Postma, J. “West-African Exports and the Dutch West India Company, 1675–1731.” *Economisch- en sociaal-historisch jaarboek* 36 (1973).
- *The Dutch in the Atlantic Slave Trade, 1600–1815*. Cambridge: Cambridge University Press, 1990.
- Price, R. *Maroon Societies: Rebel Slave Communities in the Americas*. Baltimore: Johns Hopkins University Press, 1979.
- *First-Time: The Historical Vision of an Afro-American People*. Baltimore: Johns Hopkins University Press, 1983.
- “Subsistence on the Plantation Periphery: Crops, Cooking, and Labour among Eighteenth-Century Suriname Maroons.” *Slavery and Abolition* 12, no.1 (1991): 107–27.
- Price, S. *Co-wives and Calabashes*. Ann Arbor: University of Michigan Press.
- Price, R. and S. Price. *Stedman’s Surinam*. Baltimore: Johns Hopkins University Press, 1992.
- Ribeiro, O. *Aspectos e Problemas da Expansão Portuguesa*. Lisbon: Estudos de Ciências Políticas e Sociais, 1962.
- Richards, P. “Culture and Community Values in the Selection and Maintenance of African Rice.” In *Valuing Local Knowledge. Indigenous People and Intellectual Property Rights*, edited by S. Brush and D. Stabinsky. Washington D.C.: Island Press, 1996.
- Salley, A. S. “Introduction of Rice into South Carolina.” *Bulletin of the Historical Commission of South Carolina*, 6. Columbia, SC: The State Company, 1919.
- Sloane, H. *The Natural History of Jamaica, 1725*, 2 vols. London: British Museum, 1725.
- Stedman, J. G. *Narrative, of a five years’ expedition, against the revolted Negroes of Surinam, in Guiana*, 2 vols. London: J. Johnson, 1813.
- Suret-Canale, Jean. *Essays on African History*. Trenton, 1988.
- Thilmans, G. “Le Sénégal dans l’oeuvre d’Offried Dapper.” *Bulletin de l’IFAN*, ser. B., 33. 1971.
- Thornton, J. *Africa and Africans in the Making of the Atlantic World, 1400–1680*. New York: Cambridge University Press, 1992.
- Unger, R. W. “Portuguese Shipbuilding and the Early Voyages to the Guinea Coast.” In *The European Opportunity*, vol. 2, *An Expanding World: The European Impact on World History, 1450–1800*, edited by F. Fernández-Armesto. Ashgate: Variorum, 1995.
- Vaillant, M. “Milieu cultural et classification des variétés de Riz des Guyanes française et hollandaise.” *Revue internationale de botanique appliquée et d’agriculture tropicale* 28 (1948): 520–29.
- van Amson, F.W. *A Review of Agricultural Crops in Suriname. Part I: Rice. Oryza sativa, L.* Paramaribo: Landbouwbank, 1987.
- van Dantzig, A. and A. Jones. trans. 1987 [1602]. *Pieter de Marees: Description and Historical Account of the Gold Kingdom of Guinea*. Oxford: Oxford University Press, 1602/1987.
- van Lier, R. A. J. *Frontier Society: A Social Analysis of the History of Surinam*. The Hague: Martinus Nijhoff, 1971.
- van Stipriaan, A. *Surinaams Contrast*. Leiden: KITLV Uitgeverij, 1993.
- Vianna e Silva, M. *Elementos para história do arroz em Portugal*. Coimbra: Nova Casa Minerva, 1955.
- Vieira, A. “Sugar Islands” In *Tropical Babylons: Sugar and the Making of the Atlantic World, 1450–1680*. Chapel Hill: University of North Carolina Press, 2004.
- Vogt, J. *Portuguese Rule on the Gold Coast, 1469–1682*. Athens: University of Georgia Press, 1979.
- Vos, Jelmer, D. Eltis, and D. Richardson, “The Dutch in the Atlantic World: New Perspectives from the Slave Trade with Particular Reference to the African Origins of the Traffic.” Unpublished manuscript.
- Winters, D. *Dialogues of the Great Things of Brazil*. Albuquerque: University of New Mexico Press, 1987.
- Wood, P. *Black Majority*. New York: Knopf, 1974.

