

Borrachero

Thinking

Text, Interview and Photographs by Felipe Castelblanco in the framework of the SNSF research project Plants_Intelligence. This text appeared firstly under the title “Borrachero, ‘Teufelsatem’, Engelstrompete: Was möchte diese Pflanze von uns?”, in: exhibition magazine Unter Pflanzen, Museum Sinclair-Haus, edited by Kathrin Meyer and Yvonne Volkart, Bad Homburg 2025. ISBN 978-3-945674-15-4, 160 pages, approx. 75 illustrations, pp. 96-103.

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Borrachero Andaki. Tabanok, Putumtayo. 2023

“Para saber hay que caminar” (to know, one must walk) told me the Indigenous Quillacina Mamita (female-governor) Patricia Jojoa in 2019. For many Indigenous communities of the Colombian Andean-Amazon, the *sabedores* (those who know) are medicine men and women who walk the path of sacred plants across physical and spiritual territories. For more than five years I have walked through the Andean Páramos (a type of alpine tundra-like ecosystem), crisscrossing the fertile valleys of Sibundoy in Southern Colombia accompanied by Indigenous *sabedores* (healers, co-investigators and media creators). This place is known as the gates of the Amazon and our goal has been to build a bridge between knowledge systems—and sensibilities—to manifest other modes of nature-human relations. To do so, we use aesthetic tools like film and participatory art to render visible biocultural aspects of the territory, as well as to acknowledge the vast vegetal community

that welcomes you in, often in their own terms.

Layers upon layers of volcanic ashes from the nearby Galeras Volcano have provided important minerals to the soils of the Sibundoy Valley. It is a place where plants usually thrive and where centuries of human encounters with medicinal plants have harnessed the power of some of the most potent plant chemistry in the world. During a journey Sibundoy in 1942, the American ethnobotanist Richard Evan Schultes was met by a rare plant belonging to the Solanaceae family. With narrower leaves, resembling a knife and the corolla almost divided into separate petals united only towards their bases¹, Schultes named it *Methysticodendron Amesianum* [the Mutant Sleep Tree]². Although he later reassigned it as variety of *Brugmansia*, the *Methysticodendron Amesianum* hid behind a cautionary tale. Indigenous medicine men and women know it as Borrachero Culebra [the Intoxicant of the Snake] and Schultes took a special interest in its local uses. After finding it in the medicinal garden of the Kamënstá Taita (shaman) Salvador Chindoy, for whom the plant was too sacred and too dangerous for strangers to approach it. Nonetheless, Schultes wrote about the Borrachero in a paper titled *A New Narcotic Genus from the Amazon Slope of the Colombian Andes* in 1955:

“Methysticodendron Amesianum, known only from the Valley of Sibundoy, is there employed by the Inga and Kamsá Indians in their witchcraft. Its use in each tribe is restricted to several witch-doctors, and these practitioners grow the plant with special care in the neighborhood of their huts (...) When in cultivation, the plant is apparently the hereditary property of certain families, for as much as the sorcerers pass it on to the eldest son together with the secrets attending its use (...) it would appear from what information I have been able to glean that Methysticodendron Amesianum, which the Indians classify together with other intoxicating solana-

ceous plants similarly used, is by far the strongest of all the narcotics of the region, surpassing in danger and potency even Datura arborea³.”

Until today, Borrachero Culebra is one of the many varieties of powerful *Brugmansia* plants cultivated by the Kamënstá, Inga, Quillacinga, Siona and other Indigenous peoples across the Andean-Amazon region. In 1745, the French scientists and explorer Le Condamine related the use of *Brugmansia* by the Omagua tribes in the Brazilian Amazon basin but without a doubt, Schultes' focus on the Borrachero Culebra helped to galvanize scientific interest in the chemical compounds present in the plant.

Brugmansias contains Tropane alkaloids, with hyoscyamine and scopolamine being the most abun-



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dant. Atropine and scopolamine many uses in Western medicine. In larger doses, Scopolamine causes hallucinations and is concentrated in the plant's stem, leaves, and flowers. In this regard, Schultes remarks:

no doubt that the active principles are solanaceous alkaloids of the tropane series. This intoxication, resorted to by the witch-doctors only for very important or difficult cases of divination, prophecy, or therapy, usually lasts for two full days and sometimes may persist for four - with a long period of complete lack of consciousness (...) Smaller doses of the drug are administered to boys who are studying witchcraft. Certain of the medicine-men's secrets apparently are imparted only when the novice is "under the protection" of this narcotic⁴.

Nearly 70 years since the publication Schultes' paper came out, The Borrachero Culebra continues to intrigue scientists and younger Indigenous followers as a symbol of cultural revival. The streets of Sibundoy are vibrant with murals of Brugmansia flowers and cherished trees planted in tiny front yards amidst the town's rustic architecture.

However, beyond the confines of Sibundoy, Brugmansias are regarded with apprehension due to its significant psychoactive properties, which are frequently subject to abuse. Urban legends link this plant to the phenomenon of scopolamine-induced intoxication, referred to as *Burundanga* in Colombia and colloquially named "The Devil's Breath" in Europe⁵. These substances are exploited by criminals to exert control over unsuspecting victims, who subsequently find themselves compliant to the perpetrators' demands and later possess no recollection of the events. Appreciated as both, a weapon concealed in a sweet smell and a beautiful flower for which the plant is also called Angle's Trumpet, or as potent medicine used to deal with the most difficult problems and by the most experienced shamans, the Brugmansia manages to



Brugmansia Suaveloense. Tabanok, Putumtayo 2024

lure you in. A question I cannot shake off but only to meander through my research-driven artistic exploration is: what does this plant want from us, porous people whose brain synopsis is so vulnerable to its doings?

Notes

- 1 Schultes, Richard Evans. (1955). A New Narcotic Genus from the Amazon Slope of the Colombian Andes. Botanical Museum Leaflets, Harvard University, 17(1), 1--11. <https://doi.org/10.5962/p.168494>
- 2 Davis, Wade. One River (p. 240). Simon & Schuster. NY 1996.
- 3 Ibid 1.
- 4 Ibid 1.
- 5 Cristina García, Burundanga La droga Capaz de Anular tu Voluntad [Burundanga The Drug Capable of Overriding your Will] <https://psicologiyamente.com/drogas/burundanga-droga-voluntad>



Borrachero Andaki. UVIF Photography.
Chagra of Taita Miguel Chicunque. Tabanok, Putumtayo 2023

Seeking various entry-points to the question, I present the following fragments from a conversation between two parallel trajectories of knowledge and sensibilities toward *Burgmansia*. On the one hand is Ayënan Quinchoa Juajibioy, a Kamënstä Media creator and land-defender living in Putumayo, Colombia. On the other hand, is Dr. Federico Roda, a Geneticist from National University and Max Plank Institute's Affiliate Laboratory in Bogotá. The three of us met online in October 2024 to discuss their daily involvement with the plant:

FC: Ayënan, what is the role of Borracheros plants for the Kamënstä?

AY: One story that stands out is about my grandfather. He told us how the Borrachero trees were used as boundary markers, a traditional method to safeguard allotments, which helped both the family living on the land, as well as their neighbors. It's a practice that shows respect for the land and the communities around it.

FC: So, what you are saying is that Borracheros are used as a type of landmark but quite opposite to how fences or boundary lines work in western land-use. Can you expand on this?

AY: Yes, instead of separating, planted Borrachero trees denote a sort of meeting point. The plant in this case symbolizes the existence of a group of people who have reached an agreement that involves two things, one is to preserve the place, and the other is

mutual respect between neighbors. For us, it is not necessary to build a stone wall to demarcate a property, instead the Borrachero is that symbol that refers to an agreement between two parties.

FC: Can you talk about how you see plants bringing people together?

AY: Plants have a unique way of bringing people together and doing the real work, while my role is simply to help facilitate their being. That's where the power of medicinal plants comes in. In other words, plants seed you. Therefore, to me, it's essential to share their hidden messages that I carry within, wherever I go.

FC: Federico, what role do humans play in how plants have changed their being, and vice versa?

Federico Roda FR: In numerous cases, plants generate compounds to engage with their surroundings. They do this to protect themselves, for instance, from insects that seek to consume them or from pathogens that infect them. In my laboratory, our focus is on comprehending how plants synthesize these compounds and how humans, by utilizing and cultivating these plants, have altered the plant's ability to produce specific substances and their physical form. By cultivating and consuming plants, humans have also mediated their relationship with the environment through a plant's own chemistry.

FC: How do *Brugmansias* relate to your work?

FR: We focus on the Solanaceae family, particularly the Borrachero or floripondio. These plants are closely linked to humans, having been utilized throughout South America to the point that they only exist alongside human presence. They are what we call cultivar. *Brugmansia*'s reproductive capacities are rather deficient, perhaps the toxicity of their fruit and seeds impedes animals to eat them and spread them. We think they are extinct in what would have been their original habitats and therefore, they are only present alongside hu-

mans. And therefore, the relationship between Brugmansia and humans is very strong and is particularly strong in southern Colombia. Ancestral peoples have used these plants for a long time and have greatly changed their morphology and chemistry.

FC: So, is there a correlation in how the chemistry of plants evolves to how our body also evolves? Which one is the driving factor in the co-evolution?

FR: Through its chemistry, the plant is basically telling an insect, a mammal or an organism that wants to eat it not to do so because it will be poisoned, it will feel very bad, or it will die. So, when you have a herbivore attacking the plants, they produce substances to defend themselves, but the herbivore in turn looks for ways to detoxify. And sometimes the herbivore is repelled by the plant, but sometimes it indeed seeks the effect of the toxin. It is as if the animal or insect seeks to get drunk.

FC: And how does this happen in regard to humans?

FR: When humans begin to use the plant, it is a different thing, because humans develop a predilection for those substances that in principle the plant uses to keep the insects away, as in the case of chili peppers. Although not always the hottest ones are the most appetizing for humans. And with medicinal plants it is a bit similar. It is not always the ones with the highest amount of toxins that are sought, but the ones with tolerable levels for humans.

As for the Brugmansia, something important is that it has several uses in the modern as well as in traditional medicine, and they are not always psychoactive uses. Although the psychoactive use is also very important since it changes the symbology and the way of thinking of societies, but Brugmansia also has

many topical uses, and different varieties are used for different things.

FC: One striking characteristic of Brugmansias is their smell. For some people this is a pleasant fragrance but for others it's totally disturbing. So, what would be the role of smell in this acts of self-defense of the plant, if one could say that?

FR: The subject of aroma is a very fascinating subject in Brugmansia. I said that these substances were defensive and in general almost all medicinal and psychoactive substances are derived from those that plants use to defend themselves. But there is also quite a lot of evidence that there are organisms that like to, in a way, "get high" so to speak. So, sometimes in flowers substances are produced that can be narcotic or toxic, although there is still debate. I do not know how much evidence there is, but I believe that there are some, at least in Borracheros, that in the nectar and pollen they have can have a narcotic effect with their polarizers. The subject of smell is different, because there we are talking about volatile compounds and so far, it has not been demonstrated that there are narcotics in them. Although the popular knowledge is that if one, for example, falls asleep under them or gets too close to them, it can have psychotic effects. And in my opinion, this might be because one inhales pollen when coming close to the flower.

FC: So, in thinking about evolution what should be the role of the Brugmansia flower?

FR: It's a very important question and maybe the answer is because humans like them. In fact, the flowers don't help the reproduction of the plant since most pollinators it attracts are not very effective. Flies for example, can spend their whole life cycle feeding from the same flower. So, if Brugmansia didn't have the flowers, people wouldn't propagate them. That's a possible answer.

Ayënan AY: Going back to Felipe's question, I

am curious to know if you have been able to research about the color of the different types of Borracheros?

FR: Of course, it's not something I researched directly, but I'll explain a little bit about colors. Colors in general are for protection, for example sometimes from sunlight, but in the specific case of flowers it is to attract pollinators. They come from those compounds that we call secondary metabolic compounds, and in chemistry, depending on the type of compounds the pigments are generated. Pigments have a property which is to reflect certain light waves and consequently certain colors. There are two main types of molecules in plants that produce color, one is called anthocyanins and the other is called carotenoids.

AY: And is there a connection between the color and the toxicity levels or the Borrachero?

FR: In general terms, the color of flowers is not related to the concentration of alkaloids but the species with higher alkaloid contents, *Brugmansia sanguinea*, traditionally known "guamuco", has red flowers. However, the color has made *Brugmansia* varieties attractive for humans, and in places like Germany or the US people have managed to breed the plant to get impressive colors.

FC: For me it is very interesting to hear that in Sibundoy, people plant Borracheros to also deter intruders to the homes and people with bad intentions. How do you explain the capacity of this plant of sensing people?

FR: About how the plant feels the presence of people, I would say that plants always feel the environment, they feel everything. What happens is that they don't have a central nervous system and they don't do it through a central nervous system but through small multiple sensors. Sensors that tell them what the environment is like.

FC: And what would be power of the Borrachero tree?

AY: In the stories told by our grandparents and our parents, they make analogies or have explanations

in their stories. For example, I remember a very special Taita, Taita Domingo, who was a good counselor, and he used to tell me stories about the Borrachero. For example, he told me about how to alter the course of water in the high mountains. And how through that plant one could sustain the protection of sacred places, to know other medicinal plants, to know plants of the mountain and that maybe normally when one goes through the mountain one cannot observe them but having a good management of these plants of power one can get to know a little more about other plants.

Perhaps what the Borrachero is allowing us to do, and the path it is guiding you Felipe, Federico and myself, is through these processes of research, of understanding, but also of strengthening our focus, like it does with the Kamënstá people, but hopefully with people all over the world too. Amid all these processes of ecological devastation, art is one of the tools that allows us to give a voice to the plants, and above all to make it clear that the Borrachero is a guardian plant. We want to show, according to the thinking, the cosmovision and the philosophy of our people, that in some way what this plant is telling us is that we must protect the territory in any way we can.

FR: Ayënan, I am very curious to hear your reactions about the work we do in the lab, and in general of scientific research in connection to plants. What do you have to say about this?

AY: Sure. I'm always emphasizing how critical science is in uncovering what's truly valuable for indigenous communities. These discoveries aren't just academic; they lead to discussions that help balance our communities' needs with the interests of multinational companies. I see science as a way to strengthen our ideas—it's like planting a seed. That seed takes root, grows, and eventually blossoms, symbolizing how new ideas and debates can take shape.

FC: And where are the plants in this? Is science

providing equitable roles to non-human actors such as plants in their methodologies?

AY: I think it's crucial that we start to recognize the rights of plants, ensuring they're treated fairly. They play a key role in conflict resolution for people and hold even broader significance in today's world.

In fact, I often talk about the importance of recognizing plant rights in our legal systems. For example, I recently found out that Switzerland has a successful law on this, and I'd welcome similar initiatives within our territories. These laws not only protect plants but also reflect a respect that's been part of our traditions for generations.

Therefore, the role of the institutions and of the scientific community is to understand this underlying process of Indigenous peoples, and to work together with the science, to complement and make the pertinent clarifications so that mistakes are not made, such as those that are made with other plants. For example, marijuana, coca, even ayahuasca itself. Because Borrachero is a plant that is quite powerful, and the important thing is to have clear and transparent intentions with it. To think well and to do well. So, I think that the plant gives us that thinking power, guiding us to think well so that things go well.

Basel, October 31st. 2024



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