



BANIWA

JIQUITAIA PEPPER

PIMENTA BANIWA JIQUITAIA



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SÃO GABRIEL DA CACHOEIRA & SÃO PAULO
2018

BANIWA JIQUITAIA PEPPER - Pimenta Baniwa Jiquitaia © OIBI

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CASAS DA PIMENTA NETWORK SUPPORTED BY



PRINTING COSTS OF THE BRAZILIAN PORTUGUESE VERSION SUPPORTED BY



This publication was produced with the financial support of the European Union. Its contents are the sole responsibility of Instituto Socioambiental and do not necessarily reflect the views of the European Union.

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Art. 11. The provisions of this law apply to access to genetic heritage or associated traditional knowledge and to the economic exploitation of any finished product or reproductive material arising from access to genetic heritage or associated traditional knowledge.

Dados Internacionais de Catalogação na Publicação (CIP)
(Câmara Brasileira do Livro, SP, Brasil)

Baniwa jiquitaia pepper : Pimenta baniwa jiquitaia /
tradução Tony Gross. -- São Paulo : Instituto Socioambiental; São
Gabriel da Cachoeira, AM : OIBI ; Rio Negro : FOIRN, 2018.

Vários colaboradores.
Bibliografia

1. Índios Baniwa 2. Índios da América do Sul - Amazônia
3. Pimenta - História 4. Pimenta jiquitaia - Cultura 5. Pimenta
jiquitaia - Produção 6. Sistema agrícola tradicional - Rio Negro.

18-15303


CDD-980.3

Índices para catálogo sistemático:

1. Pimenta jiquitaia : Índios Baniwa : América do Sul 980.3

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Baniwa Community of
Tucumã Rupitã, Içana river

INTRODUCTION

This publication brings together a wealth of important information on an experience involving the production and marketing of Jiquitaia Pepper produced by the Baniwa communities of the Içana and Ayari Rivers. A project that involves research on and development of this product, implemented through a partnership involving ISA (Instituto Socioambiental), Oibi (Indigenous Organization of the Içana Basin), CABC (Coordination of Baniwa and Coripaco Associations), Foirn (Federation of Indigenous Organizations of the Rio Negro), Eibc-Pamáali (Baniwa and Coripaco Indigenous School Pamáali), Abric (Baniwa Association of Rio Içana and Cuiari / Tunui Cachoeira Community), Cedeh (Centre for Study and Outreach of the Herieni School / Ucuqui Cachoeira Community), EIBP (Paraattana Indigenous School), Mázzeero Indigenous School, Waliperedakenai Indigenous School / Canada Community, Eenawi Indigenous School and the Yamado Community.



Baniwa researcher Justina Lopes, of the Canadá Community on the Ayari river, carries out a survey of pepper plants in a forest garden. © Dylan Gross, 2008

The research that generated most of the information presented here was funded by Fapeam (Amazonas Research Support Foundation), through its Young Amazonian Scientist Program (Call for Proposals 010/2006 - Call II). Entitled "Peppers in the Içana-Ayari Basin Project: foundations for the sustainability of production and marketing", the research was carried out between 2007 and 2009 based on an R&D demand presented at Oibi's annual assembly in 2005. This was taken up by the ISA team in collaboration with indigenous researchers from five regional schools, that in turn networked directly with about 27 communities in the river basin. The results (SILVA, 2010) constitute a baseline for monitoring the impacts of the project in different fields: the diversity and distribution of the variety of peppers in the basin, the daily routine and the use of time by the women producers, and the circulation of genetic material through exchange networks in the Baniwa territory.

The **Baniwa** are an Arawak-speaking indigenous people, with a total population of approximately fifteen to eighteen thousand people. They live in about 200 communities and settlements, forming part the north-western Amazon

cultural complex, along the headwaters of the Rio Negro basin, spanning Brazil, Colombia and Venezuela. For thousands of years the Baniwa in Brazil have occupied the Içana river basin, where 95 communities and settlements inhabited by 7-8,000 people are found. The Baniwa are subdivided into phratries, considered as brothers among themselves, who maintain relations of cultural and material exchanges based mainly on marriage exchange (WRIGHT, 1990; GARNELO, 2002). The main phratries are the *Waliperedakenai* (Grandchildren of the Pleiades), *Hoohodene* (Grandchildren of the Inhambu (Tinamou) / Children of the Sun), *Dzawinai* (Grandchildren of the Jaguars) and the *Coripaco*, with their subgroups *Komadaminai* (Grandchildren of the Duck), *Kapittiminanai* (Grandchildren of the Coati) and *Padzowalieni*. Each phratry is made up of smaller groups, the sibs or clans. The Baniwa still maintain close relations of matrimonial exchanges with the Cubeo and Wanano groups, mainly in the region of the headwaters of the Ayari River.



JIQUITAIA

WHAT IS IT, WHO MAKES IT

Jiquitaia (or *juquita*, *giquitaia*, *jiquitaya*, *jektaia*) is a word of Tupi origin used to refer to a powdered mixture of salt (*yuk*) with pepper (*taya*) (CUNHA, 1924.) Other variations include *iekitáia* or *iukit* (STRADELLI, 2014).

In the Baniwa language the terms used to refer to jiquitaia are *aatti iipepe* (dried pepper) and, above all, *aatti itodakape* (ground pepper). *Aatti* in Baniwa means pepper. The similarity with the Spanish term *aji* arises from the Taino term, *haxi* or *axi*, for pepper. The Baniwa are Arawak relatives of the Taino, a people who occupied the islands of the Caribbean when Columbus first came into contact with these plants, introducing these, along with their Arawak terminology, to Europe.

Baniwa woman in her garden gathering peppers. © Beto Ricardo/ISA, 2013



Other native peoples of the Rio Negro and Amazonia produce and use jiquitaia as an essential ingredient of their cooking (NASCIMENTO-FILHO ET AL., 2007). To clarify: in Amazonia the term jiquitaia also refers to a tiny reddish, non-edible ant of the genus *Solenopsis*, that forms colonies in places like forest gardens, secondary forest and thatched roofs. Its sting is quite painful, burning like pepper, a sensation that can last for up to three days.



Gourd with peppers.

© Roberto Linsker/Terra Virgem, 2013

Right, "palette" of different coloured jiquitaia on manioc beiju (flat manioc bread).

© Rogério Assis, 2010



ORIGINS AND CULTURAL SIGNIFICANCE

Peppers of the genus *Capsicum* are without doubt one of the most symbolic components of the agrobiodiversity managed in the Baniwa territory. They are imbued with meanings well beyond their nutritional, culinary and cosmetic values, occupying a prominent role in the social and cosmological system of these people.

According to the Baniwa themselves:

“Pepper is at the heart of our culture, at the heart of our diet, at the heart of our traditional upbringing, at the heart of our medicine that protects us against evil spirits that attack people, at the heart of the transmission of Baniwa knowledge and ethics. There are several episodes in which the Ñapirikoli [the great mythical Baniwa hero] used the pepper to cook food. That is why, today, we walimanai [the human population currently inhabiting the world] use it in our day-to-day life. Pepper ensures us health and protection. It is our daily medicine” (Oibi / Abric / ISA / Foim, 2013).

FROM ÑAPIRIKOLI TO HUMANKIND

Ñapirikoli, demiurge and source of the good things for the walimanai, has used the pepper since time immemorial. For this hero, pepper was his *liwaapere* or *limorodale* his shield-sword, adornment-power. At times of war, and other moments when defence was called for, pepper was an indispensable resource.

The appearance and first use of pepper is recorded in a mythical episode constantly recounted in Baniwa communities. Here it is told by Fernando Jose, of the Tukumã-rupitã community¹. At the time, Ñapirikoli used pepper to cook

¹ The two narratives presented here and the information on which this section was based were recorded by André Fernando Baniwa from his father Fernando José.

raw fish, neutralizing the danger this posed to his life and health. It thus offers future generations a technique for protecting and fundamentally purifying food, indispensable in Baniwa culinary practice to the present day.

“One day Ñapirikoli married Omaittaoa (piranha-woman). She belonged to the group of Ñapirikoli’s enemies. The following day he was invited to eat at the house of his father-in-law, head of the Piranha people. Ñapirikoli, knowing that this was to create an opportunity to kill him, prepared himself to bathe with his fellow guests. He turned himself into Tiiripi, the swallow, and Kawawiri, the scissor-tailed flycatcher. In this way he would swoop down over the water, just skimming it. Thus, he bathed without any problems. If he dived into the water, he would be devoured by the Piranha. At the table, his father-in-law offered him a plate of food containing raw fish with barbs. One of Ñapirikoli’s guests, the heron, rushed to eat before the pepper was sprinkled, and choked. Ñapirikoli had to care for him to save him. Thus it was that Ñapirikoli took the pepper from his liwaapere and added it to the raw fish-food. Quickly the raw fish was cooked, and everyone could eat it without risk. In this way, Ñapirikoli’s enemies could not kill him.

Another time Ñapirikoli used the pepper was when he was swallowed by the snake-enemy. With his liwaapere he protected himself in this snake’s stomach in order not to die. With the pepper he killed the snake. With the liwaapere he opened the snake’s belly to get out and save himself.

In the context of the everyday life of the Baniwa people, pepper is medicine: the remedy that prevents (heals), cures (kills the disease) and restores (reinforces the body after killing the disease). This is the essential social function of pepper according to Baniwa culture.”



ÑAPIRIKOLI, THE BANIWA MYTHICAL HERO, IN HIS PRIMORDIAL WORLD, REPRESENTED BY A BEJUJU SIEVE.

Ilustração: Laurentino Pereira Valêncio

rites of passage



Tasting blessed pepper, community of Itacoatiara-mirim. © Renato Martelli/ISA, 2014

These are the ceremonial moments of collective public use of pepper for protection against the invisible worlds to which humankind is exposed. They are moments for recalling stories, for transmitting knowledge, for establishing a vertical connection between this world and the worlds of the spirits, for deep learning, for counsel and sharing experiences about Baniwa ethics. And also, times for parties, with lots of music, food and dancing.

The chief of these is the *Kalidzamai*, the ritual of blessing food, especially pepper, which marks the end of the period of reclusion of young people during the process of initiation into adulthood. In evoking the *Kalidzamai*, clay pots are arranged in the centre of the group. They contain pepper, the "weapon of the singers" (WRIGHT, 1996), the knowledge-holders who conduct the ritual.

Following their first menstruation, girls receive a course of instruction, called *naiteetakano*. The *Kalidzamai* also occurs for boys, at the right time, and the training is called *nakapeetakana*.



Youth being whipped during initiation. © Felipe Schaedler, 2015
Below, female initiation. © Marcelo Salazar/ISA, 2015

After the ritual, both will be ready: trained for the world, as the Baniwa say. One of the most important moments, signifying the end of the ritual, is when the young initiates taste pepper fruits blessed by the adults.

This occurs after a long period of reclusion, fasts and restricted diets, which formerly lasted one to two months. In this way, say the shamans, the young Baniwa will have their bodies "cooked" by the pepper, which guarantees a kind of invisible shield for each: the *liwaapere* that protected the hero *Napirikoli*. This immaterial "cooking" of bodies is completed by lashing with whips. The *Kalidzamai* prepares future generations to live well in their ancestral territory.

At one point in the blessing, the leaders of the ritual also name the pepper according to the clan association of the young initiate, revealing a very interesting aspect of the intertwining of biodiversity, sociodiversity and territoriality among the Baniwa



PEPPER FOR THE BODY AND THE SOUL

By referring to pepper and tobacco as “food for the body and the soul”, Oliveira (2015) makes interesting points about what he considers exclusive “emblems” that differentiate Baniwa clans from each other, and between these and the “brancos” (non-indigenous people).

These emblems, referred to in Baniwa by the terms *inaikhi yanhenke* “clan identifier”, or *inaikhi hedali*, “that which comes from the clan”, are, according to the author, the constructions by which the Baniwa administer a unique relationship: a means by which the Baniwa are able to describe both the differences between indigenous peoples and between these and the “brancos”; “things” that mediate between these people.

According to multiple versions of myths gathered by Oliveira, after leaving the underworld and acquiring their bodies, humans receive from *Ñapirikoli* (and/or *Dzóoli* [another Baniwa demiurge]) a series of attributes that differentiate them from each other: varieties of pepper, tobacco and cassava; artifacts such as “profane” and “sacred” ceremonial instruments; intangible and difficult to classify goods such as different languages; a portion of territory and, within this, the “house of the dead.” Each clan ancestor received a variety of tobacco and pepper different from that received by the others. Oliveira interprets the commentary by Hill (1993) on the emergence myth of this people, which records how *Ñapirikoli* gave each ancestor of the different Baniwa groups a pair of grandparents to look after the sacred tobacco and pepper used for cures and other purposes rituals by their present day descendants (WRIGHT, 1996).

It was therefore no coincidence that, in choosing the name of its Casa da Pimenta, the community of Ucuqui Cachoeira on the Upper Rio Ayari called it *Manowadzaro*. This is precisely the name of the blessing of the pepper used in the *Kalidzamai* rituals of young *Hoohodene*, the group to which this community is affiliated. André Fontes, deputy leader of the community and an expert on initiation rituals, points out that the name of blessing evoked in male initiation would be *Heridanayali* (PERS.COMM.). According to the same informant, in the case of the *Waliperedakenai* group the name of blessing would be *Malhenayali* for the men, and *Hipanomayali* for women. The literal translation of the suffix

ayali would be “seed of the pepper fruit”. Just as Ucuqui had done, the Yamado community decided to baptize its Casa da Pimenta with the name *Tsitsiadao*, the name of the blessing of the pepper evoked in the initiation of the women of the *Awadzoro* clan.

When any rule of correct behavior in the forest is broken, or when, during the cooking of food, bubbles from the pan splutter and fall into the fire, this is interpreted as an offence to the *awakaronai* and to the *yoopinal* of *Iarodatti*, spirits of the forests. In this case, peppers are quickly thrown onto the fire, ensuring that the message calling for reprisals will not reach these spirits, preventing their return, usually in the form of illness or intense storms affecting individuals and communities.

As a cosmetic, specific peppers, used very selectively, are a resource for beautification and for delaying the aging appearance of the face. This prevents the evils that attack the face and which date from the creation of the world.

Just as *Ñapirikoli* has always resorted to pepper as *Iiwaapere*, the Baniwa *walimanai* also use it in everyday life, in a variety of ways, with the sole purpose of protection against evil and ensuring a good life in this world.

FUNCTIONAL FOOD



The power of peppers to improve the health and well-being of people is recognized worldwide. A series of benefits are attributed to peppers, including: reduction of cardiovascular diseases, anti-oxidant potential, anti-cancer properties, analgesic action, anti-ulcer, influence over the nervous system, improvement of the respiratory system, anti-inflammatory action, anti-depressant action and the ability for metabolic acceleration contributing to weight loss. In 2015, a Chinese study found that people who consume spicy foods almost daily are 14 percent less likely to die than those who eat spicy foods less than once a week (FRANCE-PRESSE, 2015).

This power to generate beneficial effects is mainly attributable to capsaicin, an alkaloid compound responsible for the burning sensation. However, currently in Brazil there is no entry in the records of Anvisa (National Public Health Monitoring Agency) of foods with claims of functional and/or health properties attributed to peppers of the genus *Capsicum*.

FOREST PLOTS, KITCHEN GARDENS, NETWORKS AND DIVERSITY

We owe world to indigenous agriculture the domestication of the many plants that form part of the food and agriculture heritage of Amazonia and the. This phenomenon is not simply one that occurred in the past but is one that continues in the present. For example, on the Rio Içana, Baniwa communities manage, conserve and create extensive biodiverse and agrobiodiverse landscapes.

Among the Baniwa, the cultivation of gardens is an age-old practice, especially for women. It occurs once the men have cleared and burned small areas of primary or secondary forest, in the latter where the land may have been untouched from 12 to 35 years or longer (SILVA, 2004). A principal characteristic

Dona Hermínia Garcia harvests peppers in a forest garden, Tunui Cachoeira, middle Içana. © Beto Ricardo/ISA, 2013



FIGURE 2: DAILY ROUTINE OF WOMEN PRODUCERS OF BANIIWA PEPPER, SHOWING TIME SPENT IN GARDENS AND ON FOOD PROCESSING. THE DATA GENERATD BY THE RESEARCH WILL BE USED TO MONITOR LONG-TERM IMPACTS OF THE BANIIWA PEPPER INITIATIVE



Abomi (grandmother) Florinda Emília (1933-2015) in her pepper Garden in the community of São José do Rio Içana (*In memoriam*). © Roberto Linsker/Terra Virgem, 2013

is the absence of external inputs, such as agrochemicals and heavy machinery, and the rich symbolism associated with caring for the earth, plants, and objects that revolve around the universe of the gardens and the processing of food. This low environmental impact system ensures the regenerative capacity of the forest such that its future ecosystem services and uses continue possible.

It is the women, the major part of whose days are devoted to their forest and kitchen agroforestry gardens and to food processing activities, who are mainly responsible for the food and nutritional security of the 200 Baniwa communities and settlements to be found on the Içana, Avari, Cuiari and Negro rivers in Brazil, Colombia and Venezuela. To enable this, each family bases and synchronizes its cultivation in at least three plots: a new plot in formation, a mature plot where most of the harvesting occurs, and a plot in regeneration where the area is about to be freed up so that forest succession regenerates the area for future cultivation.

Nowadays indigenous agroforestry gardens are increasingly recognized as important systems for conserving and creating agrobiodiversity. Indigenous lands in Brazil are above all areas that conserve and adapt substantial food and agricultural resources. These services, still unseen and undervalued, are fundamental to our ability to adapt to the effects that climate change will have on agriculture worldwide.

Indigenous territories are also key elements in global climate security. They are areas highly efficient for protecting forest environmental services and carbon stocks.

TRADITIONAL AGRICULTURAL SYSTEM OF THE RIO NEGRO: CULTURAL HERITAGE OF BRAZIL

In November 2010, the Traditional Agricultural System of the Rio Negro was declared part of Brazil's cultural heritage by Iphan (National Institute of Historical and Artistic Heritage) ([HTTP://ISA.TO/2oUEZcJ](http://isa.to/2oUEZcJ)). Cultural heritage is understood as a set of knowledge and ways of transmitting this that are inter-related and which, in this particular case, includes: the diversity of cultivated plants, the management practices in forest and kitchen gardens (the spaces of cultivation), the food system (the recipes and processes of transforming raw materials), processing and storage techniques, in other words the material culture, and finally, the existence of social networks for the exchange of plants and associated knowledge (EMPERAIRE, 2010). The cultivation of wild cassava (*Manihot esculenta*) by means of the *coivara* (swidden) technique, and the exchange of knowledge and plants, is the basis of this system, shared by more than 20 indigenous peoples living along the Rio Negro, in an area that includes the municipalities of Barcelos, Santa Isabel do Rio Negro and São Gabriel da Cachoeira in the north-western Amazon along the borders with Colombia and Venezuela.

The declaration of the Traditional Agricultural System of the Rio Negro as part of the immaterial heritage of Brazil emphasizes:

"Nowadays the diversity of forms of production is considered from another angle, that of biodiversity conservation, and the impacts of agricultural activities are analysed in environmental terms. Biodiversity generated by human groups, through processes of domestication and selection, is also seen in terms of genetic resources in the face of climate change.

Economic instruments, with varying forms of certification or recognition of intellectual rights, acquire an increasingly visible space in the markets and help raise consumer awareness of the diversity of production.

However, the diversity of forms of production goes beyond the realm of the technical. It relates to the multiple records of the social and cultural life of societies. To produce vegetables, animals or micro-organisms, is not only to mobilize knowledge, concepts, tools and social relations, but also to express a particular view of the world and of society.

The use of the term “system”, a set of interacting elements (Delattre, 1984), in the dossier title flows from the breadth of the heritage in question. Going beyond the notion of agriculture to that of an agricultural system means showing interactions between of this field of activity and other domains of the social, cultural and material life of a group, without limiting the viewpoint to a functional record. We are dealing with an open system, built around societies-spaces-plants relationships that incorporate certain elements in accordance with cultural, ecological, historical or political contexts” (EMPERAIRE, 2010).

PEPPER DIVERSITY ON THE IÇANA RIVER

After cassava, peppers of the genus *Capsicum spp.* are one of the most important and common crops in the forest and kitchen gardens of the Rio Içana. Such importance can also be measured by the frequency with which peppers feature in the culinary traditions of the region (GARNELO & BARÉ, 2009) and in the role they play in the social and cosmological system (OLIVEIRA, 2015; WRIGHT, 1996).

Peppers are widely distributed throughout Amazonia (BARBOSA, ET AL., 2002) and the basin is considered the centre of domestication and of the greatest diversity of the species *Capsicum chinense*, considered the most Brazilian of the five cultivated pepper species (REITSCHNEIDER, 2000).

This diversity can be seen on the Içana River, where women cultivate their peppers, either in forest gardens – usually the newest of the



Baniwa researcher Paula Florentino in her pepper garden, community of Tucumã Rupitá. © Carol Da Riva, 2008

three plots each maintains – or in the gardens of peppers grown in specially prepared kitchen plots.

The diversity found in these gardens is enormous. Our survey, conducted in the fields of 40 communities in the basin, enabled us to draw up a list of 78 varieties of peppers grown there. Without doubt, this raises the Rio Içana region to the level of an important focus of diversification of the species and one that is critical for future initiatives of on-farm protection of the genetic resources of the *Capsicum* genus in Brazil.

Between 80 and 90% of the varieties found in Baniwa gardens belong to the *Capsicum chinense - Capsicum frutescens complex*. It is within this complex that we find the hottest and most aromatic varieties of known peppers (Habaneros, Jolokias, Murupis, Malaguetas, Pimentas de Cheiro, Pimenta Bode). This range of diversity managed by Baniwa women gives the jiquitaia they produce the features by which the spice has become known: highly spiced, with intense aroma and flavour.



© Roberto Linsker/Terra Virgem, 2014

VARIETIES OF PEPPERS FOUND IN COMMUNITIES ON THE IÇANA²

1. AALIHITAKO

PIMENTA BICO DE JABURU
STORK BEAK PEPPER

The Bico de Jaburu (Stork Beak) pepper is a variety with one of the largest and most elongated fruits among those grown on the Içana, reaching 6 cm in length. The plant is fast growing on inter-fluvial dry land. It is a medium-hot variety, much used in the preparation of quinhampira (regional fish sauce). The fruits, when mature, go from purple to deep red.



2. AAMO

PIMENTA ROXA
PURPLE PEPPER

A purple pepper with a long fruit with an uneven surface, which can reach 3 cm. When ripe, the fruit is purple. It is hot and highly aromatic. The higher the proportion of this variety in the mixture, the darker the jiquitaia will be.



3. AAWI

PIMENTA AGULHA
MALAGUETA

Shaped like a sewing needle, this is one of the hottest varieties grown on the Içana. The fruit is small, at most 2 cm long, and grows upright from the plant. Although widely grown in the rest of Brazil, it is not a common variety found in gardens on the Içana.



² Translators of names into Portuguese: Aloncio Garcia and Elton José da Silva, indigenous researchers and holders of Young Amazon Scientist Programmes scholarships. Also given are the names by which these varieties are commonly known in the rest of Brazil.



Paula Florentino presents a display of pepper fruits from the Içana during an annual general meeting of Oibi. © Adailson Lopes da Silva/ISA, 2006

4. BOTAOTHE

PIMENTA BOTÃO (PIMENTA DE BODE)
BUTTON / BILLY GOAT PEPPER

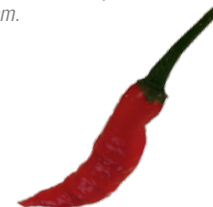
Shaped like buttons, its fruits are small, maximum 2 cm long, and red when ripe. Difficult to find, mostly in gardens on the middle Içana.



5. DZAKA INAPA

PIMENTA BRAÇO DE CAMARÃO
SHRIMP ARM PEPPER

Shrimp arm pepper is very hot, and its flavour is highly appreciated by the Baniwa. Producing few seeds, it is difficult to obtain and plant. Can reach up to 7 cm.



6. DZAKOITHE (PIMENTA DE CHEIRO)

**PIMENTA FRUTA DE ABACATIRANA/
PIMENTA DA CAATINGA
ABACATIRANA FRUIT / CAATINGA
PEPPER**

Its fruits resemble the Abacatirana (Dzakoi), a fruit tree of the caatingas (sandy soil regions) of the Rio Negro. Yellow pepper, very attractive, and moderately hot. It is highly appreciated by the Baniwa, just like the Abacatirana fruit itself. Additionally, it is a very resistant plant, growing vigorously even on the sandiest soils. For this reason, it is the most widely found variety in the gardens of the basin. The fruits are 2 cm long.



7. DZAATTE HITAKO

**PIMENTA BICO DE TUCANO
TOUCAN BEAK PEPPER**

One of the group of large and commonly found peppers in Baniwa gardens. The fruit reaches up to 6 cm in length.



8. DZAWIETSHA

**PIMENTA DENTE DE ONÇA (DEDO DE MOÇA)
JAGUAR TOOTH / MAIDEN'S FINGER
PEPPER**

Has a very sharp point, just like a jaguar's tooth. Produces fruits in abundance. When ripe the fruits are red and reach 5 cm in length.



9. DZOODZO HITAKO

**PIMENTA BICO DE PEIXE LÁPIS
PENCIL FISH MOUTH PEPPER**

Shaped liked the mouth of the pencil fish, its fruits are red when ripe. Up to 4 cm in length.



10. EEWAAPA

**PIMENTA DE CABA AMARELA
YELLOW HORNET PEPPER**

Yellow fruit, 3.9 cm long. Very hot.



11. IXEDONITHE

**PIMENTA FRUTO DE IXEDONI
(ÁRVORE DA BEIRA DO RIO)
IXEDONI FRUIT PEPPER**

The ixedoni (a riverbank tree) fruit pepper reaches 2 cm in length and its fruits are yellow when ripe. Produces a lot of seeds and is very hot.



12. HALENE

**PIMENTA BRANCA
WHITE PEPPER**

The white pepper, so-called because the growing fruits are white, is yellow when ripe. The fruit is smooth and no more than 2 cm long.

13. HALIAKALITHE

**PIMENTA FRUTO DE HALIAKALI
HALIAKALI FRUIT PEPPER**

Round peppers, like the fruit of a tree with this name occurring in flooded forest. Hot and strong smelling. Ripe fruits are yellow and 1.3 cm long.



14. HEMALITHE

**PIMENTA FRUTA DE ABIU
ABIU FRUIT PEPPER**

Resembles the fruit of the abiu tree (Pouteria caimito), except that the fruits are much smaller, at 1 cm long.

15. HIPOLENE

**PIMENTA FRUTA VERDE
GREEN FRUIT PEPPER**

Ripe fruits are reddish, very hot and 2.2 cm long.



16. HOLITO IATTITE

PIMENTA DO POMBO PIGEON PEPPER

The name refers to a riverbank tree with similar shaped fruit. Red when ripe and very hot, fruits reach 0.8 cm in length.

17. KADZALIWI

PIMENTA FLOR DE MOLONGÓ MOLONGO FLOWER PEPPER

When flowering the plant resembles the flower of the molongo (a flooded forest tree). The elongated fruit, hot, is yellow when ripe. Reaches 3 cm in length.

18. KAMAPO

PIMENTA MÁPOO (CAMAPU) CAMAPU PEPPER

Fruit is round and yellow, like those of the (*Phisalis*), a ruderal plant now widely consumed by non-indigenous people. Hot, but not aromatic.

19. KAPATANE

PIMENTA FRUTO DE PAREDE ACANALADA GROOVED SKIN PEPPER

Large, elongated fruit with irregular, grooved skin. Red, with few seeds.

Plants grow and flower quickly in recently



burned plots. Although not especially hot, the fruits are highly prized for making quinhampira, growing to about 2.5 cm in length.

20. KAPATSIDALIPE

PIMENTA DE FRUTO ACHATADO SQUASHED FRUIT PEPPER

A quick-growing variety requiring the fertile soils of new gardens. Very good for quinhampira.

21. KAPITSIRIWI

PIMENTA FLECHINHA DE ZARABATANA BLOWPIPE DART PEPPER

Plants with small leaves producing flowers and fruit continuously for two years or even more when well-tended and in fertile soil. The fruit is very hot and aromatic, yellow and long-lived on the plant (not easily shed like other peppers). Make good jiquitaia. Up to 1.7 cm long.



22. KATOTO

Suggested translation: JOLOKIA BANIWA*

The hottest of all the peppers in the Içana basin, considered dangerous by the women, who keep children away and handle the pepper very carefully so as not to burn their hands. Because of this, very few plants are grown. The peppers are big, with yellow fruit. When the women wish to test a man's capacity to bear the heat of quinhampira or jiquitaia, they add katoto to the preparation.

*a reference to Bhut Jolokia, a pepper of the same family as Katoto and which was considered the world's hottest by Guinness World Records. There is no translation to Portuguese of the name Katoto.



23. KAWATHSIDALIPE

PIMENTA CAMUTI CAMUTI PEPPER

Shaped like a camuti, the clay pot used to store caxiri (fermented drink). The fruit is very hot, highly aromatic and produces lots of seeds. Grows to 1.4 cm in length.



24. KEREKERETHE

PIMENTA OLHO DE PERIQUITO (CUMARI) PARAKEET EYE PEPPER

Pepper producing small fruit, less than 1 cm long, which are red when ripe. Generally harvested when green to avoid fruits falling to the ground or being eaten by birds. A variety that prefers new gardens from cleared secondary growth.



25. KOITSI HITAKO

PIMENTA BICO DE MUTUM CURASSOW BEAK PEPPER

Yellow when ripe, fruits are large (4.3 cm long), mild, with an intense aroma. Grows well on higher ground. Fructification begins when the plant is still small. Produces few seeds. Very good for quinhampira and jiquitaia.

26. KOORI HITAKO

PIMENTA BICO DE COROCORÓ GREEN IBIS BEAK PEPPER

The pepper with the largest fruits in the region (8 cm long). Fast growing plant, very productive in fresh soil. Initially purple, fruits turn yellow when ripe and fall from the plant. A variety much used by the Baniwa to make quinhampira and jiquitaia. Seeds widely shared among the women.

27. KOOWHEIWAAPHI

PIMENTA BUNDA DE SAÚVA LEAF CUTTER ANT BUM PEPPER

Bright red when ripe, fruits up to 4.3 cm long



28. KOPITTE

PIMENTA FRUTA DE CEBOLÃO ONION FRUIT PEPPER

Small fruits (2.8 cm long), yellow when ripe. Highly spiced with a very agreeable aroma.



29. KOWAIDATHE

PIMENTA FRUTA DE CASTANHA NUT FRUIT PEPPER

Fruits measure 3-4 cm and are red when ripe. Mild with a highly favoured aroma.



30. MAAKO

PIMENTA MARROM BROWN PEPPER

A very hot pepper. The riper it gets, the browner it becomes. Fruits up to 2.6 cm long.



31. MADZAWITHE

PIMENTA JURUBEBA JURUBEBA (NIGHTSHADE) PEPPER

Fruits, which are smaller than 1 cm, are red when ripe. Very hot with aroma appreciated by the Baniwa.



32. MAIPANALI

PIMENTA TAPIOCA DE INAMBU TINAMOU TAPIOCA PEPPER

A very hot variety and one of the most aromatic. Fruits reach 2.8 cm long, yellow when ripe.



33. MAKOWEITHI

PIMENTA OLHO DE URUTAU POTOO EYE PEPPER

Very hot variety with an aroma different from any other. Red fruits up to 5.4 cm long.



34. MAROLI HITAKO

PIMENTA TUCANO PEQUENO LITTLE TOUCAN PEPPER

Yellow fruits, 2-3 cm long. Very hot.

35. MOROPI (name borrowed from Nhengatu language)

Recently brought to the Içana it is rare, found mostly on the lower river. Very productive when it flowers. Fruits up to 3.5 cm long, with yellow irregular shaped skin. Pepper with one of the most intense and pleasant aromas. Mild, produces a jiquitaia withan intense aroma.



36. NERITHI

**PIMENTA OLHO DE VEADO
DEER'S EYE PEPPER**

Small yellow fruit (1 cm). Very hot, pleasing aroma.

37. PEERIHITAKO

**PIMENTA BICO DE GAVIÃO REAL
HARPY EAGLE BEAK PEPPER**

Yellow fruit, medium to mild, pleasant aroma, 2.5 cm long.

38. PERITSOTA

**PIMENTA UNHA DE GAVIÃO REAL
HARPY EAGLE CLAW PEPPER**

Irregular skin, red fruits, very hot. Up to 5 cm long.



39. PHITO-HIWIDA

**PIMENTA CABEÇA DE GRILO
CRICKET HEAD PEPPER**

Tiny but special, as it is a highly aromatic variety, giving the jiquitaia a strong fruity flavour. Its fruits are no more than 1 cm long, brown or red when ripe. Ideal for seasoning smoked fish, a typical regional dish.



40. PIRIKITOTHE

**PIMENTA OLHO DE PERIQUITO
PARAKEET EYE PEPPER**

Very hot and aromatic, with small, round, red fruit (1 cm long).

41. POMENHIRI

**PIMENTA CHEIROSA
AROMATIC PEPPER**

Pepper with an intense aroma, very hot, small (1.2 cm) round fruit, yellow, with few seeds



42. TTALATTALANE

**PIMENTA LEVE E ACHATADA
LIGHT FLAT PEPPER**

Large mild fruit. A pepper for eating on its own, with no fish or meat, just salt and unleavened manioc bread when drinking chibé (manioc meal drink).



43. WIITSHIA

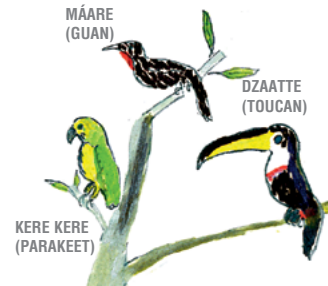
**PIMENTA PIPIRA
TANAGER PEPPER**

Pipira (tanager) pepper "is pretty" and grown by nearly all families in the Içana basin "because it is spread by the pipira bird". There are sub-varieties, large and small. The fruit is red, hot and produces many seeds, a part of which germinate spontaneously in gardens. The standard wiitshia has 1 cm long fruit, while the large wiitshia Makadalipe reaches 1.8cm and the small wiitshia Tsodalipe is less than 1cm long.



PEPPER PLANT "DONATED" BY BIRDS

In tracking the circulation routes of material among Baniwa gardens ("who gives the seed?"), there were several responses naming "the birds". These are important dispersers of peppers in the region and account for almost 1% of the seeds (Figure 3, page 34). They also provide names for many varieties, as we have seen in the list above. As birds do not have receptors for capsaicin on their tongues, they do not feel the heat of the peppers and are excellent dispersers of such plants within the gardens of the Rio Negro



ACTIVE AGROBIODIVERSITY SOCIAL NETWORKS

Phytogenetic material (pepper seeds and seedlings) move through Baniwa territory and social fabric on a daily basis. In general, such movements are associated with the most important events in the society, such as weddings, visits and religious events (evangelical meetings or Holy Communion) (FIG.3).

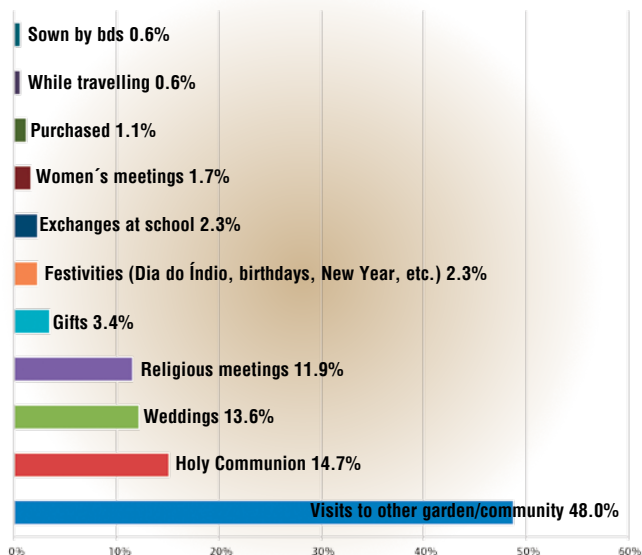


FIGURE 3: EVENTS GIVING ACCESS TO BREEDING MATERIAL (SEED/SEEDLINGS) AS RELATED IN FORMAL INTERVIEWS CONCERNING 210 EXCHANGES INVOLVING 108 DONORS AND 100 RECIPIENTS IN 41 COMMUNITIES ON THE MIDDLE AND UPPER IÇANA, THE AYARI AND CUIARI RIVERS, AS WELL AS THE MUNICIPALITY OF SÃO GABRIEL DA CACHOEIRA.

This diversity circulates mainly between women, above all as gifts from mother to daughter (FIG.4). This logic is compatible with that already verified in the case of cassava, as the logic of intergenerational transmission of a heritage good (EMPERAIRE, 2010). The sizeable number of transfers between in-laws, members of belonging to different phratries, also places this circulation within what may be considered an interethnic logic (FIG. 5). This in turn also operates at a cross-border level, given that the place of origin of the material may be over the border in of Colombia or Venezuela.

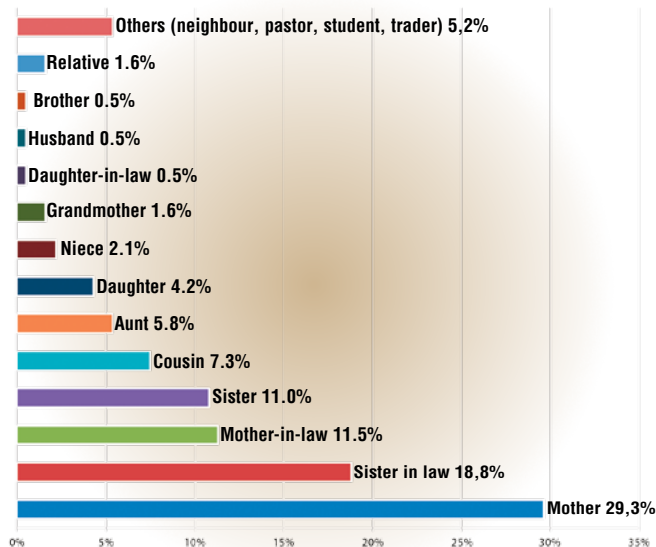
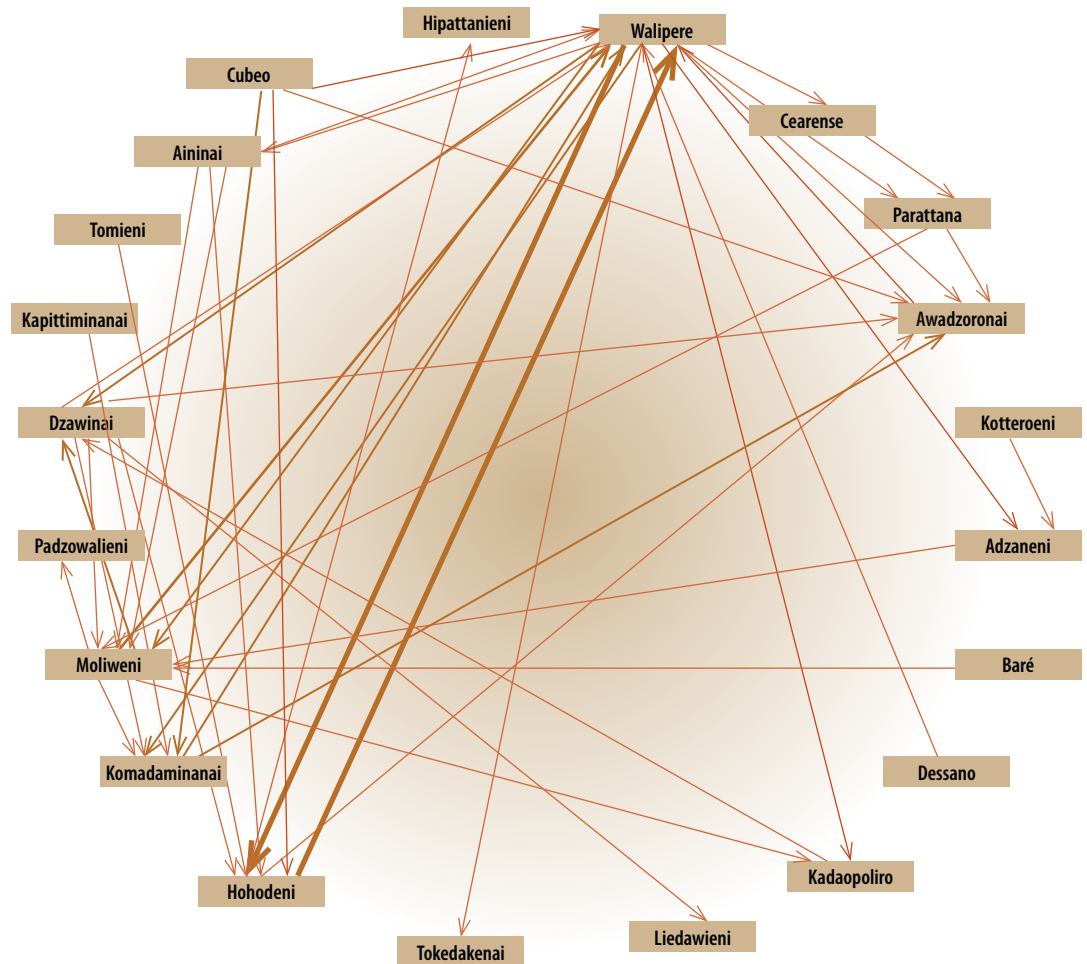


FIGURE 4: RELATIONSHIP OF THE DONOR OF PLANT MATERIAL.

The flow chart (Fig. 5) shows seed and plant exchanges among the main ethnic groups living in the Içana basin, demonstrating how dispersal of plant genetic material is diffuse, favouring its wide circulation among the groups.

These movements provide an explanation for the production and conservation of the huge diversity of peppers among the Baniwa and how this diversity is affected, or rather favoured, by these exchange networks.

It is possible that the wide circulation network we show here helps to increase cross-pollination rates and the creation of new types of pepper from such crossing. The Baniwa case is an example of how enrichment of agrobiodiversity depends on the active social networks that manage it (EMPEAIRE, 2001, PERONI AND HANAZAKI, 2002). These processes can be seen as good indicators of the vigour of the (re) production capacity and maintenance of the genetic variability of plants grown in the region. We now know that this region is the centre of diversity of the most diverse group of peppers in the Amazon Basin, the species *Capsicum chinense* Jacq., is this region. This species is also by far the most cultivated in Içana gardens, representing the majority of morphotypes (varieties) found in the Baniwa plantations.



PREPARATION

There is no single recipe for preparing jiquitaia. The diversity of cultivated peppers, the proportion of varieties in the mixture, the different ways of drying and seasoning, with salt or other herbs, are the main factors responsible for the diversity of colours, textures and flavours arising from the jiquitaia produced by Baniwa women.

Although each woman's blend is completely exclusive, a common identity is maintained: probably what we can call the stamp of its terroir, of geography, the white sandy soils that dominate the landscape of the Içana basin, the climate and the common features of how Baniwa women manage their gardens.

The research carried out through the partnership between technical staff of ISA's Rio Negro Programme and indigenous researchers has already identified seven basic modes of preparation that lead to multiple interactions with the wide variety of peppers cultivated in the region.

COLLECTING

Each Baniwa woman harvests small quantities of pepper daily. Most of this is destined for consumption by her family and community, either fresh or in the form of jiquitaia. At this stage mature, healthy peppers are preferred, harvested directly from the plant. In general, the peppers are transported from garden to community wrapped in embaúba leaves (*Cecropia* spp.), a plant commonly found on the edges of gardens and whose leaf is velvety on one side and siliceous on the other. This soft, dry and fresh envelope allows peppers harvested in the field to be preserved for a long time.



Peppers wrapped in embaúba leaves to be transported from garden to community.

Fotos: © Rogério Assis, 2010

DRYING: SUN-DRYING, ROASTING, COOKING, TOASTING

The important thing here is to ensure a drying point that gives the fruit the correct crispness to go to the pestle. The faster the drying, the greater the chances of preserving the nutritional values, aroma and colour of the fruits. Large, thick-skinned peppers will be chopped up to help the process. At rainy periods drying can last up to two weeks. In drier periods the process can be completed in a week. The fruits are always laid out in the sun in the community patio in the morning and brought in at the end of the afternoon. All this can be speeded up by putting the fruits in the oven, which may result in a darker jiquitaia. Portions of dried pepper are placed on the *mitsiede*, a small platform set up on top of the manioc flour oven, until there is enough to grind. An important innovation that the Pimenta Baniwa initiative introduced with its *Casas da Pimenta* consists of gas or solar glasshouses capable of drying the peppers in a single day in an environment better protected against dust and animals.



In the glasshouses of the Casa da Pimenta drying time is reduced from a week to twelve hours, fixing better the colour, aroma and nutritional properties of the fruits

© Roberto Linsker/Terra Virgem, 2013



GRINDING AND SIEVING



Once properly dried, the peppers are ground with a wooden mortar and pestle, an indispensable utensil for food processing among Baniwa families. This is almost always made of brazilwood or queenwood (*Brosimum rubescens*), a tree with one of the hardest and reddest heartwoods of the region. A few blows are enough to pulverize the skins of the fruit, preserving the seeds, which will be separated from the mixture using an arumã palm sieve. The activity is always done with one's back to or out of the wind. Otherwise, the blowback of peppery powder onto the person sieving can cause nasty irritation of the skin, eyes or throat.



Dona Adélia grinding dry pepper, community of Tunuí Cachoeira.

Fotos: © Rogério Assis, 2010

SALT – TRADITIONAL AND CONTEMPORARY

Indigenous peoples of the Amazon used, and still use, little salt. The region, except on the coast, is poor in sources. In the interior, salt was obtained from leaves and fruits of certain vegetables reduced to ashes.

Another way to obtain salt was through trade with sub-Andean groups, who had access to large deposits in the high jungle of that region and traded this with Amazon peoples for dry fish, feathers, honey, furs and wood. Important providers were the Ashaninka people. Arawak speakers, like the Baniwa, they controlled the mines in the hills of the Cerro de la Sal in Peru. This region was both the main source of salt for Amazonian peoples, and the political, economic and spiritual center of the sub-Andean Arawak ([HTTP://PIB.SOCIOAMBIENTAL.ORG/EN/POVO/ASHANINKA/145](http://pib.socioambiental.org/en/povo/ashaninka/145)). One clue to the linguistic and cultural proximity of these two peoples is precisely their word for salt: *iwi* (Baniwa) and *tsiwi* (Ashaninka).

Historical records of the colonial period show that, on the Rio Negro, salt, called *caruruyuquira*, or caruru salt, was mainly obtained from caruru, a plant that grows on rocks in river rapids (BUENO 1998: 98).

“On the Rio Negro: On the rocks that form rapids, there grows a plant of fleshy leaves and very salty, which the natives call carurú. (...) Dwellers nearby, especially the Indians, use it to extract the salt which they then use. Thus carurú is an inestimable resource for the peoples of the upper Rio Negro. (LACERDA, 1865)

Rock carurú is an aquatic macrophyte of the Podostomaceae family (probably *Rhyncholacis* aff. *Linearis* Tull.) that grows on the rocks of rapids on the Rio Negro and its tributaries. Its leaves, reduced to ashes, substitute kitchen salt (sodium chloride) although the taste is altered, in this case, by its high concentration of potassium.

Because of its rarity and the simplicity of its life cycle, whose location is the rock formations of the rivers of the region, we believe that any extensive use of this plant will inevitably have been subject to cultivation or exploitation techniques in nature under a very high degree of control. A research proposal is being implemented on the upper Rio Ayari, the success of which would allow the reinstatement of rock caruru as an ingredient of Baniwa pepper. Nowadays the use of such salt is very rare among indigenous people of the upper Rio Negro.

Research suggests a use of salt in the composition of Baniwa jiquitaia of between 0 to 12%. The proportion of 10% (mass to mass ratio) has been standardized for the jiquitaia currently marketed under the Pimenta Baniwa brand. The salt used in Baniwa pepper is very special: fleur de sel from Maras, the well-known mine in the Sacred Valley of the Incas in Peru.

Fleur de sel is a cluster of crystals that forms on the surface of the water, and which is carefully picked by the artisans working the mine. These crystals are called flowers, because this is the format in which crystallization occurs. It contains minerals and unique nutrients, absolutely natural, untouched by any industrial process. Each pot of Baniwa Pepper contains about 1.5 g of this precious salt.

Rock caruru (probably *Rhyncholacis* aff. *linearis* Tull.) growing on the rapids of the upper Rio Negro. © Beto Ricardo/ISA, 2012



JIQUITAIA TRADITIONAL AND CONTEMPORARY USES

Jiquitaia is strongly associated with the consumption of fish, the most important source of protein in the communities. It is estimated that each Baniwa family consumes on average 7 litres of jiquitaia a year.

Recently, this delicacy has been discovered and incorporated into the creativity of the Brazilian gastronomic circuit and its potential has been gradually revealed. New recipes appear on the internet every day.

The first official tasting event, held in 2011 at the Dalva e Dito restaurant in São Paulo, brought together renowned chefs and gourmets under the coordination of chef Alex Atala. This created an important space for instigating the use of this



From left to right, chefs Felipe Schaedler, Bela Gil and, in the centre, Alex Atala, of the Instituto ATÁ, with Baniwa women of the Yamado community. © Beto Ricardo/ISA, 2015

and other Amazonian flavours in menus worldwide (FRAGA, 2011). Since then, Baniwa pepper has appeared in salads, pasta, desserts, jams and chocolates, paired with fruits such as pineapple, mango and fresh cashew, fish and seafood, creams and purees, cured meats, drinks, becoming in fact a reference point in the sector for dried powdered pepper.



Tucunarés (peacock bass) on the grill, Juivitera community, lake region of the middle Içana.

© Beto Ricardo/ISA, 1997

Alex Atala (Instituto ATÁ)

Marinated pork with shoyu, Baniwa pepper, honey and ginger

Serves 1
Difficult

INGREDIENTS

200g pork belly
200ml stingless bee honey
350ml shoyu
45g grated ginger
3g **BANIWA JIQUITAIA PEPPER**
1 pineapple (cut into small
diamond shaped pieces)
1 lime

PREPARATION

Mix all the items above and place in a vacuum bag (max vacuum). Steam the bag in the oven for 10 hours and 40 mins at 100oC. Open the vacuum bag, drain and save the juice. Toast the pork belly on the skin side with a drizzle of olive oil.

SERVING

Grill the opposite ends of each pineapple diamond and put aside. Cut the pork in half, lightly dipping it in the rest of the marinade and seasoning the meat with lemon to taste. Arrange the pork on the plate with the grilled skin upwards and a pineapple diamond alongside.



Grilled *pescada branca* with fish broth

Serves 2
Moderately difficult

INGREDIENTS

2 cleaned *pescadas brancas* (S. American silver croakers)
1 large white onion
5 black peppercorns
1 bay leaf
2 sweet green chili peppers
1 sweet red chili pepper
3g **BANIWA JIQUITAIA PEPPER**
Coriander to taste
Manioc meal

PREPARATION

Place the fish and the peppercorns in a pan and cover with water. Leave on low heat without boiling for 35 minutes. Remove, sieve, separate the fish and put the broth to one side. Season the fish with salt and pepper.

Light the grill with 10cm of charcoal. When alight and glowing, place the fish and leave to grill over low fire without burning until toasted and dry.

Remove from the grill and put to one side. Roughly chop the peppers. Then carefully mix the broth with the fish and sweet peppers and allow to rest for two minutes to allow the flavours to mingle.

SERVING

Serve the fish and the broth in a deep bowl and sprinkle the Baniwa pepper. Garnish with coriander. Serve with *farinha d'água* (regional manioc meal).



Pasta with beans and sausage

Serves 1
Moderately difficult

INGREDIENTS



150g spaghetti
Olive oil and salt to taste
For the sauce:
120g red beans
110g Tuscan sausage
6ml corn oil
1 garlic head
¼ onion
Drizzle of extra virgin olive oil
Pinch of thyme
55g peeled tomatoes
BANIWA JIQUITAIA PEPPER to taste
Parsley to taste

PREPARATION

Cook the pasta in boiling water with a drizzle of olive oil and salt until it becomes al dente.

Sauce: boil the beans until fully cooked, but still whole.

Remove the skin of the sausage, sear and braise in the garlic and onion.

Add the tomato and thyme. Heat until the sauce thickens.

SERVING

Add the sauce to the cooked pasta. Arrange the pasta, beans and sausage, and parsley side by side on the plate. Finish by adding the Baniwa pepper.

Bela Gil

Honey and pepper drink

Yields 1 glass
Preparation: 5 minutes
Easy

INGREDIENTS

1 spoon of honey
½ lemon
1 pinch **BANIWA JIQUITAIA PEPPER** or Cayenne pepper
1 glass of water

PREPARATION

Mix the ingredients together with a spoon.



photos: © Bela Gil, 2016

Quinoa and pequi balls

Serves 4

Preparation: 1 hour 20 minutes Easy

INGREDIENTS

cup quinoa or brown rice 4 sliced pequis
½ tea cup sea salt
1 cup cooked chickpeas
soup spoons tahini or olive oil
¼ cup chopped parsley
¼ cup chopped spring onion
pinches **BANIWA JIQUITAIA PEPPER**

PREPARATION

1. Cook the quinoa and pequi with the salt and two cups of water for 20 minutes (40 minutes if using brown rice);
2. In the blender mix the cooked chickpeas with the olive oil;
3. When the quinoa is ready, place in a bowl and add the chickpeas and remaining ingredients;
4. Shape into balls and bake in the oven at 185°C for 35 minutes.



Felipe Schaedler (Banzeiro restaurant, Manaus)

Tucumã and Yanomami mushroom broth

Serves 2

INGREDIENTS

300g tucumã
10g powdered Yanomami mushroom
20g butter
5g sugar
300ml water
20g tapioca flour
100g coriander*
salt to taste lemon to taste
BANIWA JIQUITAIA PEPPER to taste

PREPARATION

Mix the water and powdered mushroom and heat without allowing to boil. After 40 minutes, thicken with the tapioca flour. Check the salt and add some drops of lemon. Sieve the broth with a fine sieve and put to one side. Reduce the broth by half, add the Baniwa pepper. Put to one side. Heat the butter. When it is bubbling turn off heat and add the tucumã, toss gently and add the sugar. Serve the tossed tucumã in a bowl with dried coriander.

* To dry coriander, place leaves in the microwave for 30 seconds. Repeat 3 times until leaves are completely dry. Sieve and save for other recipes.



Chibé with Amazon pineapple, ants and Baniwa pepper

Serves 1



Beetroot shoots to taste

INGREDIENTS

50g pineapple brunoise
30g Uarini manioc meal
40ml water
10g red onion julienne
10g sweet chili julienne
15ml lemon juice
20ml olive oil
3g fleur de sel
5g (1 leaf) endive julienne

BANIWA JIQUITAIA PEPPER to taste
2 ants

PREPARATION

Soak manioc meal in iced water. Put to one side.

In a bowl mix onion, sweet chilis (which should only be chopped now), lemon juice, pineapple, olive oil, salt, endive and Baniwa pepper. Mix well. Add soaked manioc meal.

SERVING

Garnish with ants and beetroot shoots. Serve cold.

photo: © Felipe Schaedler

MARKET

It was in 2005, at a meeting in São José do Içana of artisans responsible for the celebrated

Baniwa arumã palm basketry, with the participation of ISA staff, that the idea emerged of finding new market niches for jiquitaia. The idea was to add another product to the “Arte Baniwa” label (www.artebaniwa.org.br), building on the infrastructure already in place for its production and marketing, reducing operational and administrative costs.

Additionally, it would increase social benefits through the inclusion of an item produced by women, something that had become a priority in light of the demands of Baniwa women to participate in the Arte Baniwa project.



Baniwa Jiquitaia Pepper on the shelf in São Paulo –in the Instituto Atá stall at the Pinheiros market (above) and at the Casa Santa Luzia (below). Photos: © Beto Ricardo/ISA

Different jiquitaia colours in the local market of São Gabriel da Cachoeira.

© Roberto Linsker/Terra Virgem, 2013



The Baniwa Pepper initiative aims to strengthen an indigenous agricultural system by consolidating the value chain of one of the symbols of such a system: peppers produced by women in the forest and kitchen gardens of the Içana river basin.

It is the effort of a network of partnerships involving the Instituto Socioambiental, through a co-management agreement with various grassroots associations, schools and communities of the Içana River, part of the Alto Rio Negro Indigenous Land, which covers three million hectares of highly conserved rainforests in the state of Amazonas.

In line with the business plan (LIMA, 2010), production capacity is designed so as not to generate demand pressures that alter community activities, by seeking a horizontal expansion of the productive base; that is, by incorporating more beneficiaries as the way to expand production rather than increasing individual workloads. To this end, the initiative is consolidating a network of Casas da Pimenta Baniwa across the traditional territory of this people, resulting in a growing improvement in their ability to supply this delicacy to markets in Brazil and abroad.

Jiquitaia was chosen because it was identified from the beginning as a product that aggregates not only the traditional knowledge of these people, but also market potential and a significant impact on family income and on the role of women in Baniwa society.

Baniwa Pepper already enjoys an excellent reputation in the local market, including São Gabriel da Cachoeira (Brazil), Mitu and San Felipe (Colombia), and San Carlos and Maroa (Venezuela). However, this is not always matched by fair trading relations that value the dedication and effort of the women involved in its production. Sold in plastic bags in the local market of São Gabriel da Cachoeira, unlabelled and with no producer credit, the price is less than a third of that obtained in special niches, such as the gastronomic market, which recognizes all its special attributes.

A growing concern throughout the Rio Negro basin around the lack of return from working one's garden plots, in particular the economic devaluation of their produce, is that this discourages young people from maintaining this system, thereby compromising its security for future generations.

Over the last five years, ISA, Oibi and Foirn have promoted Baniwa pepper and the traditional agricultural system of the Rio Negro to chefs, especially through events and visits to São Gabriel da Cachoeira. The main achievement of

the initiative has been to strengthen the Baniwa green economy through a sui generis model of access to fair markets for the products of indigenous agriculture, resulting in increased well-being and gender equity, social and organizational gains, conservation and valuing of biodiversity. This option has reduced the pressure to engage in prospecting and other illegal activities that degrade the environment and the quality of life in the Baniwa communities of the Içana River, by encouraging agricultural activities among young people and consolidating the Arte Baniwa brand as a collective heritage of the Baniwa of Brazil, Colombia and Venezuela.

CASAS DA PIMENTA

The "Casas da Pimenta Baniwa" form a network of buildings and management, offering spaces and utensils suitable for processing, packaging and storage of jiquitaia produced from the peppers grown by the women of the Baniwa communities. The Casas da Pimenta network plays an important role in establishing healthy and fair bridges between high socio-environmental value

markets and the women producers of the indigenous communities.

The buildings were specially designed by architect Almir de Oliveira, following research on how the delicacy is processed, and on the aesthetic requirements and those of stability and sustainable use of materials in the traditional Baniwa buildings, as well as conformity with federal public health standards. The Casas da Pimenta are responsible for adding value to the production of family gardens, for quality control and for information flow to enable the full tracking of the production chain and its socio-environmental benefits.



Manager Osinete Paiva fills a jar of Jiquitaia in the Casa da Pimenta Dzooro, in Tunuí Cachoeira. Beto Ricardo/ISA, 2013



Architecture project for a Casa da Pimenta Baniwa. © Almir de Oliveira.

First Casa da Pimenta, built by the community of Tunui Cachoeira, middle Rio Içana.

© Beto Ricardo/ISA, 2013



Second Casa da Pimenta, built by the Ucuqui cachoeira community, upper Rio Ayari.

© Roberto Linsker/Terra Virgem, 2014

By means of the lot number of each jar filled in the Casa da Pimenta, production managers can organize information such as: origin of production, lot size, name of the women participating in production of the lot and their communities, as well as varieties of peppers that were used.

The Casas da Pimenta are responsible for:

- aggregating the production of family gardens in a given area of Baniwa territory,
- organizing processing and storage, in accordance with the special protocol for production for the market,
- conducting quality control and the flow of information that allows full tracking of the chain and its social and environmental benefits.

The Casa da Pimenta Dzooro, the first to be inaugurated, in 2013, is in Tunui Cachoeira, the traditional territory of the Dzawinai phratry. Casa da Pimenta Manowadzaro, inaugurated in 2014, is in Ucuqui Cachoeira, the traditional territory of the Hoohodene phratry. Casa da Pimenta Pamáali and Casa da Pimenta Tsitisiadoa, inaugurated in 2015, are in the territory of the Waliperedakenai and in the multi-ethnic urban periphery of Gabriel da Cachoeira, in the Yamado community.



© Felipe Schneider, 2015



Third Casa da Pimenta, built by the EIBC-Pamáali school community, upper Rio Içana.
© Carolina Morelli, 2015



Fourth Casa da Pimenta, built by the Yamado community on the outskirts of São Gabriel da Cachoeira. Marcelo Salazar/JSA, 2015

NETWORK OF CASAS DA PIMENTA BANIWA (as of April 2018)



- The Casa in the community of Nazaré is under completion.
- The Casa of the Yamado community faces the town of S. Gabriel da Cachoeira.
- The remaining communities with Casas da Pimenta are more or less 400 km from S. Gabriel da Cachoeira by river.

MANAGEMENT

These Casas da Pimenta operate through an agreed co-management protocol, under the supervision of the community and the relevant regional community association, as well as ISA and Oibi. Operationally, they function under the direct responsibility of a pair of production managers, necessarily a man and a woman.

The Casas da Pimenta Baniwa also have an important role to play in consolidating indigenous management and entrepreneurship centres that build healthy and fair bridges between the communities and markets of high social and environmental added value. They serve as a focus for bringing together and supporting a network of indigenous youth, women and managers, including non-indigenous partners, linked to important issues for the improvement of this product, such as the technological development of innovations that lead to the provision of other products of the traditional agricultural system of indigenous women of the Rio Negro identified in the business plan as having potential (LIMA, 2010).

THE PROJECT AND ITS PARTNERS

The project is implemented through a long-term partnership involving ISA (Instituto Socioambiental), Instituto ATÁ and Oibi (Indigenous Organization of the Içana Basin) and is managed through a Co-Management Agreement with several grassroots associations, schools and communities of the Içana River. From 2014, with the expansion phase of the Casas da Pimenta Network, it was also supported by the Instituto Bacuri and the Tides Foundation.

By the end of 2015 the project had about 30 commercial partners throughout the states of Amazonas, Roraima, Mato Grosso, Minas Gerais, Rio de Janeiro, São Paulo and the Federal District. ([HTTP://WWW.FACEBOOK.COM/PIMENTABANIWA](http://www.facebook.com/pimentabaniwa)). By then, along the Rio Içana there were 20 communities and 262 families benefiting from the income and experience generated by the production and sale of ten thousand jars of pepper.

The production, sales, and market value of Baniwa Pepper have been steadily increasing as new Casas da Pimenta are inaugurated and new business partners are involved. In 2015 the first export operation took place, to Amsterdam, opening the way for the inclusion of new international partners.

GLOSSARY

AATTI pepper

AWAKARONAI/YOOPINAI spirits of the forest

IIVI salt

JIQUITAIA tupi term for a powdered mixture of salt and pepper

KALIDZAMAI ritual blessing of food during the initiation of young men into adulthood

MITSIEDE (moquéim) – small cooking platform for drying or smoking foods such as fish and peppers

ÑAPIRIKOLI mythical hero of the Baniwa people

WALIMANAI the human population currently inhabiting the world

NOTE REGARDING THE SPELLING AND PRONUNCIATION OF WORDS IN BANIWA

(adapted from Ramirez, 2001)

Henri Ramirez considers there to be three super-dialects in what he terms the Baniwa-Koripako language. These are the northern dialect, spoken by the Curripaco people of the upper Alto Rio Içana, the Rio Guainia and the headwaters of the Rio Cuairi; the central dialect, associated with the Içana (above the Assunção mission as far as the community of Matapi) and its Aiari and Cuairi tributaries; and the southern dialect, spoken in Victorino, on the Rio Guainia on the Venezuelan side of the border. Variations between the dialects do not impede mutual understanding by their speakers. In the present study we highlight in italics above all those terms of the central dialect associated with the clans of the Dzawinai, Hoohodene and Waliperedakenai phratries.

The Baniwa alphabet comprises 20 phonemes – 4 vowels (a e i o) and 16 consonants (b d h k l m n ñ p r t s dz tt y w):

- **a** and **i** are pronounced as in Portuguese;

- **e** pronunciation between the closed 'e' of 'ele' and the open 'e' of 'ela';

- **o** pronunciation between 'u' (as in 'sucó' in Portuguese) and closed (as in 'poço');

- **oo** is pronounced 'o';

- **p**, **t**, **k**, **b**, **d**, **m** and **n** are pronounced as in Portuguese. However, **t** and **d** are never palatal; in other words, 'ti' 'te' 'di' e 'de' should not be pronounced like 'tchi' 'tche' 'dji' ou 'dje' in Portuguese;

- **tt** has a special pronunciation in Baniwa-Koripako; the sound is a type of *r* pronounced with the blade of the tongue firmly touching the upper teeth; compare the pronunciation of ita 'canoe' (as in Portuguese) and *itta* 'smoke' or *aatti* 'pepper' (with tongue on teeth);

- **ts** is pronounced as in English "cats";

- **dz** is pronounced as in English "beds";

- **l** pronunciation in between 'l' and 'r' in Portuguese;

- **r** is pronounced as 'j' in Portuguese, but in retroflex with the tip of the tongue bent backwards;

- **hw** and **y** are pronounced as in the English 'hat', 'water' and 'yes';

- **ñ** as in the Portuguese 'nh' or the Spanish 'ñ';

- **x** pronounced as the 'ch' in the Portuguese 'chapéu'.

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ISBN 978-85-8226-067-E



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ALEX ATALA / INSTITUTO ATÁ

We chefs can do a lot to protect our biomes and cultures. A good example is Baniwa pepper. The result of an amazing project with the Baniwa community, this pepper bowled me over, along with other chefs across the world.

In addition to being extremely versatile, it is delicious, hot, but not long-lasting. It not only enhances the flavour of ingredients, but also offers a unique taste sensation.

Getting to know this pepper is more than a gastronomic experience, it is a cultural experience. By valuing it we are valuing one of the richest cultures of our country, albeit one almost unknown to us Brazilians – the culture of the Baniwa.

To discover and appreciate our flavours is to care for our biodiversity.

