

Breadfruit of St. Vincent and the Grenadines



October 2022

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October 2022

Acknowledgments

This brochure was made possible thanks to collaboration with the following institutions: St. Vincent Botanical Garden; St. Vincent Ministry of Agriculture and Fisheries; St. Vincent Ministry of Tourism; St. Vincent National Parks, Rivers and Beaches Authority; Chicago Botanic Garden; Northwestern University; The National Tropical Botanical Garden; and Trees that Feed Foundation.

Funding for the research came from The Northwestern Plant Biology and Conservation Research Award, The Garden Club of America, Botanical Society of America, The Institute for Sustainability and Energy at Northwestern: Resnick Social Impact Fund, and The Northwestern Alumnae Research Award.

We thank the Bishop Museum for access to their historical Breadfruit Collection. A photo from this collection is included in the brochure with permission. We also thank Jim Wiseman for the use of his photos (with permission). Photos credited to Jim Wiseman are copyrighted to his name. All uncredited photos were taken by author, Lauren Audi or Nyree Zerega.

We would also like to acknowledge the assistance of individuals that were integral to the success of this project: Elliot Gardner, Norman Wickett, Jeremie Fant, Mike and Mary McLaughlin of Trees that Feed Foundation.

Finally, we would like to heartily thank our many field guides in St. Vincent who were instrumental in the work. They include: Lonny (Largo Heights), Jordan (Largo Heights), Mandey (Largo Heights), Mark Horn (Chancey), and Prim Mackenzie (South Rivers).

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A Redemptive History:

How breadfruit came to be part of the Caribbean landscape

Introduction

If you visit almost any island in the Caribbean, you will likely come across a tree with glossy dark leaves and large green fruit the size of a cantaloupe. This fruit is known as breadfruit (*Artocarpus altilis*), named for its sweet bread-like taste, high starch content and nutrients. It is considered one of the top priority species for food security.^{1,2}

Hard as it is to imagine today, this ever-present tree was absent from the Caribbean 230 years ago. The journey of breadfruit to the Caribbean and its transformation into a cultural staple is itself an odyssey.

Breadfruit in the Caribbean is a result of the tragic history of slavery. However, islanders have made it part of their culture, transforming its meaning. It is especially abundant in St. Vincent & the Grenadines (SVG), where more cultivar names are recognized than anywhere else in the Caribbean.³ It is even included in St. Vincent's national dish: blackfish and breadfruit. Its leaves line every skyline, the fruit is found in markets across the island, and the night air is filled with the smell of roasting breadfruit on open fire pits.

Breadfruit Origins

In order to understand how this came to be, we must go back over 40,000 years. This is when humans are thought to have first arrived on the island of New Guinea,



Leeward side of St. Vincent with breadfruit tree in foreground.

nearly half way around the world in the Pacific Ocean.⁴ It is here that the wild ancestor of breadfruit (breadnut, *A. camansi*) would have first been encountered by humans. Breadnut is similar in appearance to breadfruit but has a spiky surface and is filled with large, starchy seeds.⁵ Breadfruit, as we know it today in the Caribbean, is the result of domestication by humans over thousands of years, as they voyaged eastward to inhabit the islands of Remote Oceania. As they transported vegetative cuttings, they continually selected for desirable traits, including seedlessness, which was the result of triploidy (that is three copies of DNA instead of the usual two copies referred to as diploidy).^{2,5} Over time, many different seeded and seedless breadfruit cultivars emerged, and many different names were given to them. As the Lapita (ancestors of modern-day Polynesians) traveled further eastward to eventually inhabit islands as far flung as Hawaii and Tahiti, they carried breadfruit propagules

with them, along with other important crops known as Canoe Plants (e.g. taro, yam, kava).⁴ During these migrations, they favored seedless triploid breadfruit, perhaps due to fruit size, shape, taste, or texture, and this is the most common type today in Polynesia and the Caribbean.⁵

Breadfruit arrives in the Caribbean

The movement of breadfruit over thousands of years across miles of Pacific Ocean attests to the value of this crop and to colonial aspirations and greed. When naturalist Sir Joseph Banks joined Captain James Cook's first voyage to the Pacific on the *HMS Endeavour*, they encountered breadfruit for the first time in Tahiti and were amazed by it.⁶

Banks proposed the use of breadfruit in the Caribbean.⁷ Slaves were starving due in part to landowners unwillingness to forfeit land away from cash crops. Breadfruit's fast-growing nature, bountiful harvest and nutritious content were among the reasons Banks thought it would be good for enslaved populations. In 1787, England commissioned Captain William Bligh to lead a breadfruit-collecting mission to Tahiti. This effort infamously ended in the "Mutiny on the Bounty." Bligh and several crew members were set to sea by mutinous crew members in a small open boat. Over the course of the next two months Bligh navigated the open boat over 3,500 nautical miles, losing one crew member. Upon return to England, a second voyage was soon arranged to finish the mission.

Bligh captained the *HMS Providence* in 1791 (accompanied by the *HMS Assistant*) to Tahiti, where over 1,000 breadfruit

root suckers were collected, mostly from Matavai Bay. On the voyage to bring them to the Caribbean, the crew stayed over in Timor for replenishment and collected breadfruit as well.⁸

After a brief stop in St. Helena (where 12 breadfruit trees were deposited), the *Providence* landed in Kingstown, St. Vincent in January 1793. This marked the first significant introduction of seedless breadfruit into the Caribbean: 331 breadfruit plants from Tahiti and two

from Timor.⁸ Bligh's official records do not indicate which cultivars were collected in Tahiti and Timor⁸, but it is thought that at least five different seedless kinds were brought to the Caribbean.⁸



Illustration from 1825 of St. Vincent Botanical Garden, where many of the first breadfruit in the Caribbean were planted [FCO Historical Collection QK73. S2 GUJ].⁹

Caribbean Revolt

Long before Europeans arrived in 1492, the Caribbean was inhabited by people. Some of the original settlers included the Ciboney, Arawak and Carib people. St. Vincent (originally referred to as Youroumaÿn) was inhabited by Caribs, who called themselves Kalina/Carina. They are thought to have come

from the Guianas around 1200 CE and displaced original Arawak inhabitants.¹⁰ In the early 1600's Africans arrived on the island of St. Vincent either by shipwreck or escaped from enslaved islands such as Barbados, Saint Lucia and Grenada. By 1676 the British government attested that 3000 Africans lived on SVG.¹⁰ While the exact details of the original arrival of African people into St. Vincent is contested, it is clear they were present from the start of European occupation, and escaped slaves continued to arrive from nearby islands over the years. Caribs incorporated "Africans into their numbers" in a "process of ethnogenesis that lead to the emergence of novel alliances and group identities".¹¹ Black Caribs were the majority group in St. Vincent by the time breadfruit arrived in the Caribbean.

Long after other Caribbean islands fell under European rule, the Carib people of SVG successfully thwarted several attempts of colonization. However, starting in 1719 the island passed between French and British control, ending in the hands of the British in 1783. This difficulty of Europeans to maintain control has been attributed to the constant rebellion and tactical abilities of the Caribs/Black Caribs.¹⁰

A key figure in the Carib Wars was Chief Joseph Chatoyer who forced the British to sign a treaty with the Black Caribs in 1773—the first time the British ever signed an accord with non-white people in the Caribbean.¹⁰ The rebellion was eventually defeated in 1796. Afterwards, over 4,000 Black Caribs were deported to

the tiny island of Baliceaux off the coast of Bequia in the Grenadines, where there was little food or fresh water.¹² Over half of them died, likely from starvation and disease. The survivors, were transported to Roatan, a small island off of Honduras.¹¹ Today the survivors' descendants, known as Garifuna, reside mostly in the Lesser Antilles, Honduras, Belize, Guatemala and Nicaragua.¹⁰

Breadfruit was being established in St. Vincent during this time and represents another way the native people rejected and rebelled against European colonizers.



Transformation of Caribbean Breadfruit

While the history is sad and violent, it is the history of the Caribbean. There is certainly pride among Vincentians in their ability to fight off the Western colonizers for so long.

In less than two years after its introduction, breadfruit was producing fruit in St. Vincent.¹² Although it was not immediately adopted, Caribs contributed to its ultimate survival away from the plantations, and it eventually became a major staple food.

After slavery was abolished in 1834, the land was largely divided among wealthy

British landowners.¹⁰ Natives worked on these plantations in harsh conditions for meager wages. As the markets continued to decline, the British eventually departed, leaving the once lush land squandered.

At some point between breadfruit's introduction to St. Vincent and the present, there was a perception shift, and even a redemption of this emblematic fruit. Perhaps, when breadfruit was not forced as a means to perpetuate slavery, it became far more acceptable.

Today, the Caribbean is a major producer and consumer of breadfruit. Every year in St. Vincent a festival is held to celebrate its importance. Breadfruit is

boiled, baked, roasted, fried, steamed, and eaten ripe. It is even made into drinks and ground into flour. It is a source of pride and a symbol of livelihood. Today smells of breadfruit roasting on an open fire pit waft through the air, the same method of preparation practiced thousands of miles away in the Pacific Islands.

There is so much breadfruit in SVG that much of it ends up going to waste due to its short shelf life. Turning breadfruit into flour is one way to extend the shelf life and expand its marketability. With a rich past, there is also much excitement about the potential future prospects of this fruit; efforts are underway to expand its use.

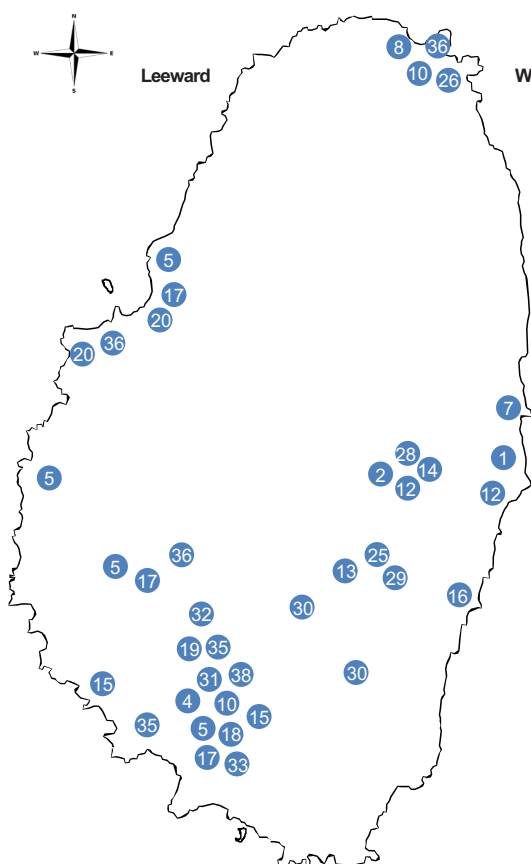
It is very much in the spirit of Vincentians who came before them to take something that was meant to enslave and use it to find prosperity and empowerment.



Each year, St. Vincent holds a Breadfruit Festival to celebrate this important crop.

St. Vincent Breadfruit Cultivar List and Map

St. Vincent and the Grenadines recognizes more breadfruit cultivar names than recorded anywhere else in the Caribbean, and breadfruit is widely distributed throughout the island. Nkrumah (1997)¹³ and Audi et al. (in press)¹⁴ each reported at least 25 names, the St. Vincent Ministry of Agriculture¹⁵ published 20 names, and Daley et al. (2022)³ recorded 23 names. Not all recorded names overlapped across the studies, and taken in total there are at least 38 breadfruit names in St. Vincent. Some of them are similar variations, and may be used for the same cultivars. Locations and names recorded in Audi et al. (in press) are in bold and shown on the map.



1. Black/Black breadfruit
2. Black creole
3. Butterheart
4. Captain Bligh/Bligh
5. Cocobread
6. Common
7. Connery
8. Creole
9. Creole white
10. Dessert/Dessert bread
11. England (same as Bligh)
12. Floaters
13. Hard Nature
14. Hogpen
15. Hope Marble/Marble
16. Horse eye
17. Kashee
18. Lawyer Caine
19. Liberal
20. Long smooth skin
21. Lulu
22. Mary Grace
23. Massa
24. Oldwind
25. Rapier/Dinghy
26. Ready Roast
27. Red bread
28. Red creole
29. Roast-it-all
30. Sally/Saly Young
31. Soursop
32. St. John
33. Suzanna
34. Smooth skin
35. Waterloo
36. White
37. Wilkes
38. Yellow

Using DNA to Understand Caribbean Breadfruit Diversity

Introduction

Bligh did not record any names for the breadfruit he introduced, but it is thought he brought between five and seven kinds of seedless breadfruit to the Caribbean, mostly from Tahiti, and one kind from Timor.^{8,9,16-18} He also introduced *Artocarpus camansi* ("seeded

breadfruit") from Timor.¹⁷ This species had already been brought to the Caribbean by the French.¹⁷ So why are there so many names for breadfruit in St. Vincent today? This was one question we sought to answer.

In an effort to better understand St. Vincent breadfruit diversity, the first four authors traveled throughout St. Vincent and collected leaf material, recorded cultivar names, and took

measurements, such as leaf size, and fruit size and shape. They were also assisted by knowledgeable field guides. In total, information was collected for almost 100 samples in SVG. This was supplemented with material from living collections from botanic gardens, and historical dried, pressed specimens stored in museums around the world. We compared characteristics of what the different cultivars looked like with their DNA to understand how similar cultivars from all over the world are to each other. All of the details can be found in Audi et al. (in press).¹⁴

Findings

As expected, Caribbean breadfruit is very closely related to breadfruit from Eastern Polynesia, where Tahiti is located. Also, Caribbean breadfruit separated into five different genetic lineages, and SVG cultivars were found in four of those lineages.

Two SVG cultivars belonged to two very genetic distinctive lineages, which enabled them to be matched to their likely Tahitian counterparts that were

originally introduced 230 years ago.

The St. Vincent cultivar, known as Waterloo is most likely the same as the Polynesian cultivar Paea. The more uncommon St. Vincent cultivar called Soursop, named for its pebbly skin, was



From Left: Jordan (field guide), Mandey (field guide), Lauren Audi (co-author), Erasto Robertson (co-author).

also found to represent a distinct lineage with a few other samples from Thailand, Malaysia, and Papua New Guinea. It is proposed that Sour sop may represent the introduction from Timor, which was stated to be "small and very inferior."¹⁶

The remaining Caribbean cultivars were found across three other lineages, each of which included numerous breadfruit names from both the Caribbean and East Polynesia. Two lineages included all the other SVG breadfruit names. The last lineage did not have any samples from SVG.

Within the two main lineages found in SVG, the breadfruit appear to be genetically very similar, but some still look distinct from one another. It is likely that breadfruit within these groups are so closely related, that any minor genetic differences between them are difficult to detect.

There may be more types of unique breadfruit in St. Vincent than the genetic methods could identify due to the fact that they are so closely related. It is also possible that some of the cultivars with different names are actually the same. There is more discussion about that later.



Field guide, Lonny, with a breadnut leaf

Conclusions

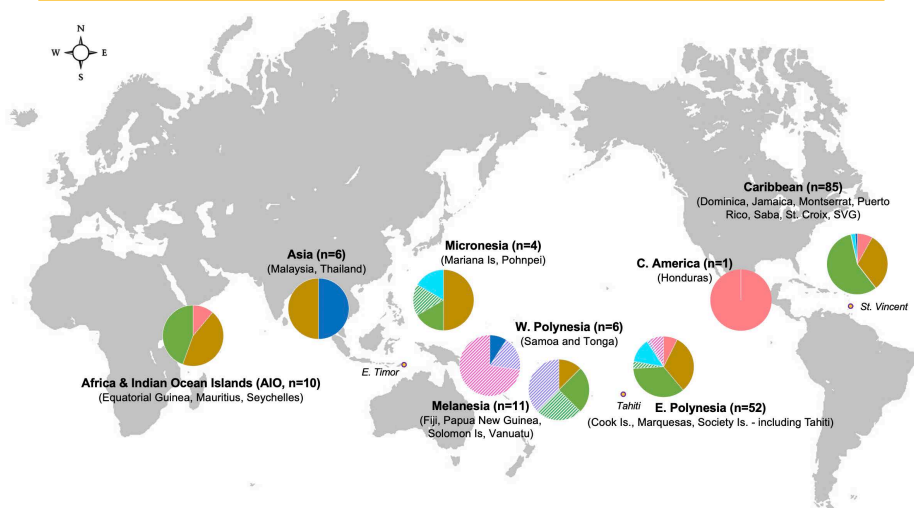
While more questions still remain, genetic findings support the idea that in 1793, five unique lineages of seedless breadfruit were introduced into SVG. Within each lineage variation exists, but it is difficult to characterize.

Whether any of the many names given to breadfruit cultivars in SVG are the result of selection by Vincentians and represent cultivars unique to SVG remains unknown. Since breadfruit is seedless, and by necessity clonally propagated, diversity arises from somatic mutations (also called "sports"). These are genetic alterations (which can happen spontaneously or due to stress) that occur in adult trees and may change the quality of a fruit or leaf. If someone likes that change and propagates a new tree from the branch where the change occurred, it can perpetuate a new cultivar.

The time since breadfruit was introduced to SVG, 230 years ago, may very well have been enough time for new cultivars to have arisen and be selectively grown, but genetic differences are so tiny, they are challenging to detect. It remains to be seen exactly how many truly genetically distinct breadfruit cultivars exist in St. Vincent, and which exact cultivars were introduced from Tahiti 230 years ago.

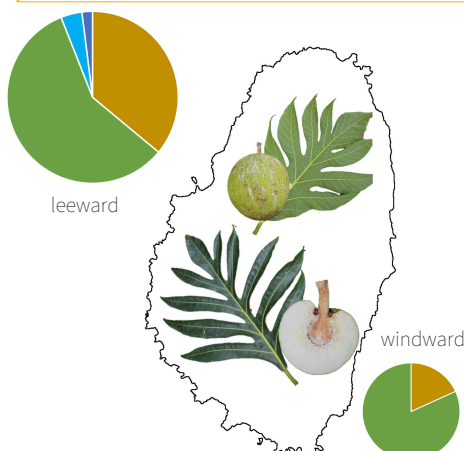
However, there are more clues from additional historical data and what the breadfruit look like. On the following pages, possible matches between SVG and Tahitian breadfruit cultivars are suggested.

Global Distribution of Breadfruit Lineages



Audi et al. (in press)¹⁴ analyzed DNA from breadfruit mostly from the Caribbean and East Polynesia (with smaller sampling from other regions). They found eight major lineages of breadfruit, five of which are present in the Caribbean. Each color on a pie chart represents the proportion of different lineages in each region, and hatched colors indicate lineages with diploid cultivars. Sample sizes (n) and the countries or island groups where breadfruit was sampled are indicated. It is known that breadfruit in Melanesia, and West Polynesia have high genetic diversity⁹, and if more samples from those regions had been included, there would certainly have been much more than eight major global breadfruit lineages. Image is modified from Audi et al.¹⁴

Distribution of Breadfruit Lineages in St. Vincent



Four genetic lineages were found in St. Vincent. The pie charts show the distribution of lineages found on the leeward and windward sides of the island. Nearly twice as many samples were examined on leeward side compared to the windward. Apart from Soursoy and Waterloo, all other St. Vincent breadfruit cultivars studied fell into two predominant lineages.

St. Vincent Breadfruit Traced to Specific Pacific Cultivars

Here we propose possible matches between St. Vincent Breadfruit and the original introductions from Tahiti. We considered DNA data, what the cultivars look like, and historical documents. We consulted Bligh's log from the *Bounty*⁸, where he listed Tahitian names of the breadfruit collected (but of course, those trees never made it to the Caribbean due to the mutiny on the *Bounty*), and we also considered descriptions of Tahitian breadfruit from G.P. Wilder (1928).¹⁹

Soursop is said to be an uncommon cultivar. The specimen included in the study was deep in a forested valley behind Largo Heights, where the trees had grown very tall. The only fruit to be found had already fallen to the ground. It has a very pebbly surface that resembles the soursop fruit (*Annona muricata*). It has a large core that accounts for almost a third of the fruit size. It is considered poor quality.

This cultivar is not known to be actively cultivated. Reverend and naturalist Lansdowne Guilding noted that the "Timor variety" was small, and very inferior.⁹ Based on our findings, Soursop was the only Caribbean cultivar that was found in a lineage with samples from Thailand, Malaysia, and Papua New Guinea. We speculate that Soursop may represent the tree introduced from Timor, and that breadfruit that was introduced in Asia may have similar origins.



Waterloo & Paea

Description: Fruit is long and ellipsoid to oblong. Fruit skin is somewhat rough with raised points and is a bright yellow to pale green. Fruit stalks inserted deeply into the top of the fruit, which is irregularly shaped. The fruit has a large oblong core with a row of brown aborted ovules. Leaves are large, often with 7 or more lobes and the lobes are overlapping.

St. Vincent: Waterloo



Waterloo has large leaves with overlapping lobes. Previous studies have reported that other names (including Lulu) may be used for this cultivar.¹³ It represents a distinct genetic lineage in St. Vincent. It shares characteristics with the Tahitian cultivar Paea, and they are in the same genetic lineage. Leakey recorded this was an excellent quality breadfruit.¹⁷

Tahiti: Paea



Wilder described four varieties of **Paea** in Tahiti, and mentions that in times past it was reserved for chiefs. Depending on the variety it can be deliciously sweet, or merely agreeable.¹⁹

Kashee & Puero

Description: Typically with round to heart-shaped fruit, rough skin with spiky raised centers, and yellow-green skin. Fruit stalk is often curved. Leaves are large with many (often 7 or more) over-lapping lobes.

St. Vincent: Kashee



Kashee is known throughout SVG for its very spiny skin even when mature. Its name means ‘thorny’ and comes from this distinctive skin. It is one of the favorite breadfruit for eating and roasting. It shares many characteristics with the Tahitian cultivar Puero. This is also likely the same variety that is known as Macca in Jamaica.²⁰

Tahiti: Puero



The most likely Polynesian match to Kashee is **Puero**. Based on DNA, Kashee shared the same lineages with many different SVG cultivars, including Kashee. The flavor of Puero is reported to be excellent, and it is very highly esteemed in Tahiti.¹⁹ Wilder recorded two oblong forms of Puero: a thin-skinned form, and one with a large core. They are all said to be fast cooking.¹⁹

Bligh & Maire

Description: Typically with roundish to heart-shaped fruit, with light yellowish-green skin. The leaves are the most distinctive part of this cultivar, with very narrow leaf lobes that extend almost to the mid-leaf.

St. Vincent: Bligh



This cultivar may be called **Bligh Captain Bligh, or England** - named after the man (and his country) who helped introduce breadfruit to the Caribbean. No other cultivar in St. Vincent has this type of leaf. There is a large Bligh tree in the St. Vincent Botanical Garden(a picture of which is on the cover of this booklet). Bligh appears to be the same cultivar referred to as Cassava in Jamaica.^{13,20}

Tahiti: Maire

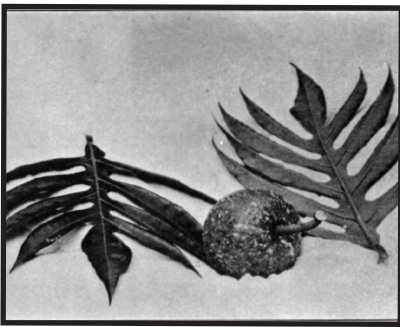


Photo by Gerrit Parmile Wilder, 1925-27; Plate XVIII B: Maire from the village of Faatoai, Moorea. Published in Wilder, G. P. (1928) The Breadfruit of Tahiti. Bernice P. Bishop Museum Bulletin 50. Honolulu: Bernice Pauahi Bishop Museum. Used with permission.



Maire is among the Tahitian names that Bligh recorded they collected during the original, failed Bounty voyage. Maire is thought to have received its name due to its similarity to the maire fern (*Polypodium* sp.) of Tahiti. This cultivar is said to cook quickly and have excellent flavor.¹⁹ Based on DNA, Bligh shared the same lineages with many different SVG cultivars, including Maire.

Cocobread Part I

Description: Large fruit with smooth yellow green skin. Leaves are large with wide, overlapping lobes with wavy margins.

Cocobread is considered one of the most desirable breadfruit for cooking and among the largest cultivars in SVG. It is enjoyed for its excellent taste and smooth texture. Several samples of Cocobread were included in the DNA study. Interestingly, samples with rounder fruits fell into one lineage, while those with oblong fruits fell into a different lineage. We will discuss both here.

St. Vincent: Cocobread (rounder fruits)



Tahiti: Havana (or Havana pataitai)



Photo on left by G.P. Wilder, 1925-27; PLATE XIV.¹⁹ Used here with permission from the Bishop Museum.

No clear single match for Cocobread was made to a Tahitian breadfruit cultivar based on DNA analysis. One potential option is **Havana**, which has large leaves with wide lobes (typically 7-9 lobes) that overlap, with a large diamond-shaped top lobe, like Cocobread. The fruit is described as subspherical, exceptionally sweet, and among the finest.¹⁹ Havana is among the Tahitian names that Bligh recorded they collected during the original, failed Bounty voyage. Our study included a **Havana pataitai** sample, which fell in the same lineage as the rounder Cocobread. In Tahitian, pataitai is a small black fish found near rocks; breadfruit names in Tahiti can be associated with fish that are available at the time of fruiting. This may be a Havana type available when pataitai fish are out.

Cocobread Part II

Description: Large fruit with smooth yellow green skin. Leaves are large with wide, overlapping lobes with wavy margins.

St. Vincent: Cocobread (with long, oblong fruit)



Cocobread with long fruits become quite large and are enjoyed for their excellent taste & smooth texture.

Tahiti: Aarue



No clear match was made to an East Polynesian breadfruit cultivar based on DNA analysis. One potential option is **Aarue**, which fell in the same lineage group as the Cocobread samples with the more elongated, oblong fruits. Aarue has large leaves with wide lobes (typically 7-9 lobes) that overlap, with a large diamond-shaped top lobe, like Cocobread. It also has an oblong fruit like Cocobread.

St. Vincent: Hope Marble

Hope Marble (Marble) is the smallest cultivar found in St. Vincent, and there may be two kinds. It has a small heart-shaped fruit and light-yellow flesh. It is considered to be sweet in taste and can be used in desserts.



A similar looking Tahitian cultivar is **Atiati**, a cultivar described by Wilder.¹⁹ He characterizes this fruit as having small, spherical fruit with yellow flesh and leaves with a terminal lobe that is short and broad. He also says it is sweet when cooked.



Are Some Breadfruit Names Redundant? A Few Examples

While there are many St. Vincent breadfruit names, some may be used for the same kind. This could be due to geographic separation on the island and the length of time breadfruit has been in SVG. Here are some names that may represent the same thing.

Both Dessert and White are characterized as having a light-yellow flesh and round to oblong fruits. Their flesh is sweet and good for making desserts. It is likely that these two cultivars are the same. There was no clear geographical divide in naming and they both grouped together in a lineage with many other cultivars. However, it is unclear what their East Polyneisan counterpart is.

Dessert



White



Long Smooth Skin was only recorded from the Leeward side of the island and has a large, very smooth oblong fruit, and 7-8 leaf lobes that touch but do not overlap greatly.



Leeward: Long Smooth Skin



Windward: Creole/Ready Roast



On the Windward side of the island we encountered **Creole/Ready Roast**, a similar cultivar with large oblong fruit.



All of these cultivars have a yellowish flesh and are reportedly easy to roast. In DNA analysis, these two cultivars were found in the same lineage. It is possible they are the same cultivar and differently named based on location. It is unclear what the Tahitian counterpart may be.

Creole Black



On the Windward side of the island there are many cultivars of breadfruit with the term Creole. We encountered Creole, Creole Common, Creole Black and Creole Red (and Creole Ready Roast).

The most notable difference between the Creole cultivars is their flesh color. Creole Red has a yellow almost reddish flesh, for which it gets the name.

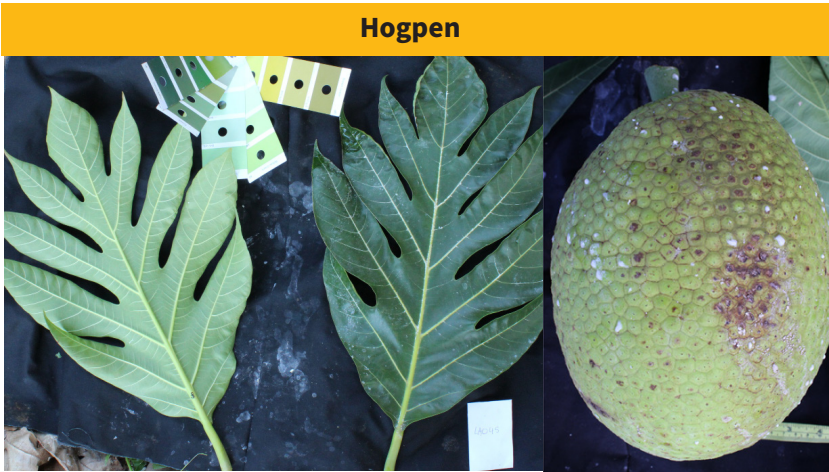
Creole Red



All the Creole cultivars were found in the same lineage in the DNA analysis (along with many other cultivar names).

Some additional St. Vincent Breadfruit Cultivars

Some examples of other cultivar names collected and documented on the island, but whose Eastern Polynesian counterparts remain unknown. These may be replicates of other named cultivars on St. Vincent or could represent unique diversity. More investigation is needed.



Local/Unknown



Yellow



Sally



Suzanna



Lawyer Caine



Floater



Sustainable Food Production & Opportunities: Breadfruit Flour in St. Vincent

Breadfruit is a long-lived tropical tree native to Oceania, where for millennia it has been a staple crop and a major component of traditional agroforestry systems. The Caribbean is one of the largest producers and consumers of breadfruit, second only to Oceania. Breadfruit is internationally recognized as an emerging crop with great potential for expanded use in the tropics.^{21,22}

Breadfruit compares favorably in yields and nutritional content, in some cases surpassing, major staples like wheat, rice and corn.²³ It is a lower energy input tree crop compared to annual crops.^{21,22} It can be produced and consumed locally on small and large scales in moist tropical climates,²⁴ and provides opportunities for local entrepreneurship. Trees bear fruit in three to five years after planting and remain productive for generations. This not only reduces costs, labor, and chemicals needed to grow many annual crops, it also means that as a large, long-lived tree, breadfruit serves a carbon sink where carbon can be stored, thus reducing greenhouse gases.

Fruit can be eaten when mature or fresh. It is roasted, boiled, fried and even made into drinks!¹⁵ In Saint Vincent, breadfruit is abundant, but unfortunately a lot of it goes to waste. One way to extend its shelf-life is to make breadfruit flour. The flour is high in nutrient content and is gluten-free.²² The flour can be used to make a variety of items, including desserts, breads, porridges, chips and much more!¹⁵ Flour is being produced in many places that grow breadfruit, including by local entrepreneurs in St. Vincent.



Breadfruit in St. Vincent: Roasting over an open fire, freshly roasted breadfruit, products made with breadfruit flour, breadfruit chips.

How to Prepare Breadfruit Flour

Breadfruit flour is a nutritious way to prepare and store breadfruit,, either for home use or for sale. Here we provide a broad overview of the steps required to produce breadfruit flour. You can find more resources at the bottom of the page. If producing flour commercially, strict food safety practices and quality control is necessary.

1 Wash, Peel & Core

Fruits should be thoroughly washed, peeled (optional), and cored. Peels are edible and can be used, but it is critical they are carefully washed.



2 Shred or Slice

Slices or shreds should be about 0.5cm thick. A variety of home kitchen or commercial tools are suitable for slicing breadfruit.



3 Dry

Breadfruit can be dried in many ways: a mesh rack in the sun, a commercial drying oven, a store-bought fruit drier, or a DIY solar dryer made with a system of netting or window screens in a well-ventilated shelter. To ensure quality and



safety, breadfruit slices should be dried to less than 10% moisture content within 24 hours. Dried slices should be stored in an airtight container prior to grinding.

4 Grind

Whether using a home kitchen mill or a commercial level grinder, thoroughly grind dried breadfruit for a consistent texture. Be careful not to overheat the flour which can damage the protein



5 Package

Store flour in airtight, food-safe packaging. It can have a shelf life of up to 1-2 years at room temperature if kept dry.



For more resources, check out:

Trees that Feed Foundation (<https://www.treesthatfeed.org>)

National Tropical Botanical Garden (<https://ntbg.org/breadfruit/resources/>)

St. Vincent Breadfruit Entrepreneurs



Slicing and drying breadfruit for flour.



Kaynella Nichols of Island Gems with their breadfruit flour

The St. Vincent Botanical Garden

This research was made possible through collaboration with the St. Vincent Botanical Garden.

The St. Vincent Botanical Garden has a rich and complex history of horticulture, conservation and colonization in the Caribbean. Established in 1765 by the colonizing British, it is one of the oldest in the Western Hemisphere. Many economic crops were first introduced into the Caribbean by way of the garden, including nutmeg and black pepper from French Guiana and plum rose, carambola and of course, breadfruit from the Pacific.

Today the garden is run by the Ministry of Agriculture and serves to conserve the great diversity of Caribbean species both native and introduced.



Achiotte (*bixa orellana*)



Torch Ginger (*Etlingera elatior*)



Scene from the Botanical Garden

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