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A Plum Story? Early Encounters and Colonial Views of the Safu in Central Africa, Seventeenth-Twentieth Centuries

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ABSTRACT

The diversity of edible species originating in Africa is considerable, but the history of their use and domestication remains largely neglected, despite existing historical records. This essay aims to explore attitudes towards safu (*Pachylobus edulis*), a Central African fruit that defies Western categories. Based on more than one hundred archival documents, this study examines the history of the safu and the tree that produces it as seen by Europeans (German, English, Belgian, Spanish, French, Italian, Portuguese, Swedish, etc.) present in Central Africa. The documentation collected on safus and safu trees reflects not only local views of the species but also the broader European projects pursued on the continent and the vision of African foodways. Indeed, their valuation is symptomatic of food encounters and hierarchies during colonial settlement. More broadly, it reveals how subsistence and agriculture were viewed in the region: the ubiquity of this fruit tree around villages, as often reported, contrasts sharply with the historical narrative of the absence of African agriculture in the tropics. Finally, it shows how colonial enterprises, despite hindered dispersal and missed opportunities, circulated the species in different parts of the planet.

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Introduction

But the species best known and most useful to the natives of all the countries bordering the Gulf of Guinea or living in the interior basin of the Congo, is *P. edulis* G. Don, well known by its indigenous names of *Nsafou* (bacongo), or *Atanga* (Gabonese) or *Assa* (pahouin), which is also used to designate the edible fruits of this species. It is perhaps the only tree-like plant of African origin really cultivated by the natives of the Congo Basin and all of Gabon, and this cultivation must have originated at a very remote time.

Auguste Chevalier, *La Forêt et les Bois du Gabon* (Paris: A. Challamel, 1916), 109.

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All Europeans who have lived in Gabon are familiar with the fruit called *Safou* or *Nsafu*, which is sold in the markets from Christmas until March or April (in the interior of the Congo, there are later varieties) and for most of the year in Cameroon and the Congo, fruit much appreciated by all Bantu tribes, but not disdained by Whites either. It is widely used in these regions of Africa, in a large part of the Congo basin, these fruits are eaten cooked in water, seasoned with a little salt; the Europeans who land for the first time in the colony do not think much of them, but with time they become fond of them. We ourselves often ate them in the past and we have unforgettable memories of them. *Safou* has a sui generis flavor; there are improved varieties, each more pleasant than the last. In truth, this fruit tree would deserve to be cultivated in other tropical countries.

> Auguste Chevalier, "Quelques Arbres fruitiers et oléagineux peu connus de l'Afrique tropicale: Canaris et Safous," *Revue internationale de botanique appliquée et d'agriculture tropicale* 29, no. 321 (1949): 390.

A "guiding spirit" of plant science in the French Empire in the early twentieth century, Auguste Chevalier's extensive fieldwork and studies across the African continent facilitated a deeper understanding of Africa's diverse flora.[1] He also held views on African agriculture that reflected the broader scientific and colonial attitudes of his time, as he sought, among other things, to identify plant species that could be economically valuable to colonizers. His abovementioned depiction of the tree *Pachylobus edulis* G. Don highlights the species as an important and widely valued fruit among the native populations in Central Africa and notes its deep-rooted local cultivation history, emphasizing its cultural and economic significance. He also suggests a broader potential for its cultivation and appreciation beyond its native contexts. He targets a fruit that, still today, is used as a symbol, whether by the Cameroonian novelist Patrice Nganang in *La saison des prunes* [*When the Plums Are Ripe*], or by the artist Soñ Gweha in their work *Safous and Other Fruits of the Future*, where they seek to "address [the] more-than-human entanglements, trade routes, and colonial histories."[2] Following this thread, Chevalier's views of the *Nsafou* already opened up some of these questions of how foreigners, and colonial scientific observation (dis)regarded local crops, and more broadly, local ways of growing, cooking and eating.

In Central Africa, the view that Western sources rarely reported on African crops, agriculture, and cooking is still entrenched.[3] Thus, little attention has been paid to the history of encounters between West and Central African crops and Western travelers, except for species that are attractive to international trade as commodities. This is the case of *Coffea canephora*, originating from the highlands of the Democratic Republic of Congo and Angola, and transformed into a global commodity in Portuguese Africa.[4] Two fatty nuts also stand out: shea butter, a colonial commodity that has gradually been integrated into global production networks.[5] And the oil palm (*Elaeis guineensis*), first in terms of commercialized quantities: the most significant crop to have spread across continents, it was domesticated from the forests of Congo-Guinea into farms.[6] Then, under its processed form, it became part of industrial foodstuffs all over the world. Its global history was inaugurated by intertwined movements of scientific techniques (categorization of species diversity, propagation practices) and colonial domination.[7] The trajectory of its use is unique in that, by the turn of the twentieth century, some Central African species stood alongside it in terms of their importance to local populations. This

is the case, for example, of the cola nut tree (*Cola* spp.), whose history as a global commodity shaped by African traders and consumers is being uncovered.[8] However, another fruit tree species has so far escaped historical recontextualization: the safu tree.

To date, *P. edulis*, the safu tree is an important tree for the food security and economy of the people in its native region of the Congo Basin. Its fruit is oblong in shape, with a dark skin. Its cross-section resembles an avocado, with greenish pulp and a large seed. Usually roasted or boiled before consumption, the texture of its oily mesocarp is also quite similar to that of a ripe avocado, and it has a more or less pronounced acidic flavor. It belongs to the Burseraceae family, whose trees and shrubs are known for their fragrant resins, including frankincense (genus *Boswellia*) and myrrh (genus *Commiphora*). In the literature, safu is also found under other former names, the most common being *Dacryodes edulis* G. Don, *Canarium edule* Hook. F, and *Pachylobus saphu* Engl.[9] Its English names are numerous – bush butter tree, African pear tree, African plum tree – and its vernacular names throughout its range are innumerable: assa, atanga, nsafou, nsafu, osa, osafu, otanga, safou, safo, safu, safú, saphu, ube, zaffo, to name but a few. Confusion sometimes occurs with other species of the genus, especially *Pachylobus buettneri*, either because the vernacular names are close or even redundant, or because the fruits are quite similar in appearance. Another species of the Burseraceae family, the aiele tree (*Canarium schweinfurthii)*, has also been subject to such misidentification because of its compound leaves and its edible fruit with a rather similar taste.[10] Inaccuracies in the identification of these two species in the literature may also have affected the description of the distribution of the safu trees.

Its native range might be restricted to southern Nigeria or Cameroon; some authors proposed a wider distribution including the tropical forests of Gabon, Cameroon, Equatorial Guinea, Congo and Democratic Republic of Congo.[11] People's interest in safu trees led to their cultivation in villages, home gardens and cocoa or coffee agroforestry systems, or their protection when fields were opened for planting crops. This may have contributed to extending its range from Uganda to Sierra Leone.[12] Contrarily to other food species (*Elaeis guineensis*, *C. schweinfurthii*, or *Coula edulis* and *Raphia* spp.), few historical traces of the safu tree have been found in the archaeobotanical surveys carried out in West and Central Africa.[13] The endocarp of its fleshy seed is not well preserved and, until recently, had seldom been identified.[14] Some complementary information is provided by historical linguistic approaches, which use vocabulary shared between languages to infer shared history. In particular, the linguist Koen Bostoen has gathered evidence for the familiarity of early Bantu language communities with several native fruit tree species, including the oil palm, the aiele tree, and the safu tree.[15] The presence of ancestral "proto-Bantu" forms around 2500 years ago, which may have given rise to the Bantu names in use today, provides indirect evidence of the use of these plants by Bantu-speaking people prior to their dispersal into equatorial Central Africa. The Bantu nucleus being located in the Nigeria/Cameroon borderland, it could also reinforce the idea that safu trees originate in this area.

Morphological and genetic data are currently being used to better understand the cultivation and evolutionary history of the species.[16] However, we still lack a comprehensive examination of how the species has been viewed and made use of over the past centuries. Therefore, there is a need to uncover what archives can tell us about how safus have been perceived locally and through the Western gaze. From the

seventeenth to the twentieth centuries, European missionaries, explorers, botanists, anthropologists, and later colonial administrators, who traveled and lived in Central Africa were often part of networks that collected plant material and related knowledge for their home countries.[17] After colonization, they also aimed to transform African environments to better serve colonial economies. This study follows safus to see how an "untapped resource" can be helpful in unfolding the peculiarities of colonial perspectives on native crops. By examining historical, botanical, and anthropological narratives across Central Africa, it first offers a perspective on how this indigenous food was perceived by Central Africans, albeit through the writings of foreigners, and then by colonists circulating in the region. Second, it provides a nuanced understanding of how its value was reassessed in a colonial context, contributing to broader discussions of the interplay between colonialism, botany, and local knowledge systems.

Meeting the Species: A Coveted Fruit, a Ubiquitous Tree

The first written accounts of the species can be found in the texts of early European travelers. It appeared for the first time in the diary of the Dutch merchant Peter van den Broecke, who visited the kingdom of Loango in southwestern Congo in 1611.[18] Among other food resources abundant in the area (bananas and plantains, yams, kola nuts, etc.), it was probably listed under the name *masseffes*, which, as suggested in a translation note, could correspond to the use of a Bantu plural prefix (ma-) and the Dutch plural suffix (–s).

Later in the century, a *zaffo* was depicted and named in a drawing by an unknown Capuchin artist (ca. 1652–1663) and composed as an atlas of the food and customs of the Kongo and Angola. Entitled *Of the People, Victuals, Customs, Animals, and Fruits of the Kingdoms of Africa penetrated to preach the Gospel by order of the Sacred Congregation for Propaganda Fide by Capuchins in the year of 1644. Congo, Angola, Dongo or Njinga, and Embaca*, it depicted several species of useful plants (palms such as the raffia or the oil palm, tubers such as cassava, yam, or potato) and especially fruits (banana, pineapple, papaya), including the *zaffo* (See Figure 1).[19] Under the small frame of the tree, a few lines written in Italian add that: "*Zaffo* . . . they cook them like eggs under the embers. They are very tasty and purple. The leaves serve to make black dye with which they dye their cloth."[20]

At the end of the seventeenth century, it was described by Cavazzi, an Italian missionary who spent most of his career in Angola but stayed in the Congo around 1666–1667.[21] Given the brevity of his stays, the information he provided on the fauna and flora was probably compiled from the work of other missionaries. Among the species described, including the oil palm, the *zaffo* "is tall and large like our oaks, and produces a fruit not unlike some of our largest plumbs [sic], and of the colour of fire, which being roasted in hot embers, yield an aromatic scent, and are a very delightful strengthener of the brain."[22]This description applies to the safu, whether by mentioning its reddish color during ripening, its peculiar odor, or its cooking method.

Observations then multiplied, focusing not only the morphology of the fruit, but also on the links between safu trees and local populations. Various elements in early nineteenth-century texts contextualized the place of safu trees in their environment. Trees

Figure 1. On the left, drawing "of the people, victuals, customs, animals, and fruits of the kingdoms of Africa" made between 1652 and 1663 by Capuchin missionaries living in Central Africa (anonymous, ca. 1652-1663). Several plant species are described, including the *zaffo* (shown in the red box). On the right, close-up on the drawing and the written depiction. Image reproduced from Fromont, "Nature, Culture, and faith in Seventeenth-Century kongo and Angola: the parma watercolors texts," *MAVCOR journal* 6, n° 1 (2022).

were reported to be present near villages and to have a special place, as expressed in the early nineteenth century by the explorer James Hingston Tuckey crossing what is now the Democratic Republic of Congo:

> The Safu [...] which Mr. Lockhart understood from the natives was one of their most esteemed fruits, he observed to be very generally planted round the villages, especially from Embomma upwards, and to be carefully preserved from birds: its importance is perhaps increased from its ripening on October, a season when the general supply of vegetable food may be supposed to be scanty.[23]

Numerous later texts mentioned the abundance and ubiquity of safu trees, emphasizing their cultivation near villages and houses.[24] The tree has also been photographed surrounded by houses or in colonial plantations (see Figure 2). Safu trees were an inheritance ("[the] nsafu we eat, were left to us by the ancients"),

Figure 2. Pictures of safu trees. Their legends stated respectively "*Pachylobus* planted as a fetish tree in an Oubanghi village" and "safo-tree in the plantations of Equateurville. *Pachylobus saphu* Engl. bearing half-ripe fruit. On the left a mango tree, on the right a papaya and the former station building. The Congo is visible behind it." Pictures respectively from André Guillaumin, "Répartition géographique et biologie des Burséracées," *Revue Générale de Botanique* 20, no. 236 (1908): 321–27; and Franz Thonner, *Im Afrikanischen Urwald* (Berlin: Reimer, 1898).

that was appropriated, and further bequeathed.[25] The uniqueness of safu trees was especially conveyed by the superlatives used to describe them: it was "the most widespread indigenous fruit tree," the one that was found or grown everywhere.[26] It was also the perception of the species' cultivation status as being exceptional ("The munsansabu was the only fruit tree occasionally cultivated;" "the only tree-like plant of African origin really cultivated by the natives of the Congo Basin and all of Gabon") that distinguished it from other trees.[27] However, while the presence of safu trees was sometimes emphasized as an indication of former settlements, the same was true for the presence of other trees (cola tree, oil palm).[28]

These description of cultivated safu trees sometimes come with specific details of cultivation history, as when the explorer Du Chaillu was told by a Gabonese chief how "this [safu] tree and a large number of others had been planted by his grandfather."[29] Even more telling is the observation of Chevalier (1912), who admits that, to his knowledge, safu trees have never been seen in a spontaneous state.[30] This view was supported by Dendrophilus (a pseudonym) who commented that in Nigeria the "native pear … though, of course, originally a wild species, it is not often discoverable as such."[31] Overall, this cultivated status challenges general descriptions of the habits of Central African peoples as uninvolved in or incapable of agricultural activities. The colonizers' blindness to the diversity and flexibility of farming practices instead revealed their inability to see and recognize local agricultural systems that were illegible to them, their dichotomous perspective of farmers versus non-farmers, of narrowly defined agriculture versus subsistence strategies.[32] They may also have been willfully blind in order to lobby political

authorities for the commercial development of selected commodities, which, as will be seen, did not include safu trees.[33]

The singularity of the safu tree can be attributed in large part to its fruits, "the most noticeable and important part of the tree," which also garnered superlatives.[34] As quoted earlier, they were qualified as "one of [natives'] most esteemed fruits," a judgment that resonates with those present elsewhere in the region.[35] It was considered as "one of the most appreciated fruits" of the Island of Sao Tomé; in DRC, it generated "jubilation in the village" during harvest and one was one of the most "popular" and "highly valued fruits of the natives," being "their main food" during its peak season.[36] In French Equatorial Africa, it was "one of the most sought-after fruits," the one they "[preferred] to any other."[37] This consideration is also expressed in the protection of the tree through fetishes.[38]

All of these remarks on the popularity of the fruit expressed the perceptions of the indigenous people of the region. Out of 40 texts expressing local views on safus, only two were negative: one because the fruit was unknown to the interior populations of the French Congo encountered by the missionary Henri Trilles ("unfamiliar with it, it is considered a poison and naturally disdained as such"), the second was putative: ("[the] natives here do not seem to be very fond of its fruit").[39] Only Hédin (1930) observed a differentiated perception of safus between two Cameroonian cultural groups, Yaoundé and Bulu, the former appreciating the fruit more than the latter.[40] The commonness of safu trees and the popularity of their fruits also made it a commodity. The botanist Don noted in 1832 that great quantities of safus were sold in the island of São Tomé and Príncipe, when their customary presence in local markets was later mentioned in the Republic of Congo, in Nigeria and in the DRC.[41]

Digging Emic Perceptions of Safus Through Europeans Writings

First, some stories related to local oral traditions appeared in the writings of the European colonists. The safu tree is mentioned in a long passage of the Mɔngɔ epic, or Nsong'a Lianja Epic, named for the heroic siblings at the center of the story. The Mɔngɔ are an ethnic group living in the Central Congo Basin (now the Democratic Republic of Congo). There are several transcriptions of this text, including that of Boelaert (1949), who popularized it.[42] The passage about the safu tree begins when Lianjà is still in the womb of his mother, Mbombé, who eats a safu that has fallen from a bird's beak, saying it is the only food she can stand now, prompting her husband to fetch fruits for her, until he is murdered by the tree's owner. Lianjà is then miraculously born as an adult and sets out to avenge his father by killing the owner of the tree and cutting down the tree that caused his father's death. The fact that the first parts of the epic, of which this safu tree sequence is a part, were recorded earlier (1892) among other Bantu ethnic groups in the area indicates that the species must have been common and valuable enough to be used as an emblem in oral history.[43]

Accounts from local perspectives on the species were then given by correspondences in local languages, obtained in dictionaries. The first set of information concerned the fruit name being reemployed to characterize other related species. Such species can be indigenous: in Ọ̀ṇìchà Igbo, *ube* (the Igbo name for safu) is the root from which is named the fruit tree *C. schweinfurtii*, either by referring to it as *ùbe ōkpoko* (*òkpokō*: large bird) or

ùbe ò sà (*sà*: small squirrel).[44] Mirroring the way colonists named safu with terms underlining its resemblance to fruits available in Europe, safu was the root used to describe newly introduced fruits. Turpentine taste is what identified both safus and mangoes to colonist's tastebuds; it might be so as well for local populations, as mangoes were called safus of the European/white man (*nsafu mputu*; *n'safu a Putu*).[45] Following the same logic, but this time probably referring to their shared oily pulp, vernacular names for avocado were also derived from safu, for instance in Ẹkpẹyẹ language, *ùbé-íbèkè* stands for "ùbê of the White man;" as in Ònìchà Igbo *ubĕ-oyibo*; and in Efik *ébĕn makara*.[46]

Sufficiently detailed dictionaries were also telling about local perceptions at the varietal level. In the 1276 pages of Laman's Kikongo-French dictionary (1936), the word "nsafu" appeared 214 times.[47] At least 18 different varietal names were provided. For some of these names, Laman also specified their linguistic motivation: names were related to safu's morphology, as in "*nsiba zambambi*, name of a nsafu with a conical shape," "*ma-ndündu*, a kind of nsafu which is a bit pale and round;" *-ndündu* meaning albino or white man. They also identified some organoleptic characteristics, such as in *ma-nsà-mansà*, name of a sour safu (from *nsà*, sour), or *mi-màazî*, name of an oily safu (from *màazi*, fat). Sometimes, names didn't provide information on the fruit but rather on social aspects, as in *dïa bakâma* (from *kàma*, wife of a chief, queen), name of safu specifying who could consume the variety: "an ordinary woman cannot eat it." This allows us to build bridges with recent studies on nomenclatures, that appear to be just as rich in other regions and times.[48] Some later writings also contextualize the importance of such knowledge: in Janzen (1967), citing the names of safu trees in the context of land disputes allows one to show the links between an individual and a territory, leading the anthropologist to elaborate that "nsafu fruit stealing and tree cutting are recognized modes of political assertion and expansion."[49] Finally, Laman's dictionary encompassed different other aspects related to safus: the way they were cooked (boiled, grilled, or steamed in a leaf), some of their other uses (there is a word for the "bit of nsafu's kernel from which a fragment was taken" and the indication that it was used for a game), or their place in local societies ("*kùni* (N), pl. bi-, from *kùna*, property of fruit trees (nsafu), palm trees, banana trees"). Information provided in this dictionary, such as the mention of a season specific to safus, also matched earlier texts.[50]

Gathering all these Western views of safus/safu trees, one can ask whether they only contribute to a Eurocentric historiography of Africa. Much of this corpus, however, was built on cross-cultural interactions, as discussed in Fromont's book on images produced by Capuchin Franciscans in Kongo and Angola, by people who became familiar with local indigenous knowledge that ended up informing their work.[51] Although this was not always the case, for the texts in the studied corpus were not only by authors who had been travelers to Central Africa. Given the distance from the subject, there is much reusing and repeating of earlier texts. This is particularly true of atlases or "universal geographies," written from afar and describing the useful species of Central Africa, which were published at the beginning of the nineteenth century. First, however, it should be noted that even texts written by Europeans who had traveled to Central Africa are themselves reconstructions: Cavazzi's pioneering account had already incorporated various sources from the 1660s and 1670s.[52] It was then itself a source of inspiration for later writings: Paul Jakob Bruns used its wording, which in turn formed the basis for

the writings of Malte-Brun.[53] But the use of certain elements from earlier texts was not without distortion: Cavazzi's description in Balandier's text refers to the turpentine flavor of safu, which is not mentioned in the original text.[54] This makes sense, since turpentine as a medicinal panacea gained momentum later than the seventeenth century.[55] The same thing happened when Kolb cited Lockhart's abovementioned description, including adjectives ("sweet, vinous, balsamic") not present in the original text.[56] Sometimes the species is simply changed, as in Ronquillo's dictionary, where Lockhart's description of safu is incorrectly linked to the species *Poupartia borbonica*.[57] Finally, their travel narrative was also present in a 1877 novel by Jacolliot who used word for word the idea that the fruit was "all the more esteemed because it ripens at a time when other fruits are rare" but took the liberty of distorting the taste of the safu into that of grapes.[58]

Safus: (Un)fitting European Tastes – a Window into How Indigenous Foods Were Perceived by Colonizers

First of all, it should be noted that the texts used analogies to help the readers at home imagine the new species they were introduced to. Before mentioning the taste of safus, more than 50 texts presented safus by comparing them to other foods more familiar to

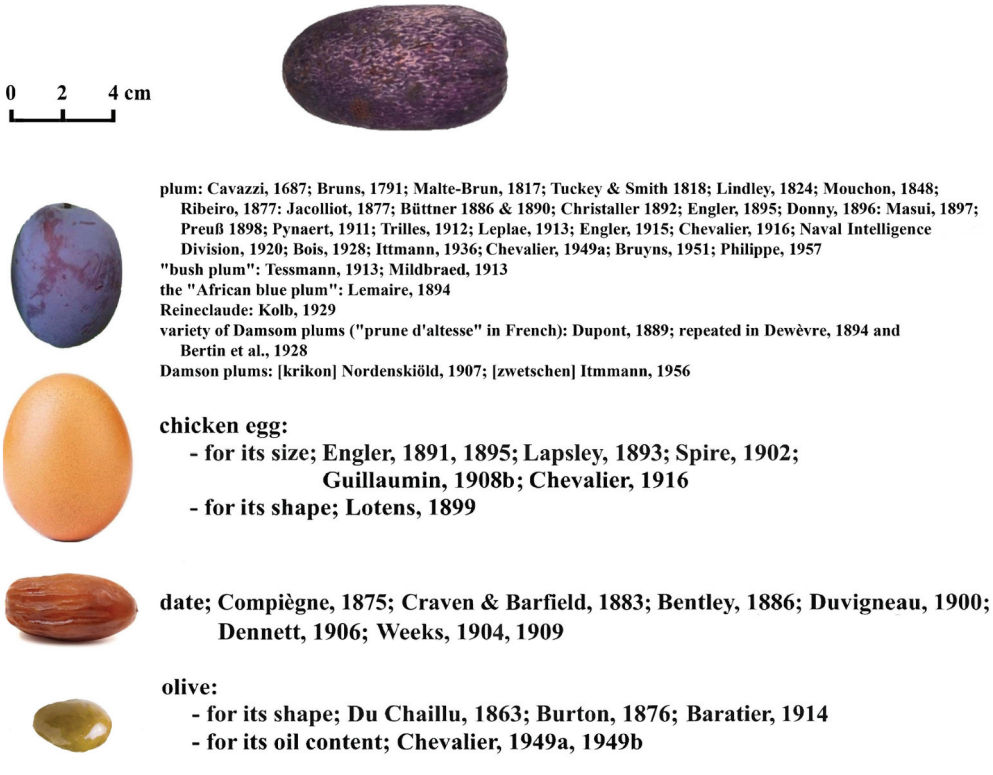

Figure 3. Foods used as comparisons by European writers to describe what safus looked like, ranked (from highest to lowest) by the number of citations. References not otherwise cited in this article are listed in ESM 1b.

Europeans (see Figure 3): the association with plums was by far the most common, with about two thirds of occurrences.

However, modern varieties are considerably larger than plums, damson style plums or even eggs.[59] To the extent that the domestication syndrome of trees involves an increase in fruit size, these dated sources could also be used as milestones in the evolution of safu morphology.[60]

Safus' aromas were not easily grasped by the tastebuds, and writings, of Europeans settled in Central Africa. The scientific name of the species, *edulis*, refers to its edibility; but what about its palatability? In the collection of materials, 60 texts described the peculiar taste of safu and, for some, its effect on foreigners. Among them, 33 expressed Europeans' appraisal of it; 11 other texts didn't elaborate on safu's taste but still mentioned European consumption (Table 1).

Almost forty percent of the texts referring to its taste mentioned its turpentine-like savor explicitly or implicitly – in the case of Chevalier, pointing to its similarity with mango's taste, and in that of Ittmann, calling the tree "the turpentine plum tree."[61] It is also noteworthy that turpentine is mentioned several times for the scent of safus specifically.[62] The second most common type of taste comprehended undefined meliorative adjectives: from pleasant, to tasty, delicious and even

Table 1. Categories of taste, and their appraisal by Europeans, ordered by the number of times the different categories were mentioned in the corpus. References not otherwise cited in this article are listed in ESM 1a.

Taste	European appraisal	Nb of ref.	References
Turpentine	absent	5	Dupont, 1889; Büttner, 1890; Chevalier, 1907; Ittmann, 1956; Balandier, 1965
	negative	2	Dewèvre, 1894; Sevestre, 1928
	ambivalent	3	Guillaumin, 1908, 1910; Bois, 1928
	habituation	5	Masui, 1894; Donny, 1896; Leal, 1915; Chevalier, 1949b; Bourdeaut, 1971
	positive	6	Lemaire, 1894; Courboin, 1904; Cambier, 1907; Van Overbergh and De Jonghe, 1907; Gossweiler, 1953; Raponda-Walker et Sillans, 1961
Undefined meliorative (pleasant, tasty, delicious, exquisite)	absent	8	Anonymous, ca. 1652-1663; Mouchon, 1848; Ribeiro, 1877; Engler, 1891, 1895; Trilles, 1912; Taylor, 1919; Cortesão, 1927
	habituation	1	Chevalier, 1949a
	positive	1	Baratier, 1914
Sourness	absent	6	Du Chaillu, 1863; [sorrel] Compiègne, 1875; Gachon, 1881 ; Lapsley, 1893; Laman, 1953; Soret, 1973
	ambivalent	2	Chevalier, 1916; Dendrophilus, 1933
	positive	2	Pogge, 1880; Duvigneau, 1900
Sweet-and-sourness, sweetness	absent	3	Jacolliot, 1877; Kolb, 1829; Bervoets and Lassance, 1959
	positive	1	Caillet, 1934
Bitterness	absent	1	Don, 1832
	habituation	1	Nogueira, 1893
	positive	1	Trilles, 1912 (raw fruit)
Blandness	habituation	2	Duvigneau, 1900; Dendrophilus, 1933
Undefined (strong, distinctive)	habituation	1	Winandy, 1898
	positive	1	Philippe, 1957
Saltiness (savory)	absent	2	Lapsley, 1893; Rich, 2007
No taste mentioned	absent	5	Spire, 1902; État indépendant du Congo, 1907; Pynaert, 1911; De Wildeman, 1934; Stoffels, 1951
	ambivalent	3	Weeks, 1909; Bertin, 1918; Busson, 1965
	positive	3	Masui, 1897; Chevalier, 1912; Gossweiler, 1950

exquisite, or exquisite and delicate.[63] Opinions clashed when authors categorized safus more precisely: the proposed flavors then ranged from sweetness to bitterness, passing through sweet-and-sourness and sourness. A short enumeration gives an idea of the diversity of flavors safus conveyed: sweet, vinous, balsamic; sweet-and-sour taste of flint; bitter and astringent.[64] The fruit's versatility is also striking when Rich, writing about food in colonial Gabon, mentioned its salty taste, or when Duvigneau, in the same book, reported that the flesh, first described as floury and aromatic, was rather unctuous, but bland.[65] This blandness was evoked by Dendrophilus as well, who compared safus with avocadoes in that they "[tasted] of nothing in particular and [were] only a peg on which to hang something else."[66] Avocado was also used as a reference to try to convey safu's peculiar taste in Chevalier.[67] Different other fruits appeared as comparison, such as mangoes or guavas.[68] Analogies could even reveal the fictionality of some material (and/or the distance between the author and his subject), as when Jacolliot stated in his 1877 novel that a safu was similar in taste to the grape.[69]

The strangeness or otherness of safu has led some writers to try to find its proper place in food classifications. This was rarely done with reference to local customs, except twice. Once when Trolli (1936) classified it neither in the fruit nor in the vegetable category, but as miscellaneous, along with caterpillars and kola nuts, among others.[70] For his part, Boone (1927) noted that "the natives [used nsafu] as both a fruit and a vegetable," although these categories may not have made sense locally.[71] But to Europeans, it seemed quite logical to categorize it as a vegetable.[72] Leafy vegetables were the most common, as it was compared to spinach, sorrel and lettuce.[73] Such categorization was probably due to its taste, mostly perceived as not sweet (see Table 1), and the need to cook it before eating. Cooked spinach and sorrel might share similarities with cooked safu flesh in terms of their green color and soft texture. In his botanical treatise, Unger (1857) classified it in the sweet and sour category, as a fruit containing "both starch and sugar in combination with plant acids."[74]

These diverse perceptions of safu's flavors also led to various appraisals of its palatability. Although consumption was mentioned by a few texts without further elaborating, the available literature was more often informative on how Europeans (dis)liked safus.[75] Hostile opinions were the least common, with only two texts that openly disparaged the fruit.[76] More texts (8), whether targeting safu's taste or Europeans' opinion of it, were ambivalent. Turpentine's taste in particular inspired mixed feelings: safu was said to be consumed "in spite of, or rather because of, its strange turpentine flavor;" it was "much sought after despite and perhaps because of its turpentine taste."[77] The fruit popularity among Europeans was at times ambiguously stated as well. In those cases, support was either formulated in a reserved way, restricted in its scope, or subtly depreciated.[78]

For some authors, however, such phrases were chosen to express something more complimentary: that the appreciation of safus required habituation. Ten references evoked the idea that a "little practice" or a "little training" were needed for "the palate [to] get used."[79] The disconcerting or even unpleasant fruit taste "[did] not usually please Europeans the first time," who "[did] not think much of [it]."[80] But "after a while" and "by tasting it several times," Europeans "[became] fond of [it]" and "[ended] up eating it with pleasure."[81] The learning process could also take another shape, through finding specific ways of cooking safus to enjoy them. This could be achieved by macerating them

in vinegar, preparing them like olives in alkaline solutions, to be eaten as pickles, seasoning them with salt, salt and pepper, or sweetening them to be eaten as a dessert.[82] These cooking methods differed from those of the indigenous people, who were reported to roast them in ashes, boil them or steam them.[83]

In summary, the fruit elicited attraction rather than aversion, which must be understood in the wider context of imperial expansion. Indeed, along with its hierarchies of race, class, and gender, colonialism brought with it a hierarchy of food; an observation made in the Americas, Asia or Africa.[84] Although acquiring, preparing and consuming food were "the overriding concern of colonists' daily lives, and the basis for their relations with the [colonized]," a finding also detailed in Fabian's book on European exploration of Central Africa, studies of coloniality in the region hardly detail the sensory encounters between local foods and Westerners.[85] In the general picture, the latter associated indigenous foods with unhealthiness and backwardness, assuming their own cultural and culinary superiority.[86] Regarding Africa, opinions were even harsher during the colonial period, as it was widely believed that the continent was devoid of fruit trees prior to European intervention.[87] The corpus collected around the safu trees is revealing in this sense, as when Baeyens claimed to have found no indigenous fruits except safu, whose indigenous status had already been questioned by Büttner.[88] This exceptionality was reflected in a guide to Congolese crops published by the Belgian Department of Finance, where in the section dedicated to fruits, safu was the only indigenous species.[89] When indigenous fruits and fruit trees were not made invisible, they were minimized or despised, such as in the early description of a Capuchin friar in Kongo in 1648, reporting that "there are other fruits of the country, but not very delightful," in McCulloch's Dictionary published in 1841, where "[the] fruits of tropical Africa, in comparison with those of Europe, Asia, the Asiatic islands or America, are few in number and of indifferent quality," or in Reade's Savage Africa, which dismissed the "variety of fruits which had long native names, curious shapes, and all of them very nasty tastes."[90] As late as the mid-twentieth century, for Stoffels, the unsavoriness of African fruits was indeed the historical justification for the introduction of so many tropical fruit trees from elsewhere.[91] The bad taste of African fruits was also sometimes seen as a consequence of the (allegedly) careless way in which fruit trees were grown: "[b]ecause the native fruits of Africa are not cultivated, they almost all have a harsh, wild, or very sour taste."[92]

In the collected texts, the first mentions of European evaluations of safu were in 1863–1880, at a time when plant resources were already being identified and cataloged through the lens of colonial botany, i.e. for economic gain.[93] Europeans, then, did not appear to change their evaluation of this fruit over time, unlike other fruits such as durian, which have become increasingly associated with, and fixed as, eliciting disgust.[94] But attraction was sometimes overcome by Europeanizing its consumption, or after a period of habituation. Such habituation had been reported for many other exotic foods. For fruits, it was best expressed by d'Enjoy: writing about French colonization in Southeast Asia, he elaborated that "guava has a pungent flavor, to which one gradually becomes accustomed and which ultimately is quite pleasant. This education of one's taste is necessary for all Europeans; almost all tropical fruits have flavors very different from those we are used to in our European fruits, which are perhaps a bit bland."[95] In Africa, similar remarks are common, whether when Grandpré speaks of palm wine, which "at first seems unpleasant to foreigners, but you get used to it and end up liking it" or when Guiral reversed his

opinion on edible insects.[96] Such taste education also applies to prepared dishes, as Jonathan Robins showed in his article on colonial cuisine in British Nigeria, where he collected reactions to palm-oil chop.[97] Now, as with other ethnobotanical works that have spanned centuries, one avenue for further research on safus would be to look at how it is cooked today and what contemporary meanings it holds in African cuisine.[98]

Tracking Imperial Projects Relating to Safus and Safu Trees

Arranged chronologically and thematically, the corpus of 129 texts referring to the safu also provides insight into European colonial interests in Africa (see Figure 4; ESM 2 – all safu-related text extracts are provided in the original language and their English translation). The greatest attention to this plant seems to occur at a pivotal

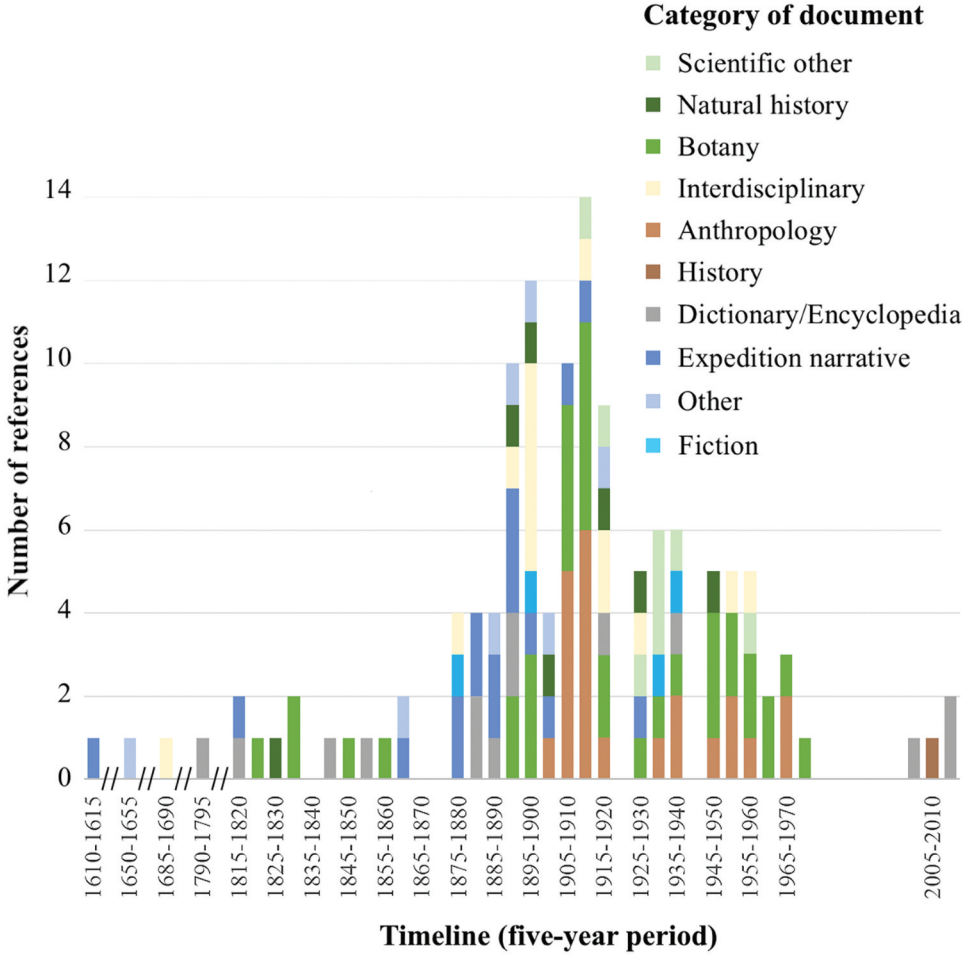

Figure 4. Written sources used in the article, organized chronologically by five-year intervals (time skips are notified with//) and by document type. The category *botany* comprises ethnobotany and ethnopharmacology; the *interdisciplinary* one groups comprehensive reports or descriptive history. The category *other* includes travel guidebooks, and exhibition catalogs. See ESM2 for more information on each reference.

time: the late nineteenth and early twentieth centuries marked a turning point in European colonization of Africa, most notably highlighted by the Berlin Conference of 1884–1885. This redirection of geopolitical attention toward the African continent, called African tropism by Pascal Clerc in reference to Jean-Michel Vasquez's work, was characterized by a significant increase in European interventions and territorial claims within Africa.[99] As Europe, with an ideologically based belief in European hegemony and a supposedly benevolent civilizing mission, sought access to new markets and sources of raw materials, the economy also shifted from the export of slaves to the misleadingly called "legitimate trade" – or, according to Dale Tomich, the "second slavery."[100]

Indeed, the last decades of the nineteenth century saw the development of plantation agriculture in the area: from palm oil and coffee plantations developed by missionaries in Gabon in the 1870s, to state-owned coffee, cocoa and tobacco plantations in the Free Congo State.[101] Colonial crops, in the vocabulary of the time, thus referred to profitable export crops to the virtual exclusion of subsistence food crops. Those latter remained for the most part peripheral, although at the turn of the twentieth century, the focus also gradually shifted toward the examination and extension of native agriculture.[102] Native trees, such as safu trees, could thus be found in colonial plantations, where they were mentioned as an interesting shade species (see Figure 2), a role it still holds today.[103] Talking about the experimental station of Victoria in Cameroon, where German colonists pursued agronomic work, Preuß and Volkens mentioned for instance: "the tree native to Cameroon, *Pachylobus edulis* G. Don, the Saphu is now cultivated in larger numbers for the purpose of shading cocoa, coffee, cardamom, etc."[104] As it was a useful species, its felling was also prohibited in some (colonial) forest laws.[105] The fact that Preuß was the one signaling this enhanced cultivation of *P. edulis* as a shade species is interesting, as his career is also illustrative of the colonial botanical imperatives and of the networks on which they thrived. For instance, he visited South America in 1898–1899, during which he collected a significant quantity of seeds, plants, and data, with a particular emphasis on cocoa, rubber, and textile plants.[106] As for the development of colonial botany, agricultural research stations such as the one established in Victoria became increasingly common as well from the 1870s to the early twentieth century, and the observations gathered from them, along with those from numerous exploration missions, contributed significantly to the development of new knowledge that was then widely disseminated throughout Europe.[107]

At the height of this interest, from 1875 to 1920, safus thus appeared many times in expedition narratives, in the journals of the German or Belgian colonial societies (e.g. articles published by the *Deutsches Kolonialblatt*, and the *Bulletin de la Société d'études coloniales*, respectively), in books related to the colonial enterprise, such as Duvigneau's medical guide for officials and colonists working in Equatorial Africa, or even in fictional stories that capitalized on the general interest in tropical Africa. Safus gave a local flavor to Jacolliot's *L'Afrique mystérieuse* (1877) or to Winandy's 1898 feuilleton published in the periodical Revue de Belgique (1869–1914).[108] Additionnally, they appeared in Caillet's serial published in l'Etoile de l'A.E.F. (1927–1939), one of the first weekly newspapers to be distributed in Brazzaville.[109] Sevestre used them in an adventure novel.[110] Safus are thus used as emblems to authenticate the Central African setting,

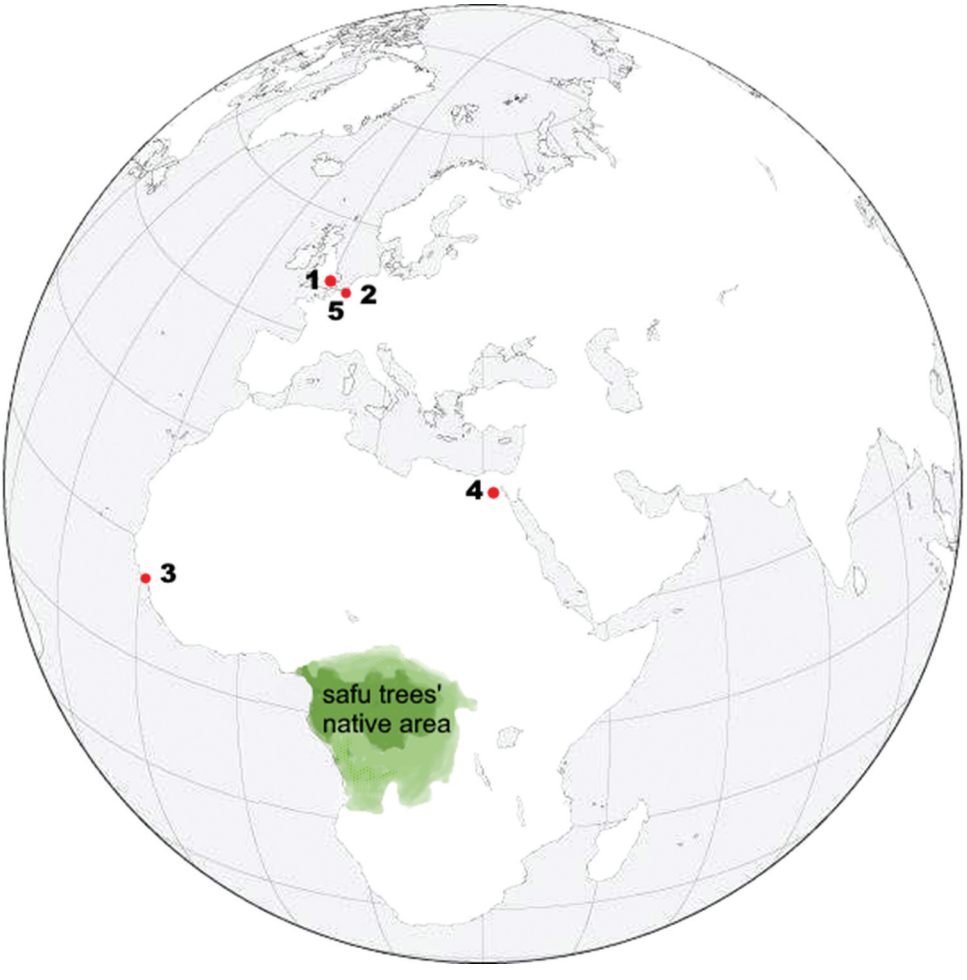

Figure 5. Map of fruit/tree circulation outside Central Africa. 1 and 2: presence of safu fruits at World's Fairs; 3: tree introduced in Conakry, Guinea, before 1905; 4: tree introduced in El Saff, Egypt; 5: tentative trial of tree introduction in the botanical garden of Brussels. See the text for corresponding references.

even if their description was sometimes imprecise (in Winandy, the taste of safou is strong) or fanciful (Jacolliot compares it to that of grapes; Caillet to gunflint).

Safus also circulated out of Central Africa (see Figure 5). They appeared in the catalog of at least two world expositions that took place in Europe in the second half of the nineteenth century: the one in London in 1862, where they are mentioned in a Portuguese catalog as coming from Sao Tomé and Principe, and the one in Antwerp in 1885, where they must have been present on the Portuguese as well as Belgian stands.[111] Europeans were equally interested in fruit properties other than its consumption as food. In São Tomé and Príncipe, Nogueira emphasized the very fine oil produced by safus, which he expected to become an important export.[112]

The attention the species drew raised the question of its transplantation from Central Africa to other countries. As an almost imperial duty, colonial horticultural societies

indeed had the prospect of acclimating new useful trees to places they did not belong, which motivated them to list candidate species. In 1824, Lindley compiled a list of tropical fruits that might be worthy of cultivation in England, in response to a request from the Horticultural Society of London.[113] In the catalog of various edible fruits from subtropical countries all over the world that "may possibly be brought to maturity in England," four Congolese fruits appeared; among them was the safu, based on Tuckey and Smith's expedition (1818), when the fruit had not been seen but was said to be appreciated locally. Relocation initiatives were taken on more compatible grounds, after failures to introduce it to botanical gardens in Europe.[114] In 1905, Chevalier evoked its presence in the Guinean capital, Conakry (now the Republic of Guinea), as well as its potential as a substitute for olive trees.[115] In 1960, Bircher cited safu tree as a plant species introduced from Victoria, Cameroon, to her Middle Egypt Botanic Station, located in El Saff (70 kms South of Cairo).[116] It also appeared among the introduced plants arriving at the USA Office of Foreign Seed and Plant Introduction.[117]

The tree spread in a final way: across the Atlantic Ocean through language. In Suriname, the *Guarea gomma* tree (family: Meliaceae) with compound leaves and round red fruits was reported to be called *safékíta*, *safeka*, or *saafu kali*.[118] It could also be the root of a name used in Cuba to refer to fruits in general, in a word derived from Bantu/Congo vocabulary: *machafio*, present in Cabrera's Congo/Spanish dictionary.[119] As in what is probably the first mention of the fruit in the abovementioned 1611 travelogue (*masseffes*), *machafio* might be constructed with the prefix "ma," indicating the plural, followed by a distorted version of *nsafu*.[120]

As described above, contrarily to oil palm plantations that thrived under colonial rule, only marginal attempts aimed at safus' expansion. The ubiquity of safu trees, as previously discussed, was frequently contradicted by the lack of any reference to them in numerous travel accounts and even in guidebooks exclusively devoted to food in the French colonies, such as Richet's publication from 1933.[121] In the end, what dominated for some Europeans, as expressed here respectively by Pynaert and Chevalier, was the sense of a missed opportunity: "although very interesting, [safu] is almost totally ignored. It is known only to travelers and residents know about it; books on useful plants in tropical countries rarely mention it." It "is regrettable that this excellent fruit tree has not yet been cultivated and selected by Europeans, and that it does not exist in our tropical gardens."[122] This rhetoric of an ignored species or a "lost crop" has somehow persisted, with its inclusion in the scope of the African neglected and underutilized species – a designation that signals its position as an unprioritized food in development agendas targeting management and marketability of commodity crops.[123] The social factors limiting its spread to other regions of Africa or other continents will be discussed in some further contribution; from a biological standpoint, it may have been hindered by its difficult propagation, whether by seed or vegetatively, and its lack of seed germination capacity.[124] This is despite the fact that safu trees would have been a good candidate species for transplantation at the time of the forced migration of Africans to the Americas.

Conclusions

As the legacies of colonial imperialism continue to influence the status and value attached to resources, it is imperative to recognize and characterize them through historical engagement.[125] By examining the historical records that mention the safu, this study has

shown that the species was repeatedly described, often with thorough details about either the environment of the safu trees or the context of safu consumption. While it highlights the extent to which European perceptions of the safu have left their mark, whether in the fruit's main name in English (African plum) or its common name in Cameroon and other francophone countries – prunes – it also seeks to uncover African agency. Not only did they domesticate wild safu trees for their highly prized fruit long before colonization, but the names of fruit species introduced into the region have reciprocally referred to the safu. As a contribution to the historiography of food and nutrition in colonial Central Africa, this case study helps to reevaluate two narratives: that authors would seldom provide information on the cultivation of fruit trees, as Juhé-Beaulaton has noted in precolonial West Africa, and that in historical sources "African foods were deemed to be lacking and underdeveloped."[126] It also shows how at the (African) turn of the nineteenth century, as colonial agricultural policies were focused on adapting global commodities rather than expanding local crops, the safu tree was made peripheral—a shade-providing species only. Research shall now be devoted to understanding its current flows across the continents, no longer driven by Europeans, but following diasporic routes of consumption.

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Notes

1. Bonneuil, "Auguste Chevalier, savant colonial." Translations from French to English are my own.
2. Nganang, *La Saison des prunes*; Hessler, *Sex Ecologies*.
3. Natermann, *Pursuing Whiteness in the Colonies*.
4. Gago, "Robusta Empire."

5. Wardell et al., "Shea (*Vitellaria paradoxa* C. F. Gaertn.) – a Peripheral Empire Commodity in French West Africa, 1894–1960"; Wardell et al., "Shea (*Vitellaria paradoxa* C. F. Gaertn.) – the Emergence of Global Production Networks in Burkina Faso, 1960–2021."
6. Robins, *Oil Palm*.
7. Rudge, "Cultivating 'Care'."
8. George, "The Kola Nut in the Atlantic World"; Abaka, "'Red Gold.'"
9. Don, *A General History of the Dichlamydeous Plants*; Hooker and Bentham, *Flora Nigritiana*; Engler, *Die Natürlichen Pflanzenfamilien*.
10. Holland, "The Eben Tree of Old Calabar (*Pachylobus edulis*, G. Don)."
11. Vivien and Faure, *Arbres des forêts denses d'Afrique centrale*; Keay, *Trees of Nigeria*; Aubréville, *Flore du Gabon*.
12. Troupin, "Les Burseraceae du Congo Belge et du Ruanda-Urundi."
13. Neumann et al., "First Farmers in the Central African Rainforest"; Oslisly, White, and Saulieu, "Anthropisation des paysages d'Afrique centrale atlantique depuis 5000 ans."
14. Gestrich et al., "Evidence of an Eleventh-Century AD *Cola Nitida* Trade into the Middle Niger Region."
15. Bostoen, "Wild Trees in the Subsistence Economy of Early Bantu Speech Communities."
16. Rimlinger, "Histoire évolutive de l'arbre fruitier *Dacryodes edulis*;" Mboujda et al., "Domestication Syndrome in *Dacryodes edulis* (Burseraceae)."
17. Schiebinger and Swan, *Colonial Botany*; Batsaki, Cahalan, and Tchikine, *The Botany of Empire in the Long Eighteenth Century*; Bonneuil, "Le Muséum national d'histoire naturelle et l'expansion coloniale de la Troisième République (1870–1914)."
18. La Fleur, *Pieter van Den Broecke's Journal of Voyages*.
19. Anonymous, *Of the People, Victuals, Customs, Animals, and Fruits of the Kingdoms of Africa*.
20. Italian to English translation and historical recontextualization: Fromont, "Nature, Culture, and Faith in Seventeenth-Century Kongo and Angola."
21. Thornton, "New Light on Cavazzi's Seventeenth-Century Description of Kongo."
22. English translation: Sale et al., *The Modern Part of an Universal History*.
23. Tuckey and Smith, *Narrative of an Expedition to Explore the River Zaire*.
24. Du Chaillu, *Voyages et aventures dans l'Afrique équatoriale*; Bentley, "Notes of Journey to Stanley Pool;" Lotens, *L'état indépendant du Congo*; Guillaumin, "Révision Des Burséracées du Gabon et du Congo Français"; Guillaumin, *Les produits utiles des burséracées*; Chevalier, "Enumération des plantes cultivées par les Indigènes en Afrique tropicale;" Bois, *Les plantes alimentaires chez tous les peuples et à travers les âges*; De Wildeman, *Documents pour l'étude de l'alimentation végétale de l'indigène du Congo belge*; Leplae, *L'agriculture du Congo belge*; Costermans, "Le district du Stanley-Pool"; Heepe, Atangana, and Messi, *Jaunde-Texte von Karl Atangana und Paul Messi*; Gossweiler, *Contribuição para o estudo da flora do Maiombe português*; Durand and Schinz, *Études sur la flore de l'État indépendant du Congo*; Naval Intelligence Division, *A Manual of Belgian Congo*.
25. Van Wing, "Bakongo Incantations and Prayers"; Le Testu, *Notes sur les coutumes bapounou*; Dendrophilus, "The Native Pear"; Soret, *Les Kongo nord-occidentaux*; Weeks, *Among Congo Cannibals*; Weeks, *Among the Primitive Bakongo*; Laman, *The Kongo*; Deleval, *Les tribus Kavati Du Mayombe*.
26. Fuchs, "Le Mayombe;" Unger, *Botanische Streifzüge auf dem Gebiete der Culturgeschichte*.
27. Citations respectively from Weeks, "Anthropological Notes on the Bangala of the Upper Congo River"; Chevalier, *La forêt et les bois du Gabon*.
28. Le Testu, *Notes sur les coutumes bapounou*.
29. Du Chaillu, *Voyages et aventures dans l'Afrique équatoriale*.
30. Chevalier, "Enumération des plantes cultivées par les Indigènes en Afrique tropicale."
31. Dendrophilus, "The Native Pear."
32. de Luna, *Collecting Food, Cultivating People*.
33. Juhé-Beaulaton and Roussel, "Tropiques d'abondance ou tropiques menacées."
34. Dendrophilus, "The Native Pear."

35. Tuckey and Smith, *Narrative of an Expedition to Explore the River Zaire*.
36. Citations respectively from Nogueira, *A ilha de S. Thomé*; Laman, *The Kongo*; Dewèvre, "Les Plantes Utiles Du Congo."
37. Citations respectively from Bertin et al., "Okoumé (partie 2)"; Mouchon, *Dictionnaire de bromatologie végétale exotique*.
38. Büttner, *Reisen im Kongolande*; Deleval, *Les tribus Kavati du Mayombe*; Weeks, *Among the Primitive Bakongo*.
39. Citations respectively from Trilles, "Mille lieues dans l'inconnu ; à travers le pays Fang, de la côte aux rives du Djah;" Dewèvre, "Une excursion botanique."
40. Hédin, *Étude sur la forêt et les bois du Cameroun sous mandat français*.
41. Don, *A General History of the Dichlamydeous Plants*; Chevalier, "Enumération des plantes cultivées par les Indigènes en Afrique tropicale"; Dendrophilus, "The Native Pear"; Bruyns, *De sociaal-economische ontwikkeling van de Bakongo*.
42. Boelaert, "Nsong'a Lianja."
43. Vinck, "Nsong'a Lianja, épopée exclusivement Mongo ?"
44. Williamson, *Dictionary of Ọ̀nìchà Igbo*.
45. Daeleman and Pauwels, "Notes d'ethnobotanique ntándu (Kongo)"; Lotens, *L'état indépendant du Congo*.
46. Blench, *A Dictionary of Ẹ̀kpẹ̀yẹ̀, an Igboid Language of Southern Nigeria*; Williamson, *Dictionary of Ọ̀nìchà Igbo*; Dalziel, *The Useful Plants of West Tropical Africa*.
47. Laman, *Dictionnaire kikongo-français*.
48. Lemoine et al., "Untangling African Plum Tree Local Nomenclature."
49. Janzen, "Elemental Categories, Symbols, and Ideas of Association in Kongo-Manianga Society."
50. Weeks, *Among the Primitive Bakongo*; Bentley, *Dictionary and Grammar of the Kongo Language*.
51. Fromont, *Images on a Mission in Early Modern Kongo and Angola*; Augusto, "Knowledge Free and 'Unfree'"; De Lima, "Raffinement du maigre et gourmandises exotiques"; Kananoja, *Healing Knowledge in Atlantic Africa Medical Encounters, 1500–1850*.
52. Thornton, "New Light on Cavazzi's Seventeenth-Century Description of Kongo."
53. Bruns, *Versuch einer systematischen Erdbeschreibung*; Malte-Brun, *Précis de la géographie universelle*.
54. Balandier, *La vie quotidienne au royaume de Kongo du XVIe au XVIIIe siècle*.
55. Cirillo, "Oil of Turpentine."
56. Kolb, *Bromatologie*; Tuckey and Smith, *Narrative of an Expedition to Explore the River Zaire*.
57. Ronquillo, *Diccionario de Materia Mercantil, Industrial y Agrícola*.
58. Jacolliot, *L'Afrique mystérieuse*.
59. Makueti et al., "Morphological Traits of Control-Pollinated Fruits in African Plum (*Dacryodes edulis* [G. Don] Lam.) Using Multivariate Statistical Techniques."
60. Fuller, "Long and Attenuated."
61. Chevalier, *L'Afrique centrale française*; Ittmann, "Rezepte aus dem Waldland von Kamerun."
62. Engler, *Die pflanzenwelt Ost-Afrikas und der nachbargebiete*; Engler, *Die Vegetation der Erde*; Gürke, "Botanik;" Dalziel, *The Useful Plants of West Tropical Africa*; Busson, *Plantes alimentaires de l'Ouest africain*.
63. "Pleasant" was mentioned in Trilles, *Le totémisme chez les Fân*; Taylor, *Inventory of Seeds and Plants Imported*; Chevalier, "Quelques arbres fruitiers et oléagineux peu connus de l'Afrique tropicale"; Engler, *Die pflanzenwelt Ost-Afrikas und der nachbargebiete*; Anonymous, *Of the People, Victuals, Customs, Animals, and Fruits of the Kingdoms of Africa*; Ribeiro, *A provincia de S. Thomé e Príncipe e suas dependencias*; Baratier, *Au Congo*; Mouchon, *Dictionnaire de bromatologie végétale exotique*; Cortesão, "Monografias das colónias portuguesas: S. Tomé e Principe."

64. "Sweet, vinous, balsamic" was present in Kolb, *Bromatologie*; "sweet-and-sour taste of flint" in Caillet, "Cadette impériale"; "bitter and astringent" in Don, *A General History of the Dichlamydeous Plants*.
65. Rich, *A Workman Is Worthy of His Meat*; Duvigneau, *Guide médical au Congo et dans l'Afrique équatoriale*.
66. Dendrophilus, "The Native Pear."
67. Chevalier, "Quelques arbres fruitiers et oléagineux peu connus de l'Afrique tropicale."
68. The comparison with mangoes is present in Chevalier, *L'Afrique centrale française*; Bourdeaut, "Le safoutier (*Pachylobus edulis*)"; Sevestre, *Les Pygmées*.
69. Jacolliot, *L'Afrique mystérieuse*.
70. Trolli, "L'Alimentation chez les travailleurs indigènes."
71. Boone, *Congo as I Saw It*.
72. Duvigneau, *Guide médical au Congo et dans l'Afrique équatoriale*; Lemaire, *Congo et Belgique*; Pynaert, "Le safo au Congo."
73. The comparison with spinach is present in Masui, *D'Anvers à Banzyville*; that with sorrel in Compiègne, *L'Afrique équatoriale* and Lotens, *L'état indépendant du Congo*; and that with lettuce in Lapsley, *Life and Letters of Samuel Norvell Lapsley*.
74. Unger, *Botanische Streifzüge auf dem Gebiete der Culturgeschichte*.
75. Spire, "Contribution à l'étude de la flore du Congo français"; Pynaert, "Le safo au Congo"; De Wildeman, *Documents pour l'étude de l'alimentation végétale de l'indigène du Congo belge*; Stoffels, "Les grandes étapes de l'agriculture au Congo belge."
76. Dewèvre, "Les plantes utiles du Congo;" Sevestre, *Les Pygmées*.
77. Citations respectively from Lemaire, *Congo et Belgique* and Courboin, "Les populations de l'Alima : Congo Français."
78. For the moderate support, wordings used were such as "Europeans appreciate[d] them somewhat" in Guillaumin, *Les produits utiles des Burséracées*; "quite an edible dish" in Dendrophilus, "The Native Pear"; "not disdained by Whites either" in Chevalier, "Quelques arbres fruitiers et oléagineux peu connus de l'Afrique tropicale"; for the restriction in scope, it is described as "much appreciated by some white people" in Weeks, "Anthropological Notes on the Bangala of the Upper Congo River"; for subtle depreciation, it was said to be "appreciated even by Europeans" in Chevalier, *La forêt et les bois du Gabon* and Bertin, *Les bois du Gabon*.
79. Citations respectively from Masui, *D'Anvers à Banzyville*.; Winandy, "En caravane." And Donny, *Manuel du voyageur et du résident au Congo*.
80. Citation from Chevalier, "Quelques arbres fruitiers et oléagineux peu connus de l'Afrique tropicale." The adjectives used (disconcerting and unpleasant) appear respectively in Bourdeaut, "Le safoutier (*Pachylobus edulis*)." and Leal, "Memorias d'Africa."
81. Citations respectively from Nogueira, *A ilha de S. Thomé*; Bourdeaut, "Le safoutier (*Pachylobus edulis*)"; Chevalier, "Quelques arbres fruitiers et oléagineux peu connus de l'Afrique tropicale"; Duvigneau, *Guide médical au Congo et dans l'Afrique équatoriale*. and Leal, "Memorias d'Africa."
82. Chevalier, "Quelques arbres fruitiers et oléagineux peu connus de l'Afrique tropicale;" Philippe, "Essais de reproduction végétative du 'nsafu.;'" État indépendant du Congo, *Culture des plantes vivrières, potagères et fruitières*; Baratier, *Au Congo*; Lotens, *L'état indépendant du Congo*; Donny, *Manuel du voyageur et du résident au Congo*; Pynaert, "Le Safo au Congo;" État indépendant du Congo, *Culture des plantes vivrières, potagères et fruitières*.

    As for the consumption as dessert, Lemaire in *Congo et Belgique* mentioned that this was done only by the English.
83. Laman, *Dictionnaire kikongo-français*; État indépendant du Congo, *Culture des plantes vivrières, potagères et fruitières*.

84. For just some of the extensive scholarship on such hierarchies, see Robins, "Colonial Cuisine;" Earle, "'If You Eat Their Food … ;'" Winchcombe, "Eating America;" Leong-Salobir, *Food Culture in Colonial Asia*.
85. Citation from O'Connor, "Beyond 'Exotic Groceries.'" and reference to Fabian, *Out of Our Minds*.
86. Pilcher, *Food in World History*.
87. Duvall, "On the Origin of the Tree *Spondias mombin* in Africa."
88. Baeyens, "Les Lesa;" Büttner, "Einige Ergebnisse meiner Reise in Westafrika 1884–1886."
89. État indépendant du Congo, *Culture des plantes vivrières, potagères et fruitières*.
90. Romano, *Breve relatione del successo della missione de Frati minori Capuccini . . . al regno del Congo. . .*; McCulloch, *A Dictionary, Geographical, Statistical, and Historical*; Reade, *Savage Africa*.
91. Stoffels, "Les Grandes étapes de l'agriculture au Congo belge."
92. Leplae, *L'agriculture du Congo belge*.
93. European valuations become clear in Du Chaillu, *Voyages et aventures dans l'Afrique équatoriale* and Pogge, *Im Reiche des Muata Jamwo*.
94. As described in Mariani, "Smelling the hell's pit" and Montanari, "The Stinky King." The reputation of durian as a distasteful fruit increased throughout the nineteenth century.
95. d'Enjoy, *La Colonisation de la Cochin-Chine (manuel du colon)*; translated in Peters, *Appetites and Aspirations in Vietnam*.
96. Grandpré, *Voyage a la côte occidentale d'Afrique, fait dans les années 1786 et 1787*; Guiral, *Le Congo français du Gabon à Brazzaville*, reported in Walters, "The Land Chief's Embers."
97. Robins, "Colonial Cuisine."
98. See for instance the work of Teixidor-Toneu, Kjesrud, and Kool, "Sweetness beyond Desserts." unfolding the history of Angelica in Northern Europe, combining medieval sources with ethnobotanical and archaeobotanical literature on perceptions of the sweetness of the species, its uses, and how these perceptions evolved over the centuries.
99. Clerc, "Les espaces du géographique." Vasquez, "La cartographie missionnaire en Afrique."
100. Tomich and Lovejoy, *The Atlantic and Africa*.
101. Tornezy, "Les travaux et les jours de la Mission Sainte-Marie du Gabon;" Leplae, *La crise agricole coloniale et les phases du développement de l'agriculture dans le Congo central*.
102. Bonneuil and Kleiche, *Du jardin d'essais colonial à la station expérimentale*; Daviron, "Mobilizing Labour in African Agriculture."
103. Preuß, "Schattenbäume in Victoria (Kamerun)"; Silva, *São Tomé e Príncipe e a cultura do café*; Sonwa et al., "Plant Diversity Management in Cocoa Agroforestry Systems in West and Central Africa."
104. Preuß and Volkens, "Kulturerfolge des Versuchsgartens von Victoria in Kamerun." For an historical introduction of the station, see Bederman, "Plantation Agriculture in Victoria Division, West Cameroon."
105. Fabre, *Le commerce et l'exploitation des bois du Gabon*.
106. Tourte, *Histoire de la Recherche agricole en Afrique tropicale francophone, Livre IV*.
107. Tilley, *Africa as a Living Laboratory*.
108. Jacolliot, *L'Afrique mystérieuse*; Winandy, "En caravane."
109. Caillet, "Cadette impériale"; Nkili, "L'émergence de la littérature africaine."
110. Sevestre, *Les Pygmées*.
111. Portugal : International Exhibition of 1862, *Portugal*; Sociedade de Geografia de Lisboa, *Exposition coloniale du Portugal*; Lemaire, *Congo et Belgique*.
112. Nogueira, *A ilha de S. Thomé*.
113. Lindley, "A sketch of the principal tropical fruits which are likely to be worth cultivating in England for the dessert."
114. The species (*Canarium Safu*) is listed among those sent to the Laeken colonial garden in 1911, in De Wildeman, *J. Gillet, S. J. et le jardin d'essais de Kisantu (1866–1893–1943)*.
115. Chevalier, "Les remplaçants de l'olivier pour les pays tropicaux."

116. Bircher, *Gardens of the Hesperides*.
117. Taylor, *Inventory of Seeds and Plants Imported*.
118. van Andel et al., "Local Plant Names Reveal That Enslaved Africans Recognized Substantial Parts of the New World Flora."
119. Cabrera, *Vocabulario congo*.
120. La Fleur, *Pieter van Den Broecke's Journal of Voyages*; Guerra, *Lydia Cabrera y la bantuidad lingüística*.
121. Richet, *L'alimentation indigène dans les colonies françaises, protectorats et territoires sous mandat*.
122. Pynaert, "Le safo au Congo.;" Chevalier, "Les remplaçants de l'olivier pour les pays tropicaux."
123. National Research Council, *Lost Crops of Africa III*; Padulosi, Thompson, and Rudebjer, *Fighting Poverty, Hunger and Malnutrition*; Termote, McMullin, and Prasad, "From Discovery to Food System Diversification."
124. État indépendant du Congo, *Culture des plantes vivrières, potagères et fruitières*; Kengue, Ngatchou, and IRA, "Problème de conservation du pouvoir germinatif."
125. Roessler et al., "The Cash Crop Revolution."
126. Juhé-Beaulaton, "Les paysages végétaux de la Côte des Esclaves"; Natermann, *Pursuing Whiteness in the Colonies*.

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