

An aerial photograph of a tropical beach. The top half of the image shows turquoise ocean water with white foam from breaking waves. Below the water is a sandy beach. Numerous palm trees with vibrant green fronds are scattered across the beach. Some palm fronds are lying on the sand. The bottom right corner of the image shows a patch of green grass or low-lying vegetation.

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Special Issue:

**Global more-than-human
histories of palms**

edited by

**Sophie Chao, Pilar Egüez Guevara
and Jayson Maurice Porter**

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Sophie Chao, Pilar Egúez Guevara and Jayson Maurice Porter

Introduction. Palm Readings: More-Than-Human Tropical Histories



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The idea that tree rings help us understand past environments and places has captured the imagination of millions. Even people unfamiliar with dendrochronology, the scientific method of dating tree rings, are vaguely aware that tree rings offer historical insights. This association between trees and rings is often so strong that people imagine that all trees grow with rings. However, most tree rings are a result of a wintering period, when the vascular cambium (growth tissue) of a tree goes dormant and stops growing. Therefore, without winters, most trees do not grow rings consistently enough to serve as a proxy of climate data (Pérez-Ángel and Porter 2024). In more tropical climates, rainy seasons and droughts can leave behind tree rings, but they can occur less frequently and more invariably than a full winter freeze. In lieu of a dendrochronology of tropical trees, the authors in this Special Issue wonder: can palms – the quintessential tropical tree – offer a lens to imagine other environmental histories?

Areaceae is the only family in the palm order with over 190 genera and 2,450 known species. Fossil records indicate that the first species of *Arecales* began to emerge around eighty million years ago; by 56 million years ago, palms were abundant and widespread in the tropics. Being old and prominent parts of the vegetation in their habitats, makes palms critical species for understanding past tropical climates. They might not have winter rings, but many palm species live long lives with ages that can be determined by the length of time needed to produce a leaf and counting leaf scars (Kress 2025). Similar to tree rings caused by droughts and heavy rains, however, the rate of leaf development shifts with environmental factors and is not a constant proxy like a winter.

Yet palms remain full of surprises. Early twentieth-century botanists considered palms the ‘big game’ of the plant world, because they have long captivated scholars and writers, but researchers are still learning about palms and the environments they both reflect and generate (Bailey 1933). At the largest scale, palms connect countless tropical localities to the entire globe. At the micro scale, the aeration of palms’ breathing roots help make liveable worlds in waterlogged soils (Lloréns 2021). They are also keystone resources for pollinators. Botanists used to

think that palms were only wind-pollinated but we are now constantly surprised by the number of animals connected to palm ecologies. We now know that beetles, flies and bees can pollinate certain species and coconut palms (*Cocos nucifera*) are pollinated by both wind and insects. Bats are principal pollinators of *Calyptranthes* in Costa Rica, African elephants disperse the seeds of wild date palms (*Phoenix reclinata*) and black bears disperse the seeds of several palms in Florida (Uhl and Dransfield 1987).

What else can we learn from reading palms and their relations to diverse places and species? What else can we learn from palms by listening to the communities who have lived with them for generations? For years, the climatic study of tree rings has ignored palms even though they grow in tropical regions experiencing the fastest rates of climate change. Recent collaborative investigations between tropical scientists and Afro-Colombian communities in the Chocó region are beginning to address this oversight. Together, community-driven research is starting to unravel the mysterious factors shaping tree ring formation in this rainy corner of the world (Giraldo et al. 2022, Pérez-Ángel and Porter 2024). In inspiration and in community, we as editors of this issue are humbled by the belief that we still have much to learn from palms so long as we listen to as many perspectives as possible, especially those rooted in the tropics, beyond the temperate gaze of dendrochronological normativity.

* * *

Endemic to the tropics and subtropics, yet found in virtually every type of habitat from rainforests to swamps and deserts, palms are well-known and widely cultivated plant species. Whether one thinks of dates, coconuts, bananas, oil palms, sugar palms or sago palms, this diverse collective of perennial flowering plants, known within secular scientific taxonomies as the *Arecaceae* family, has sustained human subsistence, everyday material life and social, cultural and religious systems for millennia, while also contributing significantly to ecosystemic and biodiversity processes. At the same time, palm species' polyvalent functions have rendered them central to trajectories of trans-national and trans-continental trade, to colonial-driven market expansions, to racialised divisions of labour and human difference with plantation regimes, and to the global capillaries of contemporary agriculture-based

economies and supply chains. Many palm products find their way into the lives of everyday consumers today as ingredients in countless different commodities – sago pearls, coconut water, protein bars and the soaps, cosmetics and detergents that palm oil is a key component of, among others.

This special issue brings together early-career, mid-career and senior researchers from across the Global North and South, as well as practitioners including activists, artists and landscape architects, to consider palms through their global and more-than-human histories. Specifically, we ask: how do human and non-human entities (biotic and abiotic), relations and values coalesce within the bodies, careers and trajectories of palms as native species, cultivated cash crops and global commodities? What can a multi-disciplinary investigation of palm-human entanglements in the past reveal about these entanglements in the present, and for the future? How does thinking across disparate spatialities and temporalities help us uncover partial connections between palm lifeways and deathways in an age of ecological unmaking?

In addressing these and other key questions, this Special Issue contributes to multi-disciplinary perspectives on plants by drawing on our collective expertise in fields including science and technology studies, environmental history, multispecies studies, plant humanities, environmental anthropology, environmental science and biology. We bring to current conversations around plant-human futures a distinctly decolonial and practice-based approach, centring the voices of early and mid-career and senior researchers as well as practitioners from world-regions where palm species flourish. Many of our contributors are actively involved in grassroots or community-level advocacy, creative artistic practice, ecological revitalisation and knowledge preservation efforts, in support of sustainable, just and inclusive multispecies futures. The regional scope of the Special Issue contributions, which encompass the Americas, Southeast Asia and Africa, further offers a truly global perspective on more-than-human palm histories beyond Euro- and American-centric histories and their conjured peripheries.

In what follows, we identify and examine four cross-cutting themes that emerge across the contributions to this Special Issue. ‘Mobilities, Diasporas and Translocal Ecologies’ explores how palms move across places, empires, trade routes and migratory worlds, generating new ecological relations, cultural meanings and forms of belonging that

exceed fixed territorial boundaries. 'Palms as World-Makers Beyond Commodity Histories' examines palms not simply as economic resources or traded goods, but as active participants in shaping social worlds, ecological processes, sensory experiences, and more-than-human forms of life in the tropics. 'Enclosure, Extraction and Unequal Care' attends to the ways palm landscapes are transformed through regimes of accumulation, dispossession and environmental exploitation, while highlighting the gendered and uneven distribution of labour, maintenance, responsibility and care across human and more-than-human communities. 'Archives, Memory and Environmental Futures' considers how histories of palms are remembered, documented, narrated and contested across diverse archives and embodied forms of memory, and how these engagements open possibilities for imagining alternative environmental futures. We close by reflecting on plurality: in the variety of forms within the Special Issue, in the diverse positionalities represented by its contributors and in the invitation that this collection offers for future interdisciplinary and more-than-human research on palm-people relations, anchored in critical and creative comparison and dialogue, and generative of new ways of reading palms across commonality and difference.

MOBILITIES, DIASPORAS AND TRANSLOCAL ECOLOGIES

Several contributions to this Special Issue approach palms as mobile, historical actors that are continually remade through their situated encounters with people, infrastructures, environments and power (Tsing 2015, Crosby 2004, West 2012, Demuth 2019). Central to these contributions is the question of how exactly palms move, and how these movements generate new ecological and historical formations. In addressing this question, the contributions push against the notion that palms remain unchanged as they are carried across oceans, transplanted into new political economies and embedded into new cosmologies. Rather, palms enter new relations as they move that alter their biocultural meanings, material forms, environmental functions and multispecies futures (Hernandez 2022, Schiebinger 2004, Watkins 2021).

Javier Carrera's essay on the peach palm (*Bactris gasipaes*) offers perhaps the deepest historical timescale of palm mobility. Rather than treating movement as a colonial-era phenomenon, the essay

reconstructs peach palm as an Indigenous technology of circulation across the tropical Americas. Originating through domestication in the southwestern Amazon, the species spread through western Amazonia toward Central America, undergoing multiple secondary domestication events as cultivated populations interbred with local wild varieties. Movement therefore appears not as diffusion but as an ongoing process of genetic and cultural transformation. Importantly, these movements generated new ecological formations. As Indigenous communities selectively propagated and dispersed peach palm, they simultaneously reshaped forests themselves, producing anthropogenic landscapes structured through long histories of perennial cultivation. The ecological effects extended beyond humans: surplus fruits supported wild animal populations and sustained hunting systems linking cultivated and forest ecologies. In contemporary Ecuador, peach palm continues to act as a mobile ecological actor through regenerative agroforestry systems, where companion planting, microbial relations and biodiversity transform disease ecologies and restore ecological resilience.

If Carrera's essay foregrounds Indigenous domestication and landscape-making, Gbenga Adesina and Case Watkins's contribution shifts attention to diaspora and forced movement. Their photo-essay asks what happens when a palm moves alongside enslaved peoples? It shows how the African oil palm (*Elaeis guineensis* Jacq.) became part of an emergent more-than-human diaspora. This African diaspora, the authors argue, has always been ecological, composed not only of humans but also of plants, seeds, foodways, cosmologies and practices that crossed oceans together. Transported from West and Central Africa to Brazil through histories of enslavement and colonial violence, the palm became something new in Bahia. Its oils entered Afro-Brazilian cuisines, its groves reshaped coastal landscapes and its presence became embedded in language through the term *dendê*, marking things as simultaneously African and Bahian. Dense groves of *dendazeiros* naturalised across forests, roadsides, mangrove margins and domestic spaces, becoming central to Afro-Brazilian identities and practices. Through imagery of estuaries, mangroves and 'transatlantic rootings', the essay reconceives diaspora as an ecological process in which mobility itself becomes a form of dwelling and the basis for new Atlantic worlds.

Theresa Ventura's contribution offers a different model of mobility that is structured through empire, infrastructure and capitalism.

In the Philippines, coconut palms move primarily through processes of extraction and development. Ventura uses the concept of the crop-scape to show how coconuts become global through assemblages of plants, labour, finance, architecture, state power and colonial science. The Coconut Palace in Manila became a powerful symbol of this process. Constructed under the Marcos regime (1965–1986) and built materially and ideologically around coconut, the building condensed histories of development, export agriculture, international lending and nationalist aspiration. Coconut trunks became columns, shells became ornament and development research became architectural spectacle. Yet this mobility remade the palm as much as it spread it. Coconut was transformed from a locally embedded multipurpose species into an export commodity routed through multinational supply chains. Colonial agricultural institutions, penal colonies, plantation infrastructures and industrial chemistry progressively translated coconut into copra, glycerin, charcoal and eventually even military technologies like napalm. The coconut's movement from village subsistence to global commodity thus altered what the palm could become.

Throughout these contributions, palms emerge as generators of translocal ecologies, or ecological worlds constituted through movement across regions, oceans, empires, and generations. This movement rarely left palms unchanged. Peach palm becomes domesticated and ecologically generative through Indigenous mobility. African oil palm becomes diasporic and relational through Atlantic crossings. Coconut becomes infrastructural and extractive through colonial capitalism. Palms, then, make and remake global worlds. Mobility becomes the very process through which palms, people, landscapes, and futures are continually co-produced. At the same time, the contributions resist treating movement as frictionless circulation or abstract connectivity. Mobility appears as uneven, contested and historically situated, enabled through some relations while foreclosing others (Tsing 2005, Soluri 2005, Grove 1995). Palms move through cultivation, enslavement, trade, displacement and ecological adaptation, generating new forms of attachment alongside new forms of loss. In this sense, palm mobility brings us to consider how movement transforms the conditions of life itself and generates new possibilities for inhabiting and relating to more-than-human worlds.

PALMS AS WORLD-MAKERS BEYOND COMMODITY HISTORIES

A second recurring motif within this Special Issue is the attempt to move beyond reading palms as commodities or extractive resources – oil, timber, fruit or profit – and instead understanding them as world-makers, or beings that participate in creating forms of attachment, sociality, territory, memory and collective survival (Kimmerer 2014, Kohn 2013, Carney and Rosomoff 2011). Rather than reducing palms to units of value or exchange, the essays within this theme foreground the relationships, practices, temporalities and ethical commitments through which people and palms co-produce one another.

Vanessa Villegas Solórzano's contribution offers a clear example of this conceptual shift. Paralleling Carrera's essay, Villegas Solórzano present the Chonta or peach palm not as an agricultural crop but as a material and symbolic infrastructure of Afro-descendant life across the Pacific coastlands of Colombia, Ecuador and Panama. Its fruit, *chontaduro*, is food at the same time as it is memory and belonging: 'the taste of home', or an embodied connection to territory, ancestry and collective identity. Eating *chontaduro* becomes a practice through which attachments to place are renewed across time and movement. Yet food is only one way the palm makes worlds. The same tree provides the wood for the *chonta marimba*, a foundational instrument in Afro-Pacific musical traditions. Marimba music accompanies births, celebrations, mourning and everyday life, linking generations through sound and ritual. Its rhythms sustain both bodies and social worlds, producing memory and continuity. The plant exceeds its functional utility, embodying a spiritual connector and marker of territorial identity. Through Afro-descendant histories of movement and settlement in the Chocó region, palms emerge as infrastructures through which worlds of inheritance, belonging and *vivir sabroso* (a spiritual notion of wellness linked to territory and identity), endure.

A different but complementary argument appears in Cavalcanti Ribas Vieira's article, which challenges environmental narratives bent on reducing oil palm to a destructive plantation crop. Without denying the violence of agribusiness expansion in the past and present, Vieira argues that such framings obscure longer histories of relation between African communities and oil palms and flatten diverse palm worlds into a single

extractive narrative. Drawing on ethnographic research conducted in the Mayombe forest region of Central Africa, the contribution develops the concepts of ephemeral and territorialised plants to show how palms become embedded in local worlds over time. The category *dííba yoómbe* refers to semi-wild palms understood as emerging with and belonging to Yoómbe communities. These palms are neither plantations nor untouched nature but exist through relationships among humans, forests, spirits and land. Palm products such as *mwuambe* sauce, palm wine and palm oil sustain kinship and everyday life. Oral stories position palms within cyclical time, where life, death and renewal unfold together. Against plantation temporality – linear and extractive – the Mayombe palm world remains relational, situated and continually renewed through localized systems of value and reciprocity.

Read together, the contributions under this theme uncover how palms actively shape how communities imagine belonging, continuity, and flourishing under conditions of movement, environmental uncertainty, and historical change. Across these palm readings, trees appear as active participants in making worlds. They nourish bodies and memories, anchor identities and territories, sustain rituals and economies, mediate relationships across generations, and create possibilities for collective futures. To think beyond commodity histories is therefore to recognise that palms enter worlds of market value at the same time as they create worlds of attachment, kinship, identity and survival (Anderson 2005, Head and Atchison 2009, Nazarea 2005, Miller 2019). Rather than emerging primarily through exchange, accumulation or productivity, value appears through practices of care, inheritance, reciprocity and coexistence. Palms are foundations and substrates of possibility for particular forms of life. They gather people together, organise temporal rhythms, transmit knowledge and sustain ethical obligations across generations. Their significance lies not only in what they produce materially but in the relations they enable and maintain.

ENCLOSURE, EXTRACTION AND UNEQUAL CARE

A third connective tissue within this Special Issue centres palms through their histories of uneven flourishing and the unequal regimes of power through which some palm ecologies are protected and invested in while

others are enclosed, exhausted, abandoned or rendered disposable. Contributions engaging with this theme demonstrate that palms become sites where value is patchily distributed across landscapes, bodies, species and communities (Tsing et al. 2019, Chao 2022, Rudge 2023, Li and Semedi 2021). They demonstrate how celebrated narratives of progress and growth tethered to commodified palms also depend upon the enclosure of Indigenous lands, the depletion of workers' time and energy and the exclusionary allocation of scientific and institutional care.

Alice Rudge's contribution situates oil palm expansion within a much longer history of frontier-making in Malaysia. She argues that oil palm inherited and intensified older colonial technologies of enclosure. Drawing on ethnographic work with Batek communities in Pahang, Rudge's contribution begins with the recurring statement: 'we have no place to run to now', capturing how once-mobile forest dwellers have become increasingly confined by shrinking forests and expanding plantations. To explain this condition, Rudge traces how Pahang was historically constructed as a frontier requiring intervention and control. Colonial land codes, forest reserves, mining concessions, agricultural estates and wildlife parks progressively territorialised land and reorganised populations. This reveals how oil palm did not create enclosure but rather emerged through earlier infrastructures of extraction and governance. During the Emergency, resettlement, chemical defoliation, movement restrictions and food controls further intensified these processes. Oil palm is thus reframed as the latest expression of long-standing and layered histories of enclosure whose flourishing depended on rendering some landscapes and communities disposable.

If Rudge foregrounds territorial enclosure, Perdana Roswally shifts attention to the gendered body as a site of naturalised and invisibilised extraction, arguing that plantation economies depend both on the dispossession of land and on the dispossession of workers' capacities to reproduce and sustain life. Her contribution opens with Maria, an Indonesian plantation worker who questions whether repeated miscarriages resulted from years of spraying agrochemicals. Maria's experience reveals a broader pattern in which women disproportionately bear toxic exposure while remaining structurally invisible within plantation labour regimes. Women are commonly employed as temporary workers responsible for spraying pesticides and fertilisers under intense heat and limited protection. Drawing on feminist political ecology, Roswally

maintains that agrochemical exposure must be understood well beyond an occupational hazard, as a political condition through which plantation productivity is sustained. Women experience bodily dispossession, where reproductive capacities, health and longevity become extractable resources. Miscarriages, toxic contamination, chronic illness and unpaid labour are the conditions of production rather than its side-effects. Extraction thus exceeds economics when it is experienced and lived as embodied, ecological, and intergenerational.

Andres Caicedo's contribution turns from extraction to differential regimes of care. Working in Tumaco on Colombia's Pacific coast, he examines how oil palm and coconut palm experience radically unequal forms of protection, repair and recognition despite facing comparable ecological crises. The ethnographic entry point is the *picudo negro* – the South American palm weevil – blamed for transmitting two diseases affecting both oil palm and coconut: bud rot and red ring, respectively. Yet, while bud rot disease threatening oil palm has generated extensive scientific research, institutional intervention and financial investment, red ring disease affecting coconut has received little support. Coconut growers describe enduring repeated epidemics without recognition or assistance. As one farmer explains: 'oil palm has godfathers; coconut doesn't have mourners'. Caicedo argues that this uneven care is racialised. Oil palm is framed as modern, productive and nationally valuable, while coconut cultivation – associated with Black peasant livelihoods – is represented as backward and scientifically deficient. Black ecological knowledge is marginalised even as growers consistently connect disease emergence to deforestation and plantation expansion. Scientific infrastructures mobilise to save oil palm while allowing coconut worlds to disappear.

These contributions tack back and forth between palm species that receive investment, protection and futures, and palm species that are enclosed, exhausted or abandoned. These unequal histories and flourishing unfold across disparate territories, bodies and species. Palm histories are therefore also histories of whose lives, landscapes and worlds are deemed worthy of sustaining or sacrificing (Chao, Bolender and Kirksey 2022, Haraway 2008, Oliveira and Hecht 2016, Reinert 2016, Porter 2021). Importantly, the contributions show that inequality and injustice are not accidental or incidental to palm economies but rather constitutive of them. Enclosure, for instance, depends on the selective allocation of mobility and belonging. Extraction relies on rendering certain bodies

expendable. Care operates based on decisions around which ecologies deserve repair and which can be left to decline. At the same time, the contributions refuse purely victimising accounts. They reveal how communities on the ground continue to contest enclosure, endure abandonment and articulate alternative forms of relation and value (Moulton and Harris 2025, Davis et al. 2019, Tammisto 2024). Palm histories thus become a lens through which to examine the political ecology of survival itself: how worlds are disrupted but also how decisions are continually made about which worlds are allowed and enabled to endure.

ARCHIVES, MEMORY AND ENVIRONMENTAL FUTURES

A final recurring motif within the Special Issue frames palms as living archives and speculative futures – as material witness through which knowledges are stor(i)ed, histories transmitted, memories sustained and pathways for environmental and social renewal imagined (Leal 2018, Montgomery 2026). Contributions engaging with this theme shift environmental history away from documenting what has been lost and toward asking how palms continue to orient collective horizons of promise and possibility. Across manuscript traditions, ecological restoration and poetic memory, palms emerge as media through which worlds persist and are continually remade.

Shruthi Kumar's contribution resists treating archives as fixed repositories, showing instead how palm leaves became dynamic materialities in preserving and renewing medical knowledge across generations in Tamil Nadu. Siddha medicine – one of South India's oldest medical traditions – circulated largely through oral transmission and was marginalised under colonial regimes that privileged Ayurveda and Sanskrit textual traditions. Palm-leaf manuscripts became one of the few means through which Siddha could document itself and assert scientific legitimacy. Crucially, the archive itself is framed by Kumar as recursive rather than permanent. Original manuscripts no longer survive, and the knowledge they contained endured thanks to repeated acts of copying onto new leaves before older manuscripts deteriorated and were ritually destroyed. Preservation therefore depended on continual renewal rather than permanence. Palm leaves themselves functioned as technologies of care, with palmyra and talipot leaves undergoing elaborate

preparation through drying, boiling, oiling, fumigation and chemical treatment to extend their lifespan. These practices reveal that archives constitute more than neutral containers of information and instead operate as living infrastructures, sustained through labour, expertise and material stewardship across generations.

Alejandro Solano, Pilar Egüez Guevara and Agustina Arcos' contribution pivots to palms as archives of ecological possibility. Working in Ecuador's Chocó Andino Biosphere Reserve, the authors describe a fifteen-year restoration project that treats palms as active agents in building regenerative futures. At Mashpi Shungo Reserve, eighteen native and exotic palm species have been integrated into agroforestry systems alongside hundreds of other plants using approaches such as successional agroforestry, analogue forestry and syntropic agriculture. Rather than excluding introduced species, restoration becomes an experimental practice of assembling resilient landscapes. The contribution focuses especially on *Bactris gasipaes* (*chontaduro*), commonly cultivated elsewhere through extractive monocultures for palm heart production. At Mashpi Shungo, the authors resisted this model by allowing palms to mature within diverse agroforestry systems, generating shade, nutrient cycling, fruit production and habitat for wildlife. Abundant fruit production redirected local fauna away from cacao crops, illustrating how palms reorganise ecological relations and reshape patterns of multispecies coexistence over time. Restoration therefore becomes a future-oriented environmental practice grounded in long histories of palm use and care.

The final contribution, Paolo Realpe Mina's poem and lullaby 'La Chucula', turns from institutional and ecological archives to intimate forms of memory. The poem centres a drink made from *chontaduro*, coconut milk and plantain, but its concern does not lie primarily with culinary instructions. Rather, the poem transforms the palm into a vehicle of inheritance and continuity through repetition, rhythm, and everyday language. Repeated lines – 'I used to drink it when I was a child', 'my uncle also had it', 'all the children had it' – situate palm within intergenerational memory and locate history within ordinary acts of preparation and consumption. The repeated substitutions of *chontaduro*, *chonta*, *chontilla* and *chapil* point to continuity through adaptation as ingredients change but the practice endures, and as memory survives through forms of improvisation and repetition. The lullaby form further

positions the palm as something carried forward through voice, collective care and everyday intimacy, turning nourishment into a practice of remembering and, thus, preserving intangible cultural heritage. Palms are reimagined in the poem as an edible archive through which childhood, kinship, neighbourhood and historical continuity remain alive and continue to nourish future generations.

Across these contributions, palms do far more than just preserve the past and record environmental histories. Palm leaves carry medical knowledge into uncertain futures. Palm restoration efforts reactivate ecological possibilities. Palm songs and recipes transmit memory through everyday practice. In the process, palms act as vegetal compasses, geared towards particular environmental futures, and with and through which communities imagine continuity, enact care and cultivate worlds yet to come (Leal 2018, Watkins 2021). Palm archives, meanwhile, are reimagined as material, ecological and embodied processes that require continual acts of renewal, interpretation, and transmission. Palm leaves must be copied and preserved. Restored landscapes must be cultivated and adapted. Songs must be sung and recipes repeatedly prepared. In each case, continuity emerges through practice rather than permanence, as environmental futures are fashioned through inherited forms of knowledge, care, and relation that remain open to transformation. Within these dynamics, palms are positioned as witnesses to historical worlds and as companions in the creation of worlds to come.

PLURALITY AS PRACTICE AND INVITATION

We close this Introduction with a word on plurality, which we approach as both analytical concern and as editorial practice. Aligning with *Plant Perspectives'* commitment to making space for scholarship that exceeds disciplinary boundaries, extends beyond the academy and enables more participatory forms of knowledge production, this collection features a combination of conventional peer-reviewed scholarly articles, non-scholarly essays, a photo-essay, poetry and book reviews. Deliberately bringing together different genres of writing, modes of inquiry and forms of knowing reflects a central proposition of the collection: that palms exceed any single method, archive, discipline, or language. To write global and more-than-human histories of palms requires

approaches attentive not only to political economy, environmental change and historical process, but also to memory, affect, embodiment, aesthetics, sensory experience and lived relation. Different forms make different things visible, and different genres create distinct possibilities for encountering palms as historical actors, ecological companions and participants in world-making.

Across this Issue, scholarly articles trace plantation expansion, labour regimes, ecological restoration, mobility, enclosure and more-than-human relations through ethnographic, historical and analytical methods. Non-scholarly essays create space for practice, reflection, synthesis and conceptual experimentation, foregrounding palms as archives, ecological actors and future-making beings. The photo-essay mobilises image, texture, and juxtaposition to explore diasporic ecologies and vegetal intimacies in ways that exceed conventional textual narration. Poetry turns to rhythm, repetition and sensory language to evoke inheritance, memory and everyday relations with palms. A book review extends these conversations by situating the collection within broader intellectual and political debates in environmental humanities and plant studies. This plurality of form matters because it unsettles hierarchies around what counts as evidence, argument, and knowledge. Rather than separating creative and scholarly practices, the Special Issue treats them as mutually generative.

Plurality also characterises the spectrum of positionalities that are represented in this Special Issue. As editors, we bring different cultural, disciplinary, geographical and professional trajectories that inform how we approach palms and the worlds they sustain. Anthropologist Sophie Chao (French/Chinese descent, living and working on unceded Gadigal Country, Australia) engages in her scholarship with questions of multispecies justice, extractivism, Indigenous worlds and more-than-human politics in the Asia-Pacific region. Environmental historian Jayson Maurice Porter (US Black American, living and working on the former plantation zones built on unceded Piscataway land, now called Washington, DC, USA) contributes to historical and environmental perspectives that are attentive to mobility, political ecology and the *longue durée* of ecological transformation in Mexico. Anthropologist and film-maker Pilar Egúez Guevara (Ecuadorian, latina, mestiza working in between Ecuador, Cuba and the United States, what once was called Abya-Yala) brings a commitment to food sovereignty, restoration

practice and environmental stewardship grounded in Ecuadorian landscapes and lived engagement with cultural heritage preservation and regenerative futures. Together, our different trajectories have shaped the Special Issue as an evolving conversation across methods, regions, careers and commitments.

These differences extend across the contributing authors. The Special Issue features scholars and practitioners working across anthropology, environmental humanities, history, geography, ecology, agronomy, plant studies, medicine, literary practice and artistic production. Contributors write from and with different regional contexts including South and Southeast Asia, Latin America, West and Central Africa and trans-oceanic worlds. Their contributions draw on archives, ethnography, restoration practice, oral traditions, poetry, visual methods, historical analysis and creative experimentation. Equally important, contributors occupy different career stages and institutional locations, from established scholars to emerging voices and practitioners working across and beyond academic settings. Such differences are not incidental to the project but constitutive of it. Bringing these positionalities together creates fertile conditions for comparison, friction, translation and unexpected resonance, foregrounding plurality as the method through which this collection thinks and seeks to stimulate thought.

Ultimately, we hope this Special Issue will be taken up as an invitation to pluralise perspectives, methods, scales and forms of engagement with palm worlds. This ethos aligns closely with *Plant Perspectives'* commitment to amplifying interdisciplinary plant studies and exploring plant–human interactions across spatial, temporal and cultural contexts. Throughout the Issue, plants remain centre stage as actors that shape movements, memories, infrastructures, ecologies, livelihoods and futures, and as analytical companions through which broader questions of life, history and coexistence might be reimagined. We hope that this collection fosters further interdisciplinary, collaborative, cross-regional and translocal research on palm lifeworlds and deathworlds – research that attends both to local specificity and global entanglement while questioning that very distinction, that reimagines more-than-human histories of palms across different yet interconnected sites, scales and subjects, and that unearths in these pasts new possibilities for multispecies futures and multispecies justice to gain ground and grow (Gumbs 2008).

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A Perspective on the Historical Role and Future of *Bactris* *Gasipaes* as a Food Crop*



ABSTRACT

Peach palm (*Bactris gasipaes*) is a domesticated perennial of the tropical Americas historically cultivated within Indigenous agroforestry systems. Interdisciplinary evidence indicates that it functioned as a staple in pre-Columbian Amazonia, embedded in diversified, human-managed forests. Despite its nutritional and agronomic potential, modern development efforts have not integrated it into contemporary food economies, largely due to a mismatch with prevailing models based on annual monocultures. Current production focuses on palm heart, while fruit use remains localised. This article argues that peach palm is better understood as a staple suited to agroforestry systems and may play a role in emerging regenerative and climate-resilient food strategies, provided that genetic diversity and traditional knowledge are maintained.

KEYWORDS

Bactris gasipaes, agroforestry systems, Amazonian domestication, Indigenous food systems, perennial staples



INTRODUCTION

In 2000, I worked as a local technician in the design and implementation of demonstration agroforestry plots in Orellana province, Ecuador, under the guidance of Pedro Saviniano Miranda, co-author of the handbook *Agricultura em Andares* (Multi-layered Agriculture) (Miranda and Rodrigues 1999). This system promoted the combined cultivation of annual crops, shrubs and useful trees. A key aspect of the methodology was that species selection was carried out by local farmers. I observed that participants – particularly those belonging to the Amazonian Kichwa people – consistently selected peach palm (*Bactris gasipaes*) as a central component of the system. This was my first encounter with the

* AI-based tools were used during the preparation of this manuscript to support language editing, text clarification, and structural organisation and translation from Spanish. These tools were also used to assist in summarising information and improving readability. No AI tools were used to generate original data or conduct analysis. All interpretations, arguments and conclusions are the sole responsibility of the author.

species and marked the beginning of a 25-year inquiry into its importance as a food security and food sovereignty crop for the peoples of tropical America.

This type of experience, involving the implementation of agroecological agroforestry practices, is widespread in Latin America, and its outcomes are generally positive. In this case, the plots established led to a significant increase in the quantity, quality and diversity of food available to participating families, including a noticeable increase in fauna available for hunting and trapping. According to participants, peach palm was an important reason for this outcome, as its fruit production exceeds household consumption and attracts wildlife that feeds on it. However, in the absence of dedicated studies, this kind of evidence remains largely anecdotal. A similar situation applies to many agroecological initiatives – particularly small-scale or locally driven ones – which, despite their reported success, remain underrepresented in formal scientific analysis.

As founder and coordinator of the Red de Guardianes de Semillas (Seed Guardians Network) in Ecuador, an organisation dedicated to promoting the use of traditional, non-proprietary plant species, I continued to encounter peach palm in the years that followed. Through exchanges with smallholder farmers and Indigenous communities in the Amazon, I developed an understanding of the role of this palm in local food systems and its potential for broader application. In 2018, I led a campaign on ancestral seeds that promoted the use of peach palm alongside nine other traditional crops. As part of this initiative, professional cooks engaged in the development of new culinary applications based on these ingredients (Carrera 2020).

In this article, I describe peach palm, its historical role in food systems, its future prospects and potential avenues for research, from the perspective of a field practitioner working with farmers and Indigenous food systems in Ecuador.

DESCRIPTION

The peach palm (*Bactris gasipaes*), a domesticated species of the Arecaceae family, is native to the tropical forests of the Americas, ranging from Honduras to Bolivia. In natural forest conditions, it can reach

heights of up to thirty metres, although in monoculture systems it rarely exceeds twenty. It grows from sea level to approximately 1,200 metres above sea level, with optimal performance below 800 metres. Fruit production begins at annual rainfall levels of around 1,000 millimetres, but the species thrives in environments receiving between 2,000 and 5,000 mm. It performs best under warm tropical conditions, with optimal fruiting typically occurring at mean temperatures around 24–28 degrees Celsius, although it can produce at slightly lower temperatures with reduced yields.

The fruits are round to ovoid, measuring approximately 2.5 to 6 centimetres in length, with coloration ranging from yellow to orange and red; some landraces present a dark purple color, almost black. The mesocarp is firm, fibrous, and starchy, surrounding a hard endocarp that encloses a seed up to two centimetres long. The trunk is relatively slender and, in most varieties, densely covered with spines strong enough to pierce rubber footwear. Its wood is very dense and hard, with a high density (often $>0.9 \text{ g/cm}^3$ and sometimes exceeding 1.0), and has long been valued in tropical America for its durability and strength. It has traditionally been used for construction, tool-making, and the manufacture of hunting weapons, as well as for other utilitarian and craft purposes.

Peach palm exhibits considerable ecological plasticity. It tolerates poor and acidic soils, although it performs best in deep, well-drained substrates. It does not tolerate waterlogged or heavily compacted clay soils. The species shows high genetic variability, resulting from frequent hybridisation among cultivated and wild populations. It is predominantly outcrossing, with monoecious and protandrous inflorescences. Pollination is primarily carried out by beetles of the *Nitidulidae* and *Curculionidae* families. The temporal separation between male and female flower phases promotes cross-pollination between individuals. This reproductive strategy, combined with high genetic segregation, contributes to the extensive diversity observed within the species.

This diversity has made precise classification challenging. Nevertheless, two major groups are commonly distinguished: the Oriental group, associated with the Amazon and Orinoco basins, and the Occidental group, which includes populations from the Pacific regions of Ecuador and Colombia, as well as Central America (Mora-Urpí et al. 1997).

HISTORY

The domestication of peach palm (*Bactris gasipaes*) is thought to have originated from one or more wild populations classified as *Bactris gasipaes* var. *chichagui*, giving rise to a proto-domesticated form known as Chichagui type 3. Available evidence suggests that this process took place in the southwestern Amazon. As the species spread through the western Amazon into Central America, secondary domestication events likely occurred. These involved the hybridisation of Chichagui type 3 with local wild populations, generating new, locally adapted domesticated varieties. The regions with the highest genetic diversity of cultivated peach palm are found in the Ecuadorian Amazon and northern Peru, indicating the intensity of human management and selection in these areas. Secondary centres of diversity include the Cauca and Llanos regions in Colombia (Galluzzi et al. 2015).

Recent research suggests that the domestication and dispersal of peach palm followed at least two distinct trajectories, associated with different fruit types and cultural uses (Clement et al. 2017). The western dispersal, extending through the Ucayali River into northwestern Amazonia and Central America, was characterised by the early selection of starchy fruits. These fruits are well suited for fermentation, and evidence indicates that they became central to food systems, particularly in the preparation of fermented beverages used in seasonal harvest festivals. Archaeological and historical data suggest that peach palm was widely cultivated in home gardens and shifting cultivation systems in these regions, often in large quantities, indicating its significant role in subsistence and cultural practices.

In contrast, the eastern dispersal, toward central and eastern Amazonia, retained fruit types with higher oil content and was not selected toward larger, starch-rich forms. These oily fruits are less suitable for fermentation, and there is limited historical or ethnographic evidence of their use in similar large-scale or ceremonial contexts. Available archaeological and historical data suggest that this eastern expansion may have occurred later and was less prominent in early accounts.

Overall, this differentiation in fruit types and uses indicates that the cultural importance of peach palm varied regionally, with starchy varieties in western Amazonia, northwestern South America and Central America playing a particularly prominent role in food systems and

social practices. The broader significance of peach palm has only been recognised in recent decades. Earlier interpretations of Amazonian land use assumed that slash-and-burn agriculture was the only viable cultivation system. In this system, forest vegetation is cut and burned during the dry season, releasing mineral nutrients stored in biomass as soluble compounds in ash. While this provides a short-term increase in soil fertility, the effect is transient: heavy rainfall rapidly leaches nutrients, and within one or two years, soils become depleted and low in organic matter. Fields must then be abandoned for extended fallow periods, often up to fifteen years. Over time, repeated cycles can reduce ecosystem resilience. This method has been widely documented in agronomic and ecological literature for the region. Based on this model, researchers concluded that the Amazon could not sustain large populations, estimating limits of around fifty individuals per settlement. Observations of contemporary semi-nomadic Indigenous groups seemed to support this view. Archaeologists such as Betty J. Meggers argued that the Amazon was a 'green desert', incapable of supporting complex societies (Meggers 1971).

This interpretation contrasts with earlier historical accounts. In 1541, the expedition led by Francisco de Orellana reported densely populated regions along the Amazon River. His chronicler, Gaspar de Carvajal, described large settlements and intensive food production systems. Since the 1990s, archaeological research has substantially revised this perspective. Evidence of extensive settlements – including villages, towns, and urban scale sites – has been documented across the basin (Heckenberger et al. 2008, Prümers et al. 2022, Arroyo-Kalin and Riris 2021, Balée 2013). It is now widely accepted that the Amazon supported large populations, numbering between five and ten million, prior to the demographic collapse caused by European-introduced diseases.

A central question emerging from this evidence is: how did these populations sustain themselves? Slash-and-burn agriculture alone cannot account for the proposed scale, and earlier critiques of its limitations remain valid. Alternative explanations have emerged from multiple lines of evidence. One is the study of terra preta, anthropogenic soils with high fertility found throughout the Amazon and extensively documented in soil science literature (Heckenberger et al. 2008). Another comes from the composition of the forest itself: many areas contain high proportions of domesticated or semi-domesticated perennial species.

There is growing agreement that pre-Columbian Amazonian societies practised sophisticated forms of agroforestry. Over long periods, they modified forest composition by favouring useful species, creating anthropogenic ecosystems that function ecologically as forests while providing sustained food production. Domesticated and useful species are hyperdominant in modern forests, indicating past human selection (Maezumi et al. 2018, Levis et al. 2020, Balée 1993, Clement et al. 2015, Clement and Mora-Urpí 1987, Sierra 2015).

Such systems could support large populations while maintaining ecological stability. These forest-gardens recycle nutrients efficiently, preserve canopy cover and minimise soil erosion. However, the extent and intensity of these transformations varied across the basin, and the degree to which Amazonian forests can be considered broadly anthropogenic remains an active area of research. Peach palm appears to be a key species within these systems (Levis et al. 2017, Clement et al. 2017). It is widely distributed across the Amazon basin, as well as in regions such as the Pacific Chocó and Central America, often occurring in high densities. As a domesticated perennial, its presence is a strong indicator of long-term human management and the development of forest-garden systems.

From an ecological perspective, peach palm also plays a significant role in sustaining faunal populations. In traditional forest-garden systems, fruit production often exceeds human harvesting capacity. The surplus feeds wildlife, increasing animal populations that can in turn be hunted. In this way, peach palm contributes both directly to human diets and indirectly by supporting sources of animal protein. While consistent with ecological theory (trophic interactions), this interpretation is supported mainly by observational and ethnographic evidence rather than controlled studies (Balée 1993, Levis et al. 2020). Knowledge of how to manage such systems is rapidly declining as land use shifts toward monocultures, cattle ranching, and extractive activities. However, fragments of this knowledge persist. During a permaculture workshop in Napo province, Ecuador, an elderly Kichwa farmer described the following practice :

First you walk in a forest patch with a *shigra* (woven bag) full of maize, beans and squash seeds, and scatter them. Then you cut the low vegetation so it covers and protects the seeds. Once the understorey is cleared, the trees become visible. You select which trees to cut, leaving the most useful and maintaining

sufficient canopy cover. In the gaps, you plant desired species – especially chonta (peach palm), because it is the most useful. By the time the maize is harvested, the shade has returned. Then you move to another plot and repeat the process’ (personal communication).

To the author’s knowledge, practices like these remain largely undocumented in peer-reviewed literature, indicating an important gap for future research.

Additional observations point in a similar direction. Indigenous permaculture expert Rogelio Simbaña reported comparable systems during work with the Shiwiari community of Juyuintza in the Ecuadorian Amazon, in 2020 (Simbaña 2020, personal communication). He described managed forests with minimal undergrowth, deep layers of fertile anthropogenic soil, and multiple distinct peach palm varieties distributed across several hectares.

Today, peach palm remains part of the diet in countries such as Colombia, Ecuador, Peru, Brazil, Panama, Venezuela, Nicaragua and Costa Rica, although its importance varies regionally. In Ecuador, consumption is largely restricted to areas where it is cultivated and remains limited in national markets. The species has also been introduced to tropical regions outside the Americas, particularly in Asia and the Pacific. It is cultivated in countries such as the Philippines, and to a lesser extent in India and Hawaii. However, production focuses primarily on palm heart rather than fruit, and it has not become a staple food (Lim 2012).

CULTIVATION

Detailed agronomic and genetic characteristics of peach palm have been extensively documented (Mora-Urpí et al. 1997). Peach palm can be propagated either by seed or vegetatively through basal shoots. Seed germination occurs in nurseries or seedbeds and may take between forty days and six months, depending on genotype and environmental conditions. Sexual reproduction maintains genetic diversity, which contributes to population resilience and provides a basis for selection in breeding programmes. Plants grown from seed typically begin fruit production after approximately four years under optimal conditions, although six years is more common. Vegetative propagation is carried out

using shoots emerging from the clump. This method allows for earlier fruiting – typically around three years – and ensures that the genetic characteristics of the mother plant are preserved, as the resulting individuals are clones.

Ecologically, peach palm is a forest species that requires partial shade during early development. It performs well when associated with other plant species that function as nurse plants. It is typically integrated into highly diverse agroforestry systems, where it is associated with a wide range of perennial and annual species – including fruit trees such as Inga, avocado and guava; staple crops such as cassava and maize; and other useful palms – forming multi-strata production systems characteristic of traditional Amazonian forest management. As it matures and reaches the canopy, it requires increased light availability and eventually full sun for optimal fruit production.

Fruit production can continue for several decades, typically around thirty to forty years under conventionally managed conditions, although individual palms may remain productive for longer periods – up to sixty to seventy years – particularly in low-intensity or diverse agroforestry systems. Under favourable conditions, two harvests per year are possible, with yields reported between ninety and 130 kilograms of fruit per plant. Harvesting is typically carried out using poles or ladders, with care taken to prevent fruit from falling, as impact damage reduces quality.

In contrast, palm heart production is continuous. Following the cutting of a stem, new shoots emerge within approximately three months, allowing for repeated harvest cycles. At present, commercial cultivation is largely oriented toward palm heart extraction, often under monoculture systems. These systems typically use planting densities ranging from 3,000 to 20,000 plants per hectare for palm heart production, and 400 to 500 plants per hectare for fruit production. However, monocultures are associated with increased vulnerability to pests and diseases. Significant pest outbreaks have been reported, including severe impacts on plantations in Colombia (Vásquez Ordóñez 2021). Similar patterns are observed in other crops, where low species diversity in large-scale monocultures increases susceptibility to widespread damage (Wetzel et al. 2016, Balogh et al. 2021).

One of the main pests affecting peach palm is the palm weevil, *Rhynchophorus palmarum*. This beetle lays eggs inside the plant tissue; the larvae then bore into the trunk, feeding on internal tissues and

weakening structural integrity. In addition, the species is affected by various fungal pathogens that can impact different parts of the plant. While these issues are typically limited in diversified agroforestry systems, they tend to be more severe in monocultures, particularly those relying on agrochemical inputs; this pattern is supported by agroecological literature, though specific studies on peach palm remain limited.

Dimension	Traditional / Pre Columbian Systems	Modern / Conventional Systems
Production model	Diversified agroforestry systems	Monoculture plantations
Biological diversity	High (multiple species and varieties)	Low (genetic and species uniformity)
Primary outputs	Fruits, ecosystem services, multiple products	Palm heart (single commodity focus)
Food function	Staple food (carbohydrates and fats)	Marginal or non-staple product
Ecological dynamics	Nutrient cycling, canopy continuity, resilience	Soil depletion, higher pest vulnerability
Management scale	Smallholder and community-based	Commercial, large-scale production
Knowledge system	Traditional ecological knowledge	Technical/agronomic standardisation
Relation to markets	Local consumption and exchange	Integration into national/global markets

TABLE 1.
Contrasting food system models: peach palm in historical and modern contexts. This schematic comparison summarises the contrasting roles of *Bactris gasipaes* across historical agroforestry systems and modern production models centred around palm heart.

These observations suggest that conventional monoculture systems may not be well-suited to the ecological characteristics of the peach palm. Alternative approaches based on diversified agroforestry systems and intercropping are increasingly considered more appropriate, as they align with the species' ecological requirements. Experimental and field-based experiences provide supporting evidence, although much of it remains anecdotal.

Plant breeding represents another key component of future strategies. However, the high genetic variability and heterogeneity of peach palm populations present challenges for conventional breeding approaches, which typically prioritise uniformity, stability and distinctiveness. These traits, while desirable in industrial agriculture, may reduce resilience to pests and diseases and limit adaptability.

An alternative approach is participatory plant breeding based on evolutionary populations. In this system, populations are continuously replanted using seeds from previous harvests, allowing natural selection to operate alongside farmer selection. Over time, this process generates locally adapted and genetically diverse populations. Research indicates that such systems can improve yield stability, adaptation and resistance to biotic stress (Ceccarelli and Grando 2020). Overall, while empirical and anecdotal evidence consistently points toward the advantages of diversified, agroecological systems for peach palm cultivation, there remains a need for more rigorous scientific research to validate and optimise these approaches.

USES

The primary product of peach palm is its fruit. It must be cooked prior to consumption in order to inactivate naturally occurring anti-nutritional compounds. The most common preparation method in Ecuador is boiling the fruits whole, typically with salt, for up to two hours. After cooking, the outer skin is removed before consumption. The fruit is often eaten as a side dish and may be salted to taste. Alternative preparation methods include roasting or baking, similar to the processing of chestnuts.

Processing the fruit into flour is another important culinary strategy. The pulp can be dried and milled to produce a starchy flour, which

may also be roasted to obtain a product similar to farina.¹ This expands its culinary applications, allowing incorporation into a variety of food products, including mixtures with cereal flours and formulations for animal feed.

A widespread traditional preparation consists of fermenting the cooked and mashed mesocarp for one to two days, followed by dilution with water to produce *chicha*, a thick beverage that functions both as food and drink. This is one of the most common uses in Amazonian regions. Ethnographic observations indicate that it is consumed frequently throughout the day and constitutes an important source of hydration and nutrition (Clement et al. 2017)

Extended fermentation of the pulp (one week or more) produces an alcoholic beverage used in social and ceremonial contexts. The fermented mass can also be incorporated into other preparations, such as breads and cakes. In some regions, preservation techniques include the production of silage by compacting the fermented mass in pits lined with leaves (e.g., banana leaves) for periods of up to one month. A comprehensive account of traditional uses is found in Patiño (1963).

Nutritionally, the fruit contains approximately three per cent protein, 42 per cent carbohydrates (mainly starch) and seven per cent lipids. It is also a source of carotenoids, vitamins A and B2, and minerals such as phosphorus and iron. However, composition varies significantly among cultivars and landraces (Dias Soares et al. 2022). Overall, it is considered a nutritionally dense food within tropical American diets.

The lipid content is noticeable both in the texture of the fruit and in the cooking water. Oil can be extracted through traditional methods by cooking and crushing the fruits, followed by cooling, which allows the oil to separate and rise to the surface. This oil is used as a flavoring and colouring agent in local cuisines. The seed is also edible, although its use is less common and less documented than that of the pulp; after prolonged cooking – often together with the fruit – to soften tissues and reduce anti-nutritional compounds, the hard endocarp is cracked open using tools to extract the kernel, which has a firm, oily texture and may

1 Farina (also spelled *farinha*, *fariña* or *farina* depending on region and language) is a coarse flour traditionally made in Amazonia and Brazil by grating or crushing a starchy crop, fermenting it sometimes, drying it and roasting it in a pan or griddle.

be consumed directly or occasionally roasted, although this process is labour-intensive.

Another major product is the palm heart (palmito), obtained from the apical meristem. It is commonly consumed cooked or pickled and used in salads and other dishes. While widely appreciated gastronomically, palm heart production involves the cutting of stems, which has implications for plant management. Nutritionally, it provides dietary fibre and minerals such as magnesium and iron.

Additional uses are documented in ethnobotanical sources. According to Lim (2012), the sap extracted from the trunk may be consumed fresh or fermented; young inflorescences can be roasted and eaten; and male flowers are sometimes used as a condiment. In some cases, immature inflorescences are harvested, chopped, and cooked. Facciola (1998) mentions that in Costa Rica the fruit is slowly smoked to keep it fresh and improve the flavour, that seeds are the source of an edible oil and that the young flowers may be chopped and added to omelettes. This author also mentions Coquillo, a palm wine prepared from the sap.

The larvae of the palm weevil (*Rhynchophorus palmarum*), which commonly infest peach palm, are traditionally consumed in several Amazonian countries, including Ecuador, Peru, Colombia and Venezuela, as well as in the Guyanas, Panamá and Costa Rica. In Ecuador, they are commonly known as chontacuros and are eaten raw, roasted or fried. These larvae are rich in fats and proteins and constitute an important nutritional resource in local diets. (Jaramillo-Vivanco et al. 2023). Harvesting practices may include opening infested trunks to collect larvae. In some cases, families intentionally fell selected palms to promote oviposition by the beetles, thereby ensuring larval production after several weeks. These practices are based on traditional ecological knowledge and are documented primarily through ethnographic observation. Beyond food uses, peach palm wood is highly valued for its density and durability. It has been widely used in the Amazon for the construction of houses, tools and hunting implements, and is suitable for fine woodworking. Archaeological and ethnographic evidence indicates its long-term importance as a structural and material resource.

Component	Use	Context	Evidence type
Fruit	Boiled; fermented (chicha); flour production	Amazonian food systems	Ethnographic and nutritional studies
Palm heart	Fresh; pickled; processed products	Commercial agriculture	Agronomic and market data
Seed	Cooked kernel consumption (limited use)	Localised traditional use	Ethnographic (limited)
Larvae (<i>R. palmarum</i>)	Protein and fat source (raw, roasted, fried)	Amazonian regions	Ethnobiological studies
Wood	Construction; tools; weapons; crafts	Amazonian and tropical regions	Archaeological and ethnographic
Oil	Extracted from cooked pulp; culinary use	Traditional food systems	Ethnographic

TABLE 2.
Main uses of peach palm across traditional and commercial systems, indicating context and type of supporting evidence.

FUTURES

Recent reviews highlight the nutritional and functional potential of peach palm as a future food resource (González-Jaramillo et al. 2022). The fruit combines complex carbohydrates (starch) with a moderate lipid fraction, providing a dual energy source that is uncommon among staple crops. It also contains dietary fibre, carotenoids (provitamin A), B-complex vitamins and essential minerals such as iron and phosphorus, with composition varying among landraces. Beyond basic nutrition, studies point to the presence of bioactive compounds with antioxidant properties, suggesting possible roles in functional foods and nutraceutical applications. Processing options – such as flour production,

fermentation and oil extraction – expand its versatility for both local consumption and value-added products.

Modelling studies suggest that projected climate change scenarios may expand the areas suitable for peach palm cultivation. Galluzzi et al. (2015) indicate that shifts in temperature and precipitation could increase the extent of climatically favourable zones for the species. Combined with its relatively low input requirements and the nutritional properties of its fruit, this positions peach palm as a potentially important crop within tropical food systems.

It is important, however, to preserve genetic diversity and traditional cultural uses in their regions of origin. This is essential for maintaining the evolutionary processes that generate and sustain crop diversity, which depend on continuous interaction between human selection and local environmental conditions. Traditional management systems – particularly those practised by Indigenous and smallholder communities – act as dynamic reservoirs of genetic variation, allowing crops to adapt to changing biotic and abiotic stresses. The erosion of these systems, whether through genetic homogenisation, land-use change or loss of cultural knowledge, can reduce the resilience of the species and limit future breeding options. In addition, many uses and processing techniques are closely tied to specific cultural contexts and may not be easily transferred or replicated elsewhere, making their preservation critical not only for biodiversity conservation but also for the continuity of associated knowledge systems. The same study identifies priority regions for the in-situ conservation of peach palm genetic diversity, including the Ecuadorian Amazon; the Tarapoto and Pacaya-Samiria regions in Peru; Vichada in Colombia; the Solimões region in Brazil; and eastern Panama. Conservation strategies emphasise the importance of maintaining traditional agroecosystems, particularly Indigenous-managed systems, where processes of selection and diversification continue to operate. Key groups identified in this context include the Amazonic Kichwa, Huaorani and Achuar in Ecuador; Cubeo, Curripaco, and Yuriti in Colombia; Chayahuita, Quechua, Urarina, Cocama-Cocamilla and Shipibo-Conibo in Peru; Ticuna and Mirana in Brazil; and Kuna and Emberá in Panama (Galluzzi et al. 2015).

Peach palm is ecologically compatible with diversified agroforestry systems. Its growth requirements – shade tolerance in early stages and integration into multi-strata canopies – align with the structure of complex agroecosystems. This has led to its inclusion in agroecological

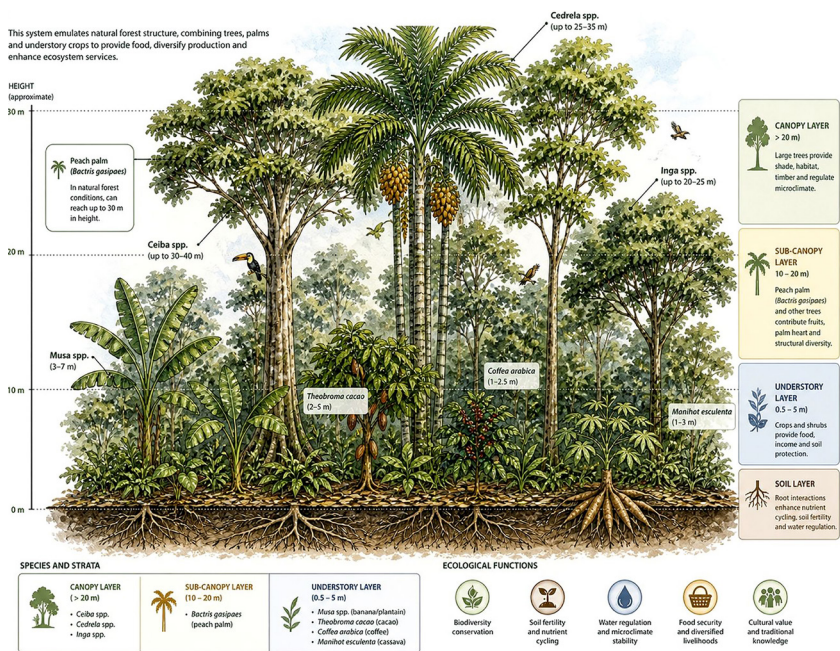


FIGURE 1.
Multi-strata agroforestry system incorporating *Bactris gasipaes* (peach palm)
(generated with AI)

Note: Heights are simplified for visualisation purposes. They are indicative and reflect agroforestry systems approximating natural forest structure; actual values vary depending on species, management and environmental conditions.

and permaculture-based models that aim to replicate forest functions while maintaining food production. Evidence supporting these systems comes from a combination of agroecological research and field-based experiences, although controlled comparative studies specific to peach palm remain limited.

Given increasing interest in regenerative agriculture and climate-resilient food systems, peach palm may play an important role as a perennial component in diversified tropical production systems. However, its future relevance will depend on multiple factors, including the conservation of genetic diversity, the continuity of traditional knowledge systems and the development of cultivation models that balance productivity with ecological resilience.

Clement et al. (2004) carry out a very interesting analysis of the limitations in the spread of peach palm in modern markets, despite the efforts made by researchers and agencies. They signal that, although peach palm was a major staple in pre-Columbian agroforestry systems, modern research and development efforts have failed to transform it into a widely adopted crop. This failure is attributed by the authors not to biological limitations, but to a mismatch between the crop's characteristics and market expectations, as well as to strategies that emphasised production over processing, market development and consumer demand. As a result, peach palm remains primarily a smallholder crop embedded in diversified agroforestry systems, with limited integration into modern food economies.

One key element of their analysis concerns the nature of the peach palm fruit: it is starchy and oily rather than sweet, and therefore does not fit easily within conventional fruit markets. As they note, it functions more as a 'tree potato', competing with staple crops such as cassava and maize. This characterisation helps clarify its historical role: peach palm appears to have been domesticated as a staple, providing carbohydrates and fats within agroforestry systems. The current dominance of crops such as cassava, maize and rice is closely linked to agricultural models based on annual monocultures, which have been widely adopted in the tropics despite well-documented ecological impacts. In contrast, perennial and mixed annual-perennial systems are increasingly recognised as more compatible with tropical soils and ecosystems. Within such systems, peach palm has the potential to become a major contributor to the provision of starch and oil. Realising this potential will require further research on production and processing, market development, practical implementation and broader dissemination of knowledge about agroforestry-based food systems.

In addition, future work may explore the development of locally grounded value chains that build on existing practices and knowledge systems. This includes the integration of peach palm into local and regional gastronomy through the diversification of culinary uses and the involvement of chefs and food networks, as well as the development of small-scale processing techniques (e.g., flours, fermented products, oils) that can extend shelf life and increase product versatility. Such approaches may support community-based enterprises and strengthen

local economies, particularly when they are designed to operate within agroecological production systems rather than replacing them.

At the same time, these processes raise important questions regarding governance and equity. The commercialisation of products derived from *Bactris gasipaes* must consider the legal and ethical implications of intellectual property regimes, especially in relation to ancestral knowledge and genetic resources. Issues such as access and benefit-sharing, recognition of Indigenous and local communities as knowledge holders, and the risks of appropriation or biopiracy are central to the development of equitable value chains. Addressing these dimensions will be essential to ensure that any expansion of peach palm-based economies contributes not only to economic opportunities but also to the conservation of biodiversity and the continuity of cultural practices.

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Gbenga Adesina and Case Watkins

Transatlantic Ecologies of the African Oil Palm: Photo-Poetic Explorations of the Intimacies of Diaspora



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ABSTRACT

This collaborative, experimental essay considers, feels and relates stories that emerge from the transatlantic diaspora of the African oil palm (*Elaeis guineensis* Jacq). Grounded in photographs from Bahia, Brazil, a poet and a geographer respond to the images and to each other with theoretical narratives and poetic meditations. Exchanging in these various modes, we explore a range of intimate ecologies, landscapes and foodways forged by coalitions of palms and people in diaspora.

KEYWORDS

Photography, poetry, political ecology, palm oil, landscapes, Costa do Dendê, Bahia, Atlantic world, African diaspora, Afro-Brazil

Danço a magia, canto a Bahia
Prosada e versada no dendê, no dendê
Bahia
África do lado de cá
Reza, alegria, rito, harmonia

I dance the magic, I sing Bahia
 Composed and versed in *dendê*, in *dendê*
 Bahia
 Africa, on *this* side
 Prayer, joy, ritual, harmony

– Mateus Aleluia, ‘Bahia bate o tambor,’
 Track 3 on *Fogueira Doce* (Três Selos, 2017,
 LP). Our translation.



INTRODUCTION

Is there any plant more infamous than the African oil palm (*Elaeis guineensis* Jacq.)? As the twenty-first century's most produced, traded and derided edible oil, palm oil has become a poster child of globalised capitalist extraction run amok. Grown mostly in plantation monocultures blazed into rainforest biomes in Southeast Asia (and elsewhere in the tropical Global South), the African oil palm has earned a nasty reputation as a land grabbing, greenhouse gas emitting, biodiversity eroding nightmare (Robins 2021). Still, none of this is the fault of the palm itself – an exceptionally prolific, versatile and beneficial plant with rich socioecological histories resonating through West and Central Africa and into diaspora (Watkins 2021). In this experimental essay, we reflect

on those lesser-explored diasporic histories and the intimate ecologies they have entwined.

Over at least the past 5,000 years, the African oil palm has collaborated with human partners to create and sustain communities, cultures and cosmologies in West and Central Africa. Yoruba communities, as just one example, revere the oil palm as the ‘tree of life’ whose oil represents the nourishing ‘blood of the Earth,’ essential in the preparation of many ritual and mundane foods (Ojo 1967: 53; Ológundúdí 2008: 39). When the transatlantic slave trade began kidnapping and trafficking millions of African souls to the Americas, the African oil palm made the journey along with them. Together with a rich variety of African plants, seeds, animals and foods, the palm and its oils became early travellers on the brutal transatlantic circuit of African bodies and other goods.¹ Thus the African diaspora is, and has always been, *more-than-human* – an immense diffusion of people, plants, knowledge, power and resistance that has reshaped the demographics, politics, cultures and ecologies of the Americas and beyond.

Diaspora holds an abundance of meanings. For people and other beings separated from their homelands, diaspora can evoke distance, uprootedness and loss. Yet, at the same time, diaspora carries with it new opportunities for connection, for community and for place-making (Williams et al. 2025, Henson 2024: 1–26). Separated from more familiar contexts and webs of relation, diaspora integrates its agents – whether people, plants or other beings – into new social-ecological relations. It is this reshuffling of relation and potential that captivates this essay. Just as diaspora severs some bonds, it creates potentials for new ones. Coming into relation with new places thus creates new collaborations, new ecologies, new *intimacies*.

In this photo-poetic exploration, a poet and essayist from Lagos, Nigeria, and a gringo geographer working in Brazil consider, feel and relate stories that emerge from the transatlantic diaspora of the African oil palm. Grounded in photographs of diasporic ecologies from Bahia, Brazil, we respond to the images and each other with theory, poetry and lyrical prose. Experimenting in these various modes, we explore a range of intimate transatlantic ecologies, landscapes and foodways forged by

1 On the African diaspora of plants, animals and foodways, see Carney and Rosomoff (2009).

palms and people in diaspora. We connect cultural-environmental geographies of the African oil palm with under-appreciated theories and theorists in and of Brazil and elsewhere in the Global South to highlight the generative tensions underlying diaspora and more-than-human relationality. The resulting visual, narrative-theoretical and poetic reflections offer a coalescent yet ephemeral treatment of the ever-shifting intimacies of palms, landscapes, ecologies and foodways in Bahia, the African diaspora and their Atlantic worlds. We stress that the thoughts we string together here are experimental rather than conclusive. We offer them as an invitation to imagine with us.

A note on methods

Case Watkins shot these photographs as a part of ongoing ethnographic fieldwork in Bahia, Brazil, beginning in 2008. All the knowledge and images represented here were derived from ethnographic practices centring informed consent, community autonomy and ethical commitments to *walking with* our collaborators (Sundberg 2014, Watkins 2021). Gbenga Adesina selected these seven images from a much larger array. Without discussing the photos and before any captions or narratives were written, the two authors individually prepared drafts in response to the images – the former based in poetry and lyrical prose and the latter based in narrative and theoretical exploration. Drafts were exchanged, discussed and then revised in response to each other's treatments and ideas. Revised drafts were then collated and edited for clarity.

THE AFRICAN (DIASPORIC) OIL PALM

The dispersal of the African oil palm has always been socioecological. Initially a pioneer species limited to the interstices of West African ecotones, the palm followed humans as they opened rainforest canopies with cycles of swidden-fallow mosaics, eventually forming dense groves across much of West and Central Africa.² In exchange for nurture and protection, the palm provided its human collaborators with nourishing oils, intoxicating wines, and a host of domestic uses. This interactive web

2 On the socioecological benefits of 'swidden-fallow' or 'shifting' cultivation in West Africa, see Fairhead and Leach (1996).



FIGURE 1.

An elderly Afro-Brazilian man climbs a *dendezeiro* to harvest its fruit on the rural outskirts of Cairu, seat of the Tinharé archipelago, on Bahia's Dendê Coast (2012).
All photos: Case Watkins.



In Yoruba cosmology, heaven is a tree. A vertical paradise or a dream of paradise striated by gravity. You access it not by sudden rapture but through climbing.

The climber inches forward, listening to his body, listening to the body of the tree which is the body of the earth. Climbing is an act of listening. The tree has to allow itself to be climbed. The tree has to be climbed with a rope made from the tree itself. The climbing rope is a duality woven from coarseness and tenderness. One part of the rope is strung together from a trellis of woven cane. The other part is cut from the bark of an oil palm frond. The coarseness and tenderness are in perpetual flux and listening. The rope which is made from the tree twists around the body of the tree and the body of the climber who is made of earth. He's the king of an elusive gravity. In Yoruba cosmology, kings don't die. They ascend to the roof. They climb to the crown of leaves at the dome of the vertical heaven where the ancestors live and form a cloud. Or they become the fruits at the crown of the trees. Seeds represent the unborn which become trees. Trees and leaves represent the living which produce fruits. Fruits are the ancestors. Death is ripeness.



of relation contributed to the development of Western African societies from the southern fringes of the Sahel across the Niger Delta and deep within the rainforests of the Congo Basin. Neither palm nor people wielded these influences individually. Instead, we find agency and change in their intimate social-ecological relations.

Across the Atlantic, the land that would become (the Brazilian state of) Bahia had been home to various indigenous communities for at least ten millennia prior to the accidental arrival of Portuguese sailors in the year 1500 (Cabral and Bustamante 2016). In the decades that followed, Bahia became a central nexus in the colonisation of the Americas and the transatlantic slave trade – two interdependent crimes against humanity with immense influence in the making and maintenance of the modern world. Indigenous communities persevere in Bahia, despite centuries of attempted genocide and other atrocities, while people of African descent now comprise more than eighty per cent of the state's populace. As elsewhere in the (post)colonial world, 'home' is a deceptively simple designation enveloped in tortuously complex histories and geographies.³

3 See the 2022 Brazilian Population Census at <https://www.ibge.gov.br> (accessed 10 June. 2024). On the entanglements of Black and Indigenous histories in Bahia, see Miki (2018).

Since the early twentieth century, scholars and officials have placed Bahia at the heart of Afro-Brazilian life and culture (for example Ickes and Reiter 2018). But how did this happen? The factors and processes of social-ecological change are numerous and complex, but one that commands our attention here is the intimacy of people and plants in diaspora. Since the earliest days of colonisation, people and plants of African descent have collaborated to create landscapes, communities and cultures in Bahia and throughout Brazil. Geographer Robert Voeks has detailed an astonishing array of African plants growing in Brazilian soil, many of which serve vital roles in Afro-Brazilian religions and cosmologies (Voeks 1997). One of these, the African oil palm, has firmly naturalised in coastal Bahia, flourishing across forests, pastures, yards, highway medians, ditches, farms and fields from the urban capital to rural agrarian communities to the swampy edges of mangrove ecosystems.

Arriving in Brazil no later than the early seventeenth century, the palm and its nutrient-rich oils remain fundamental in Bahia's distinctive Afro-Brazilian landscapes, foodways and religions. Bahians refer to their locally sourced palm oil as *azeite de dendê*, an Atlantic portmanteau of the Arabo-Iberian term for olive oil (*azeite*) and a Kimbundu Bantu word for palm oil (*ndende*). Following Portuguese convention, the palm that so graciously furnishes this oil became the *dendezeiro*. When Brazilians describe something – anything – as ‘in’ or ‘of *dendê*’, they mark it indelibly as both African and Bahian. For centuries, dense and productive groves of emergent *dendezeiros* have dominated landscapes and cultures in the coastal plains and tablelands running south of Bahia's capital, Salvador.⁴ In the late twentieth century, officials in the state's Secretariat of Culture and Tourism officially named that region the Dendê Coast (Costa do Dendê) in a public nod to the dendezeiro and the cultures it nourishes.⁵

4 Here and throughout, we use the term ‘emergent’ to deliberately reference the ‘emergent properties’ produced by complex systems, in this case the unplanted distribution and reproduction of African oil palms within biodiverse groves and (agro) forests spread across coastal Bahia. See Watkins (2021: 49–55).

5 Secretaria da Cultura e Turismo da Bahia (2001). It is important to note here that the official labeling was always about boosting tourism rather than supporting local communities or acknowledging the extraordinary African diasporic feats and legacies embedded in the region's cultures and landscapes.

(BE)COMING HOME



FIGURE 2.

An emergent grove of *dendezeiros*, elsewhere known as African oil palms, towers above a family home and its dooryard gardens in the terraqueous municipality of Igrapiuna on Bahia's Dendê Coast (2012).

I'm thinking of a Yoruba proverb, *Aye loja orun nile* which in this context I'll translate as 'The world is a market place, home is heaven.' If the modernity of the world was invented with the notion of you and your children as commodities, home or heaven for you then might be the opposite of the auction block. A place where you exist outside the brutal logic of barter or extraction. The marketplace is contagious with dangerous noise and music of entrapment which unsettles your spirit. But home is rest, a nest for you, bird of passage and multiple flights, a nest for you among the trees.

Despite the brutalities of colonialism and transatlantic enslavement, Afrodescendants have formed vibrant communities in Bahia's Atlantic coastal regions since their arrival five centuries ago. Many of these communities – known in Brazil as *quilombos*, or *comunidades quilombolas* – were founded by self-liberated, formerly enslaved people and have long harboured humans, plants and cultural practices of African descent (Carney and Rosomoff 2009, Gomes 2015, Bledsoe 2017).⁶ The homescape depicted in Figure 2 displays a range of *quilombola* ethics and practices. Assembled from local kiln-dried terracotta bricks and shingles, and surrounded by recently harvested *dendezeiros*, diversified agroecological gardens and joyful hibiscus flowers, this home is neither 'natural' nor 'artificial'. Rather, it results from ancestral strategies of abundance, what the late great *quilombola* farmer, poet, scholar and activist Antonio 'Nego' Bispo dos Santos called *biointeração* (biointeraction). Placed in contradistinction to the 'developmentalist perspective' pushed in colonial thinking, biointeraction is an onto-epistemological vision and way of life that works in circular, non-linear patterns to bridge Earth's constituents, among them people, plants, water and soil (dos Santos 2015, esp. ch. 3). 'To discuss ecology without mentioning architecture', Nego Bispo warns us, 'is an illusion' (dos Santos 2023: 65).

Biointeraction thus offers us a path otherwise than the colonial logics of extraction. While colonial-Western thinking frames the world through arbitrary binaries such as 'natural' and 'man-made,' biointeraction sees and works toward an integrated Earth where humans participate

6 The Brazilian Constitution of 1988 codified public support for quilombos, and as of this writing, the federal government has recognised 3,752 quilombo communities across the country. See Fundação Cultural Palmares at <https://www.gov.br/palmares/>

in socioecological synergies. And even as these and other quilombola philosophies root and flourish in Brazilian soil, they emerge from the swirling currents and offshore shoals of the Atlantic World where indigenous and diasporic wisdoms meet and commingle (King 2019).

TRANSATLANTIC ROOTINGS



FIGURE 3.

A boater gathers shellfish amidst the mangroves, overlooked by an emergent grove of *dendezeiros* in the estuary of the Rio Igrapiuna on Bahia's Dendê Coast (2012).



I know this place. I was there 400 years ago. On a nearby shore, I saw white ships arriving, I trembled and ran. The names of the ships were whispers I had heard in a strange dream of ships arriving. I hid with my father and mother in the nooks of the mangroves. We muffled the cries of the children and prayed the raiders would not find us.

*

I know this place. I was there yesterday in my dream. I'm there even now. Look. The roots of the mangroves are tangled like ancestry and memory. They lean and bow toward each other like elders in a mutual ecological obeisance. They extend upward in a canopy like a harmony of hands, then above them, the gazelle neck of the palm trees which contain the spirit of my grandfather sway with a wicked grace.

*

Mangroves, like jazz, grow into two directions at once.

*

A boy in a white cotton singlet. He's lean and graceful like an eel. He was born for the precise symmetry of the river. He sits on the precipice of a boat. History is a boat. One leg extends toward the river and the other extends toward the past. I know this landscape from my past and I know it from my future.

*

The river that ends here begins in a desert. An ocean waits at the mouth of the estuary to swallow us.

*

I dreamt and I saw islands and archipelagos migrating. In the dream of ecologies, my body was a door of passage and a bridge. Between the old world and new world, I was a map of fragments. Between the seasons measured not by calendars, but by palm trees appearing and disappearing, I was a door of manifold returns. The Atlantic was a silver coin and my blood was on both sides. I was haunted and made sacred by my fragmentation. I slept in the old world and woke up in the new world with a gasp: *I can't breathe*. These deltas, a memory. The landscape is a mirror.

*

In the dream of ecologies, my body is a dream of passage and a bridge. Between the old world and new world, I'm a map of fragments. Between the seasons measured not by calendars, but by palm trees appearing and disappearing in a dream of migrating islands and archipelagos, I'm a door of manifold returns. The Atlantic is a silver coin and my blood is on both sides. I'm haunted and made sacred by my fragmentation. There are days I sleep in the old world and wake up in the new world with a gasp: *I can't breathe*. These deltas, a memory. The landscape is a mirror.



Bahia's Dendê Coast connects South America to the Atlantic Ocean. But where does one end and the other begin? Here groves of *dendazeiros* give way to muddy mangroves before falling into a tangled network of brackish estuaries and saltwater inlets. This watery landscape is striking in its similarity to those of the Niger Delta, and elsewhere in West and Central Africa, where humans have managed and benefited from the dense groves of oil palms that line the upland fringes of intertidal mangroves. On both sides of the South Atlantic, these liminal spaces fluctuate between land and water, never fully conceding to either category in that false dichotomy.

Thinking with this fluidity, geographers Haripriya Rangan and Judith Carney have highlighted such 'aquaterras' and their outsized roles in shaping coastal livelihoods, particularly in the global Tropics (Rangan and Carney 2025). Instead of 'marginal' territories desperately in need of (Western) development, they find realms of socioecological abundance and potential where generations of communities have thrived through innovative strategies of adaptation. Sloping gently from tableland forest to aquaterra, the Dendê Coast marks the dissolution of South America into the Atlantic—the colossal, unforgiving body that connects Bahia with the African continent.

Here the rhythmic lapping of tidewater recalls the poetic imagery of *Ôrí*, a 1989 film by Raquel Gerber documenting the ferocious and innovative scholar-activism of the radical Black Brazilian polyhistor Beatriz Nascimento. For Nascimento, the African diaspora and its constituents emerge from a condition of *transatlanticidade* (transatlanticity) – at once a continuum, a map and a collective embodiment (Gerber with Nascimento 1989). Her contemplation of the metaphysics and materialities of aquatic space is stunning in its congruence with Nego Bispo's concept of *confluência* (confluence), as well as the lively theorization of the river shared by Indigenous leader and philosopher Ailton Krenak (dos Santos 2015: 89–103; Krenak 2024). Empowered by these allied yet distinct visions we might behold the Atlantic shores of the Dendê Coast as a fluid manifestation of the cultural, political and ecological intimacies of the African diaspora.

UNSHACKLING



FIGURE 4.

Dendezeiros surround the Caxuté Community near the banks of the Rio do Engenho in the heart of Bahia's Dendê Coast (2019). Based around a Candomblé house of worship, or *terreiro*, the compound nourishes people, plants, and landscapes to cultivate spiritual, social, and ecological wellbeing.



I'm thinking of the Yoruba word often used to connote dance, 'Gbèra.' Levitate. Move. Movement. It's a command. A call to action. An invitation to kinetic deliverance from stasis through the rapture of rhythm.

In the Candomblé religion of descendants of enslaved Africans in the New World, a spiritual practice born of a desire to reassemble a fractured but divine memory, worshippers assemble themselves in a processional epic. God is movement. They wear white. They ready themselves as vessels for a kinetic force. Their hands and legs, their torsos and mouths and lips become narrative instruments of the spirit. They move and the spirit moves. If they do not move the spirit will not move.

Movement as in the tactile imagination of an unfettered body. Movement as in political levitation. Levitation is the opposite of shackles.



*

I once went to see a dance called, 'Black Swan Revival' at the Harlem Stage House in Harlem, New York. It was choreographed by the great Zimbabwean dancer, Nora Chipaumire, but the specific legibility of the dance that evening was set on the black male body of her protege and collaborator, Shamar Watt. I was stunned by Watt's body. He did not just perform the dance, he made the dance a presence inside his body. He wore the dance.

He began his dance in the dark.

From the dark stage, we heard gasps and spasms first. There was a struggle in the dark, though we couldn't yet see it, we felt it. Something, someone was in pain, in captivity, it was seeking freedom. When an orb of light shone on him on the stage, it confirmed what we felt. A small square had been drawn on the stage with white chalk, he was inside that square, flailing his arms, dancing, writhing, trying to get out. His actual costume was a white shirt fully unbuttoned to reveal his torso (the lower part of the shirt flailed like a tail when he jived). He wore tight fitting black pants that made his legs look like sparrow legs. An earpiece was hooked to his left ear, the wire curved down to his neck like the operculum of a fish. Because the wire was white and luminous in the tightly stitched darkness of the stage, I saw it as a tiny wing. He was simulating a bird. Every time he got close to the edge of the white square as if to escape and break out of it, an invisible hand would forcefully pull him back. He flapped his wings, but it was flight as containment, flight as rootlessness without motion. A sky that doubles as a cage. History as containment. He couldn't breathe. When his body on the stage sighed deeply and finally, I felt it in the left of my lungs.

*

There was another dance that night. 'Sen Koro la', (The rites of initiates) by the Burkinabe dancer, Lacina Coulibaly, who teaches dance at Yale and Sarah Lawrence. Sen Koro la translates in Bamana language as 'under our feet'. Coulibaly's dance was mostly with his feet, tender, tentative, as though he was moving to a music inside himself. He was alone on the stage, but he danced as if a multitude was dancing with him inside him. The dance had air and space, it was alive, like a room made for levitation. His body could breathe, was breathing, but gently, tenderly. His upper body, umber brown and sturdy, was bare, and on his lower half he wore a flowing white skirt. My father loved to wear white to sleep, he thought of it as signifying peace and renewal. When he stopped breathing, a white cloth was pulled over his body. For burial he was wrapped in a white shroud like a spirit getting ready to levitate.



Many Afro-Brazilian communities and their knowledge systems contribute to a global mobilisation toward decoloniality – a collective dismantling of the stubbornly entrenched structures of social, cultural, political and ecological power imposed through colonialism (Mignolo and Escobar 2009, Kimmerer 2013, dos Santos 2015, Penniman 2018: ch. 3, Daigle and Ramirez 2019: 78–84, Krenak 2024). Quilombo communities on the Dendê Coast such as Graciosa and Lamego have joined this effort, inspiring collective action and a range of political-economic-ecological struggles toward just futures. The Comunidade Terreiro Caxuté, an Afro-Brazilian religious and educational community, draws on ancestral wisdom, pedagogy, and ecological ethics to care for its people and places. Founded in 1994 by Maria Balbina dos Santos, a *sacerdotisa* (priestess) of the Afro-Brazilian religion Candomblé known throughout the region as Mamêtu Kafurengá, or simply Mãe Bárbara, the community serves an astonishing variety of social-ecological functions. Among these, the compound operates as an extended family home, house of worship (*terreiro*), cultural-environmental museum, agroecological extension office, primary school, community library and food bank ‘born and raised among the *dendezeiros*’ (Luangomina 2019: 36). Based in Afro-Brazilian traditions they describe as Bantu-Indigenous, its members apply ancestral methods and ethics to build and maintain community. These efforts are part of their approach to ‘*terreiro* pedagogy,’ the community’s guiding philosophy, which emphasises a ‘process of teaching-learning’ based in hybridity, multiplicity and circulation over the colonised binaries of teacher-student, nature-society and work-life (dos Santos 2019: 51–54). They use *azeite de dendê* in the preparation of sacred and routine foods; they use its fruit and kernels in divinations and other rituals; and from the fronds they make *mariô* to adorn the entrances of their ceremonial spaces. Their holistic approach to *dendê* – at once sacred, cultural, economic, and environmental – descends from diasporic ancestral traditions to propose futures of abundance based in socioecological wellbeing and care.

EAT AND REMEMBER



FIGURE 5.

A *Baiana de acarajé* deep-fries her signature dish in locally sourced *azeite de dendê* (2008).

According to my people, the Yorubas, there are two kinds of death. Good death and bad death. Bad death has the insignia of famine, of a thing cut off too early. But good death is a rite of maturation and passage. You pass from among us to the realm of ancestors to watch over us. We rejoice and eat Akara at the funeral to mark the transition. We beseech the god of the portals.

But Akara is about life. It's not the dead who eats it, it's the living. We eat it at the bazaar and market stalls, at the street corners and the street vendors. It's food in motion, food on the run. It's food that crosses doors, crosses borders and oceans.

Akara is the food of the living. Wherever there is

Akara there is aliveness. It's food made sacred by the people's communal hunger. It's the food of the cycle of life and death. It's almost like colour of earth, the colour of flesh. The oil is the blood. Take this, eat and remember.

Bahia's most prominent purveyors of *azeite de dendê* and its ancestral foodways have to be the ubiquitous *Baianas de acarajé*. Scattered through the state, country and beyond, these mostly Black women vendors stand at the forefront of Afro-Brazilian foodways and religious cultures. Their eponymous dish, *acarajé*, is a diasporic bean cake fritter descended from the Yoruba delicacy àkàrà. *Baianas* fashion their savoury pastries from hand-milled black-eyed peas, deep-fry them in locally-produced *azeite de dendê*, and finally slather them with okra – ingredients all native to West Africa. Finishing with dried shrimp and a fiery pepper sauce, they love to warn the gringos, '*Cuidado, viu?! É picante*. [Careful, you hear?! It's spicy.]'

Baianas have much to teach us about the interrelations of gender, culture, politics, religion, labour and food. In her fieldwork with *Baianas* and their labour union in Salvador, Vanessa Castañeda shows how *Baianas* masterfully navigate fraught social mores to wield considerable social, economic, and cultural power (Castañeda 2021). Drawing on centuries of tradition, as well as their own interpretations of Black Feminism, *Baianas* have mobilised diasporic foodways and cultural ingenuity to provide for themselves and their families, perpetuate Afro-Brazilian religious beliefs and practices (especially related to *Candomblé*) and spread joy. Despite the profound structural inequities persisting from colonial past to neoliberal present, *Baianas* command important roles in local economies and the cultural politics of 'historical patrimony' by seizing official recognition of their traditions from state and federal authorities.⁷ Innovating foodways with deep diasporic roots, *Baianas* and their *acarajé* continue to (re)connect people with ancestral plants, practices and landscapes.

7 Castañeda (2021) details the fraught cultural-political processes that led to the official recognition of the *Baianas de acarajé* by IPHAN, Brazil's National Historic and Artistic Heritage Institute.

ECSTATIC FLESH



FIGURE 6.

A young wage worker unloads freshly harvested *dendê* fruit from an elderly ox (2012). The fruit awaits transport to nearby processors who will transform its flesh into *azeite* for sale in regional markets.

Think of the fruit, ecstatic flesh. Think of the seed of the fruit, ecstatic destiny. Wind is the messenger of their propagations. A seed splinters in the soil, breaks loose from its burial shroud and resurrects. What resurrects begins to grow downward and upward like a vertical river. It gathers the energy of the earth to itself. The roots dig down toward the bones of ancestors. The shoot rises like prayers. It grows honouring the sun and the moon with the dance of its slender stems. Guided by its inner head, its essence and a secret map of the future all being carried inside them, the seed does not stop until it has become a fruit. Like a boy, there is a story inside it. Every seed is a destiny.

Thanks to the prominence of *dendê* oil in Bahian and Afro-Brazilian foodways and religious cultures, most people recognise that substance only in its final processed state: *azeite*. Less well known are its precursors of seeds, soil, trees, fruits, expertise and effort. To become palm fruit and finally palm oil, *dendê* must pass through various stages of production, harvest and processing – all dependent on specialised knowledge and physical labour. Without knowledgeable people willing to work, there can be no *dendê* for regional foodways and religious expressions. This fact is unfortunately becoming more apparent in Bahia, as a collapse in local labour markets is coinciding with the chaos of climate change and centuries of misguided development policies to precipitate a crisis in local *dendê* production (Watkins 2025).

Faced with this crisis, public and private elites have regrettably doubled down on their support for one-size-fits-all approaches to agrarian development. Instead of recognising the devastation caused by centuries of top-down, colonial-corporate development schemes, authorities continue to push inaccurate and unconscionable narratives that more and more plantation monocultures could ameliorate the crisis. These efforts come as merely the most recent onslaught in centuries of colonial-cum-capitalist agro-industrial development rhetoric and policies. What if the authorities instead recognised and supported local workers and their communities, ancestral landscapes of *dendzeiros* and the wisdom they together embody? (Watkins 2025). What if they heeded the calls of social(-ecological) movements active in the region, such as Teia dos Povos, who organise and advocate for food sovereignty and agro-ecological systems such as Bahia's ancestral *dendê* landscapes? (Ferreira and Felício 2021)

HARMONY



FIGURE 7.

A quilombola woman ‘washes’ oil from fresh *dendê* fruit to derive *azeite* in the quilombo community of Kaonge, located in the Iguape district of Bahia’s Recôncavo across the Bay of All Saints from Salvador (2012).

Think then of these hands, the hands of my mother. There is a covenant between the seeds and the hands. The hands know through an intimate memory the tenderness of the seeds, the fruits and the oil. The hands know – through a knowledge older than the hands – of the covenant of hands and the seeds, the covenant between the fruits of the seeds and the oil of the fruit. These baptismal hands. The hands submerge in the river of oil. The hands dip, glide, glaze over the seeds, fruits, and oil. The oil blesses the hands. The hands bless the oil. The hands do not bruise or hurt the fruits. The hands talk to the seeds. The hands dance with the fruits until there is a harmony, the harmony of ancestors or lovers. The harmony of a covenant.

‘The heart of the proposal’ offered by Teia dos Povos ‘is in the idea that agroecology is feminine and feminist’ (Ferreira and Felício 2021: 124). Affirming this revelation, the agroecology of dendê in Bahia remains a diasporic, hereditary and gendered practice that connects contemporary communities with ancestors on either side of the Atlantic. While harvesting fruit has long been a duty mostly for men and boys, the manual labour of processing oil from fruit is typically conducted by women and girls (Lody 1992: 33). Here the hands that ‘wash’ the azeite from the fruit perpetuate ancestral practice, at once mundane and sacred, Bahian and African – transatlantic, yet quotidian.

This sacred practice continues in communities throughout coastal Bahia, including Kaonge, Dendê, Engenho da Ponte and the other *quilombos* of the Iguape peninsula. Writing from and with those communities, *quilombola* scholar, advocate and poet Rosane Viana Jovelino frames these activities within a ‘solidarity economy’ based on the agroecological cultivation of *dendê*, polycultural gardens of manioc and other native plants, beekeeping, fishing and shellfish gathering, handicrafts and community-based tourism – all sustained through inclusive democratic systems which balance and rotate leadership among genders and age groups (Jovelino 2018). These and thousands of other *quilombo* communities deserve not only inalienable rights to their lands and livelihoods, but indeed our sincere recognition as exemplars of inclusive democracy, socioeconomic solidarity and viable ecologies.

SACRED CARGOS



FIGURE 8.

Bottles of artisanal *azeite de dendê*, qualified as *azeite de pilão* (meaning processed via ancient transatlantic methods using mortars and pestles), sit for sale in an open street market in Valença, the largest city and de facto urban capital of Bahia's Dendê Coast (2009).



Cargo on these shores once meant palm oil, kernel seeds, ivory, cotton, dyewood, pepper and humans.

*

The flow of palm oil is the flow of the beautiful divine. The blood of a fruit that is bruised and in its bruising blesses the earth. Where there is no flow of oil, there will be no remission of sin. Where there is no remission of sin, there will be sacrifice. Palm oil is the spirit of sacrifice. Palm oil is prayer and propitiation for mercy. The antidote to evil.

*

Cargo on these shores once meant palm oil, kernel seeds, ivory, cotton, dyewood, pepper, and humans.

*



The ships that once carried humans shackled with bruised wrists that dripped blood onto the wooden floors of the ship later carried palm oil that dripped onto the wooden floors of the bruised ship on the same spots the blood had been. In the memory of a disintegrated wood in the afterlife of trees somewhere, a wood remembers the oil of the Africans and the blood of the Africans on the same spot of wood. The oil made sacred by the blood. The blood made sacred by the oil. How could you have stolen a people's prayer and called it cargo? Or how could you steal a people's prayer and call it cargo?



Azeite de dendê is a plural and protean essence of Afro-Brazilian cultures and cosmologies. For Candomblé initiate and multi-modal Bahian artist Ayrson Heráclito, *dendê* represents a fundamental material element of the Black Atlantic, its 'blood, semen, and saliva' (Heráclito 2022). His oeuvre of an 'afro-diasporic cultural body' thus harmonises with Beatriz Nascimento's concept of transatlanticity, both referencing space as simultaneously geographical and corporeal (Burocco 2024). For her part, Nascimento credits *azeite de dendê* as one of four elements of the 'red blood of the vegetable kingdom' that contains and carries *axé* – the vital force of existence. 'That which is structure, from which all departs or returns. The home of all *Knowledge*' (Nascimento 2023: 316–17, her emphasis).

In his ethnography of the *dendezeiro*, Brazilian anthropologist Raul Lody details the relations of *dendê* within Afro-Brazilian foodways and religious practices. Even as *dendê* retains its essential dynamism and plurality as an expansile symbol and substance, its most profound meanings and functions within Afro-Brazilian cosmologies associate it with the *Orixá* Exú, a West African-Bahian trickster deity also known as Legba or Nzila, the 'principal agent of *dendê*' and the very 'owner of the *dendezeiros*' (Lody 1992: 12, 10).⁸ Adherents of *Candomblé* typically open

8 The three major families or 'nations' of Afro-Brazilian Candomblé revere pantheons of similar but distinct deities. In the Yoruba-based pantheon of *Orixás* revered in Candomblé Nagô-Ketu, Exú is the name of the deity referred to here; in the Fon-based traditions of Candomblé Jeje, he is also known as the Vodun Legba or Leba; and in the Bantu-based traditions of Candomblé Bantu (or sometimes Angola), he is known as the Inkice Nzila. See Capone 2010: 269.

their ceremonies with a *padê*, a ritual offering that includes a serving of *farofa de dendê* (manioc flour toasted in palm oil), to placate the irascible Exú and bring together people, ancestors and deities. Evidencing the fluidity and reciprocity that often guides Western African and Afro-Brazilian thinking, ‘Exú becomes dendê, just as dendê becomes Exú, without this limiting ... dendê exclusively to Exú.’ *Dendê*, Lody goes on, can therefore be seen broadly as ‘African blood’ and, quite specifically, as the ‘orange sperm’ of Exú— ‘the most *dendê* of all’ (Lody 1992: 79, 81–92, 9, 10, 12).

TRANSATLANTIC CONFLUENCES



FIGURE 9.

A pair of *dendezeiros* emerge from a tiny fluvial island in the middle of the Rio Una as it flows through the village of the same name in Southern Bahia, roughly 150 kilometres south of the region officially dubbed the Dendê Coast (2012).





It was said the Africans on those ships dreamt the mangrove trees with their thick, tangled legs, rose up to their full height like furious giants and followed the ships. The native river followed them too. The mangroves with their tangled legs like ancestry and the native rivers howled and trailed the ships. Then they furiously sped past the ships and by an ancient map inside them – since trees and rivers are older than humans – arrived at the New World before the ships. When the Africans arrived their mangroves and rivers were waiting for them.





Or sometimes the river was a seed in the landscape of a dream and then it began to grow branches like spirits.

From a tiny foothold in an aquatic expanse, life on earth emerges. River, soil and tree converge to nurture an intimate transatlantic existence. Only together, in coalition, could they create and sustain this particular home. And while the tiny island harboured a seed, that seed went on to form roots which now anchor the island, protecting it from encroachments and erosions, and aggregating, when flows allow, yet more earth. For Indigenous philosopher and organizer Ailton Krenak, the river is alive; a sacred provider of life; an ancestor; a teacher. Sharing his people's ancestral wisdom, Krenak explains how rivers speak with their own language. They regenerate from the traumas of human violence. They learn, they change course and they converge to find an ocean. And still, they are us. 'The rock and the water are so wonderfully entangled with us that we can say "we-river, we-mountains, we-earth" ... We allow ourselves to be water and feel this incredible power that it has to take different paths' (Krenak 2024: 1–14, quote p. 3).

Krenak also admires and engages Nego Bispo's complementary concept of *confluências*. Thinking with Bispo, Krenak describes confluences as political-ecological devices formed of both convergences and divergences, transfigurations that 'evoke the context of diverse worlds that can affect each other' (2024: 21–23). Rather than accepting everything into its main channel, the river converges with some (life-giving) ideas and activities, and diverges from others. Bahia's ancestral palm oil landscapes, for instance, converge with manioc and other beings and techniques indigenous to South America, just as they diverge from the necrocapitalist politics and ecologies of monoculture. *Confluências* thus

provide methods for coalescing and building strength through onto-epistemological diversities. ‘The river’, Nego Bispo teaches,

does not stop being a river because it converges with another river; on the contrary, it becomes itself *and* other rivers, it becomes stronger. When we enter into confluence, we do not stop being us, we become us *and* other people – we *render*. Confluence is a force that yields, that increases, that expands (dos Santos 2023: 4–5).⁹

This river, this theoretical-material space of watery, more-than-human simultaneity, must eventually fall into its estuary. The Rio Una, as all rivers in eastern South America, finds its final confluence at the shores of the Atlantic. In this way, we find the immortal inspirations of Krenak, Bispo and Nascimento – three brave and brilliant Brazilian theorists – converging to form an intimate transatlantic coalition. Blessed and empowered with their gifts, it is left to us to carry forward the promise of this confluence, to imagine, create and sustain new worlds.

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9 In the original Portuguese, dos Santos uses the verb ‘render’, which can mean ‘to yield’ and ‘to generate’ in the sense of (agricultural) production. All emphasis ours.

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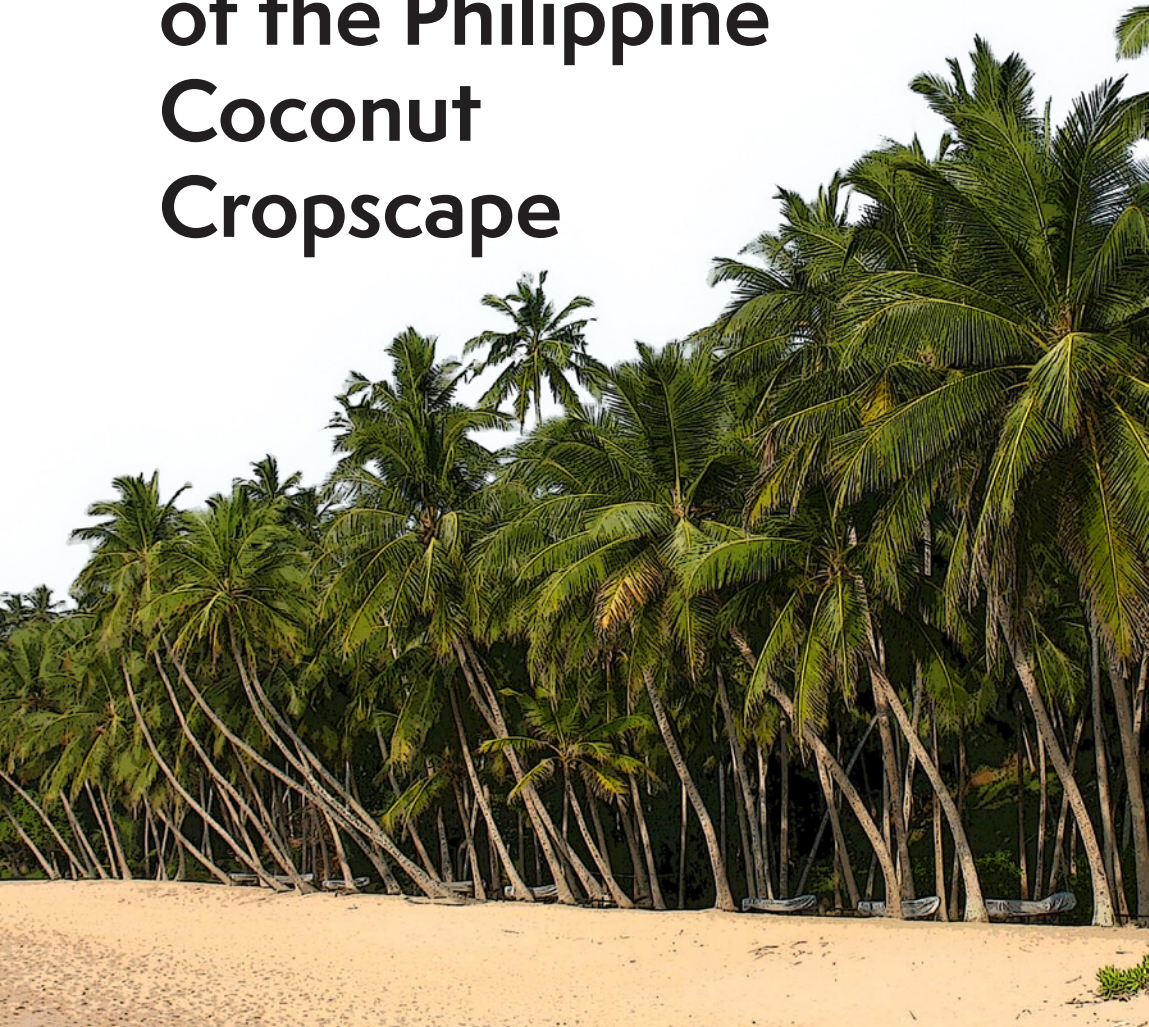
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Planting Power: Visual Cultures of the Philippine Coconut Cropscape



ABSTRACT

This photo essay filters the Philippine copra industry through the lens of the cropscape, a mode of understanding the multiple assemblages and timescales by which rooted plants become mobile. One key story in this assemblage is Imelda Marcos's Tahanang Pilipino – a model 'Filipino home' purportedly built exclusively out of coconut materials at the dawn of her husband's martial law regime and today popularly known as a 'the Coconut Palace'. By approaching the Tahanang as a mid- to late-twentieth century iteration of a longer visual culture of coconut palm extraction, we see how Imelda Marcos's imagined coconut future was deeply rooted in the extractive logics of a Euro-American colonialism that divided the globe into a temperate North and tropical South. The Tahanang Pilipino, I argue, modernised and nationalised a colonial history by naturalising the Philippines as a producer of tropical commodities for global consumption.

KEYWORDS

Coconuts, palms, Philippines, United States, history



The Cultural Center of the Philippines Complex (CCP) sits on land reclaimed from Manila Bay. First Lady Imelda Marcos designed the complex in 1966 to be a statement about the country's place in the world and, by implication, her husband Ferdinand's leadership. Its two theatres and a film centre were to serve as a repository for the otherwise linguistically and ethnically diverse archipelago's shared national heritage. A massive hotel and a convention centre announced that the Philippines was open to international business and investment. The Tahanang Pilipino – a model provincial home built almost entirely out of coconut – signaled that palm agriculture was the business in which to invest. Colloquially known as the 'Coconut Palace', the Tahanang put the palm to work.

The Palace captures the coconut palm's (*Cocos nucifera*) material and aspirational labours on behalf of the Marcos regime. It showcased the potential of coconut as a building material and of Filipino labourers as skilled craftspeople. An estimated 2,450 trunks were rendered into timber and shingling. Hundreds of thousands of smoothed and polished shells provided decorative inlays on doors, walls, and a 36-foot-long

dining table made of coconut wood. A chandelier composed of 101 shells flanked by two imposing wooden stairways greeted visitors upon entry (Figure 1). The seven guestrooms on the second floor, each representing the craft and flora of a region, signaled national unity despite a communist insurgency in rural Luzon and a separatist movement in Muslim-majority Mindanao. The largest and most gilded of these was the Ilocos Room, birthplace of Ferdinand (Lico 2003: 117–19). The inverted trunks serving as exterior columns – 122 in total – had been bred and engineered for the Palace by the Philippine Coconut Authority and the United Nations Coconut Wood Utilization Project (CWUP) headquartered in Mindanao’s Zamboanga peninsula (Figure 2). The wood, named *Imelda madera* in honor of its patron, symbolised the first family’s power over the plant and over human life even in the furthest and most rebellious provinces.

Despite popular resistance to the World Bank and IMF loans funding that the CCP mounted and to the regime of martial law imposed by her husband in 1972 on the premise of fighting communism and separatism, Imelda still declared the Tahanang ‘an architectural masterpiece, reflective of the Filipino people’s culture and their loftiest aspirations free from the vestiges of colonialism. It is a repository of native materials to show the Filipinos and the world that the Philippines is truly a rich country’ (Marcos 1981, quoted in Lico 2003: 117). Yet, as architectural historian Diana Martinez notes, its official opening was timed to coincide with the 1979 UN Conference on Trade and Development at the CCP. The Tahanang Pilipino ‘was only the most symbolic gesture of the Philippines’ willingness and ability to support an agenda oriented toward the development of a trade economy’ (Martinez 2022: 117).¹

Pushing beyond the symbolic, this essay treats the Tahanang Pilipino as a mid- to late-twentieth century iteration of a longer visual culture of coconut palm extraction. Imelda Marcos’s imagined coconut future was deeply rooted in the extractive logics of a Euro-American colonialism that divided the globe into a temperate North and tropical South. Colonial tropicity, write Felix Driver and Luciana Martins, invoked a visual code that framed the people and nature of the Global South as latent frontier resources for an ever-expanding industrial capitalism

1 Martinez offers an excellent reading of architecture, neocolonial agriculture, development debt and martial law.



FIGURE 1.

Interior lobby of hardwood staircases and the 101-coconut shell chandelier.
Tahanang Pilipino, Cultural Center of the Philippines Complex, Manila.
Photograph from <https://buildeee.com/articles/the-coconut-palace>

(Driver and Martins 2005). In the American colonial Philippines, invocation of these visual codes justified and guided Indigenous dispossession, the punitive relocation of racialised labour and the felling of forests for plantation agriculture, as processes of enclosure and ecological disruption that are constitutive of frontier zones.² In an age of otherwise intense imperial competition, it also facilitated inter-imperial exchange among the Euro-American resource managers who built colonial states and understood their work as improvement. The plantation photography of colonial commissioner and resource entrepreneur Dean

- 2 On resource frontiers as spaces of expropriation and displacement see Tsing 2003; on how rural people and local ecologies contribute to and constrain resource frontiers see Barney 2009. I've written in greater detail on scientific agriculture as a form of labour management in Ventura 2025.



FIGURE 2.

Four of the 122 exterior columns made from the Philippine Coconut Authority and the United Nations Coconut Wood Utilization Project's *Imelda maderas*. Photographed by the author in Manila, 2007.

Conant Worcester, planter manuals, and treatises of economic botany explored here were key components of how complex landscapes became knowable, manageable, and reproducible. Indeed, during the US occupation (formally 1898–1946), copra – the dried endosperm or meat of the coconut from which oil is pressed – became the archipelago’s third largest export. The coconut’s transformation from a local crop that shielded small growers from the precarities of commercial agricultural to a contemporary driver of inequality is a testament to the world-making power of the extractive gaze.

THE EXTRACTIVE GAZE AND THE COCONUT CROPSCAPE

The imperial division of the globe between a temperate, industrial north and a tropical equator was the conceptual foundation of the coconut cropscape, here broadly defined as the biological, environmental, and social contexts in which crops are simultaneously embedded and made movable (Bray et al. 2023: 4). For American expansionists in 1898, the occupation and annexation of the Philippines promised movement from a North American to a world superpower. The islands were a stepping-stone across the Pacific toward an imagined China market but also a place from which to funnel yet unknown tropical resources to US factories and consumers. To this end, botanists, agronomists and veterinarians flanked the invading army as it waged a brutal war of occupation that took upwards of 250,000 Philippine lives. Colonial Bureaus of Agriculture, Forestry, and Lands were established during the war and acted as adjuncts of the United States Department of Agriculture (USDA), with staff circulating between the Philippines and Washington DC. USDA Secretary James Wilson advised his counterpart in the Philippine colonial government, the agronomist Frank Lamson Scribner, that his bureau should focus on ‘fibers, coffee, rubber, spices, and such things as we cannot produce should have most attention’ (Wilson 1903: 7). President William McKinley’s December 1900 State of the Union Address presented resource colonialism as an agricultural education beneficial to Filipinos, ‘so that their peoples may be helped to produce the tropical products now so extensively brought into the United States’ (McKinley 1900). Decades before the Tahanang Pilipino, the Agricultural Pavilion at the 1901 Pan-American Exposition

represented this resource colonialism in its architecture. Grapevines and coconut palms hung above the entrance arch and draped the plaster moldings.

Inter-imperial exchange with European botanists in Dutch Java and British Ceylon encouraged Americans in the Philippines to turn their attention to coconuts and copra. Bureau of Agriculture (BA) employees traversed a copra commodity chain that connected Oceania and the Indian Ocean to industrial centres in the North Atlantic.³ William Lyon, a California forester turned economic botanist for the BA, reported that chemists in Marseilles had ‘produced from the cocoanut (*sic*) a series of food products whose manufacture has revolutionized the industry and placed the business of the manufacturer and of the producers upon a plane of prosperity never before enjoyed’ (Lyon 1903: 6). This revolutionary product was oleomargarine, the shelf-stable butter substitute made from vegetable fats. British chemists were fast turning the comestible into a combustible. When heated under pressure with an alkali such as lye, coconut oil’s high lauric acid content converts into nitroglycerin at a rate 25–30 per cent higher than other high lauric acid vegetable oils (United States Senate 1942). Coconut-derived glycerin would be used as a flamethrower in the first world war. The palm’s fibres, husks and kernels, rendered into charcoal, became filler in gas masks.

The Philippine coconut cropscape took more material form with the American movement of Tagalog-speaking war prisoners from Manila to the Iwahig Penal Colony on the southern island of Palawan. Penal relocation served the dual ends of easing dangerous prison overcrowding in Manila and asserting formal US over an area the Spanish had claimed but did not rule. The remains of a failed Spanish penal colony in the Iwahig River Valley housed the first 61 prisoners arriving in 1904. Lyon, working with the Bureau of Prisons, scouted locations for experimental farms on which to put prisoners to work. These prisoners, who were predominantly insurgents from rural Luzon, drew upon their own knowledge of planting commodity and subsistence crops, thereby making the prison a space of exchange. They likely knew coconuts as an insurance crop, a low maintenance tree whose fruit, bark, and sap

3 On coconuts as global commodities, see Bennett (ed.) 2018, Droessler 2022, Cerepak 2020; Laurance 2019 is a labour of love, full of anecdotes but short on analysis.

provided foods and vinegars, medicine and building materials (Tiglao 1983: 181–272). Coconut saplings thrived in the Iwahig Valley's sandy soils and circulating ground water, leading Lyon to call for more clear cutting for planting. Prisoners bore the risks of the ensuing ecological disruption. Mosquito displacement, stagnant waters and periodic flooding led to frequent malaria and dysentery outbreaks ('Heavy rainfall' 1910). Endemic beriberi, a vitamin B1 deficiency, signaled the chronic undernourishment through which prisoners worked. Iwahig's death rate was over 25 per cent in the first two years of its founding (White 1928). Unrest ensued. The Constabulary suppressed an organised outbreak of 100 prisoners in 1905, while others fled to the mountainous interior, seeking refuge with Indigenous Tagbanwa. An illicit trade in sex, food and favours, meanwhile, took shape between prisoners and a small community of older settlers around Iwahig's bay, a palimpsest of previous Spanish colonisation attempts to occupy the island (White 1928: 245).

Prison officials drew on women's care labour and plant knowledge to pacify prisoners. Families were encouraged to send seed packets from north to south, perhaps welcomed as familiar and future sustenance in an envelope or, at the least, shade cover for the coconut seedlings prisoners were set to planting. Iwahig's 1904 Creation Act also allowed for the reward of good behaviour with the arrival of prisoner families, a 'privilege' that 'may be revoked at any time by order of the Superintendent of the Colony' (Iwahig Creation Act 1904). Marriage, family labour and ultimately the promise of a homestead on prison grounds motivated good behaviour. The presence of families, and a mandate to finance the prison through the sale of its agricultural products, allowed Americans to frame Iwahig as 'one of the greatest penal reforms', to quote one newspaper, a prison yet 'an absolutely free community' ('Iwahig colony is one of greatest penal reforms' 1911). By 1926, Iwahig was 'said to be the largest penal colony in the world', home to over 1,200 prisoners whose families spread out over 100,000 acres. A second penal farm, San Ramon in Mindanao, began receiving prisoners in 1907 (Lyon 1903).⁴ It would soon house 600 prisoners, mostly Bangsamoro Muslims from Mindanao and Sulu, on 1,415 acres (Alzate 1925: 20–22). By the 1920s, the total acreage of Philippine land planted to coconuts for copra exports

4 I've written elsewhere about these prisons and do not want to risk repetition. See Ventura 2022. On the gendered division of labour, see Miller 2024.



FIGURE 3.
Administration Building, Iwahig Penal Colony, 1935.
Source: US NARA. Public domain.

had tripled from 406,000 acres to 1.166 million (Snodgrass 1928: 200). Plantation photography and planting manuals derived from prison labour attracted the copra investments funding this transformation.

Inasmuch as newspaper sources boasted of Iwahig's carceral innovations, prisoners are largely absent from the plantation photography soliciting investment in copra. Aerial photography, writes Theo Reeves-Everson in regard to mineral extraction, depopulated landscapes, 'creating an imaginary resource frontier of 'wild and empty spaces where *discovering* resources, not stealing them, is possible' (Reeves-Everson 2024: 605). The above aerial photograph, dated 1935 and stored at the US National Archives and Records Administration (Figure 3), shows just a few central buildings bordered by agroforest to the left and cleared fields to the right. The redirected Iwahig River weaves between at least five distinct agroforest zones. Devoid of people, the image communicates a tropics

not in a state of wild anticipation but instead already ‘conquered’ by economic botany for capitalist production.

Yet the coconut palm’s pervasiveness, together with its ability to reseed without tending and to fruit sparsely or prolifically in concert with its ecology, required ground-level extractive photography that documented its disciplining to the pace and profit of industrial temporality. To the Euro-American investor, coconut trees were sources of future copra profits: the more nuts, the more profits. More trees, however, did not necessarily mean more nuts. Spacing at distances between twenty and thirty feet apart and constant pruning did. Inter-imperial exchange informed subsequent spacing experiments at Iwahig and a second plantation prison, the San Ramon Prison Farm in Mindanao. BA farm machinery agent Thomas P. Hanley reported that a chance train ride from Colombo to Kandy placed him ‘in the acquaintance of an educated Singhalese’ who owned a plantation ‘upon which he made coconut growing a specialty’. The unnamed informant shared that spacing the trees 25 to thirty feet apart generated more nuts than if the trees were planted closely together (Hanley 1902: 630). Edwin Copeland, San Ramon’s chief botanist, carved out zones for spacing experiments, directing prisoners to plant trees at varying distances and depths, the growth of which he monitored and compared to old groves. By the end of the experiment, he had determined that seedlings be placed in holes at least twelve to thirteen inches wide and deep at distances no closer than 32 feet, with the land in between planted with soil-enhancing cover-crops and additional pruning serving to encourage further year-round fruiting (Copeland 1914: 135–36).

Dean Conant Worcester’s San Miguel Estate photography captured this ground-level engineering in the form of before and after images. Worcester was a University of Michigan-trained ornithologist who turned his previous collecting trips to the Philippines into a long and contentious career as a colonial administrator. Adept with a camera, his photographs of upland Indigenous Peoples represented the country as divided between Malay lowlanders and savage hill peoples – a visual – representation that in turn buttressed the assumption that an ethnically-united Philippine nation capable of independence was as yet non-existent.⁵ The below San Miguel images are carefully preserved in

5 On Worcester’s ethnological photography, see Kramer 2006, De Leon 2023, Rice 2013.

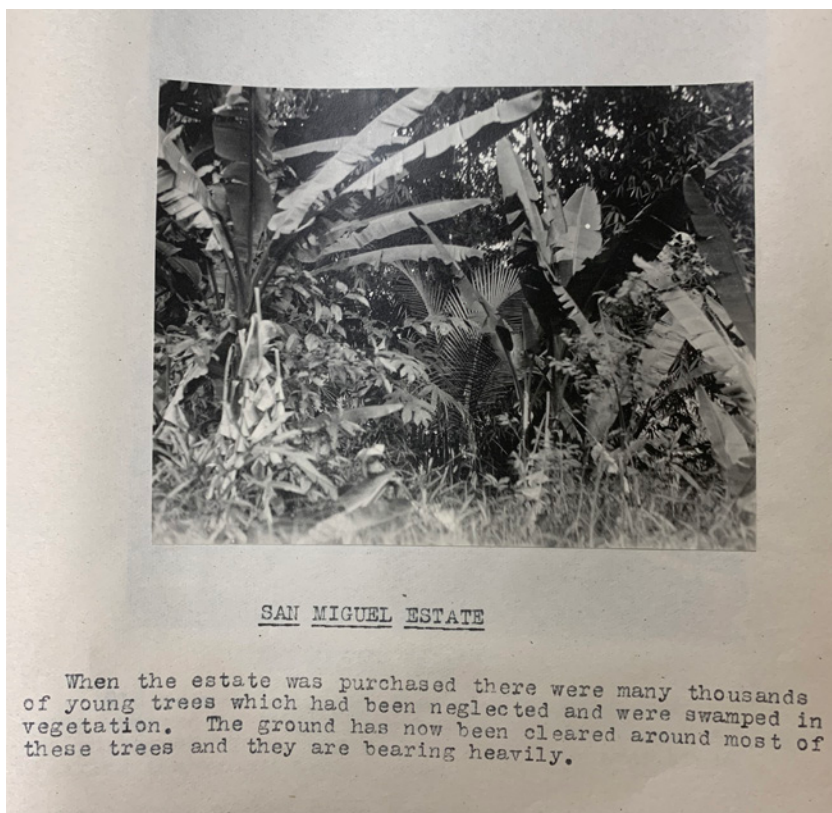


FIGURE 4.

Before Image of the San Miguel Estate. Folder 57: Letters to George Worcester (brother), April 22, 1922, 1921–1923, Dean C. Worcester Papers. Source: courtesy of Theftford Historical Society, Vermont.

an album sent to his brother in Vermont. Yet they were widely reproduced in BA-investment guides aimed at attracting outside capital to fund copra processing plants. In Figure 4, Worcester lays out a standard visual trope of wild, untamed nature. The estate, he captions, contained thousands of young ‘neglected’ trees, which had been ‘swamped in vegetation’. By the fifth and sixth images, the brush around the trees had been cleared and the old grove trees were now in a ‘fine condition’.

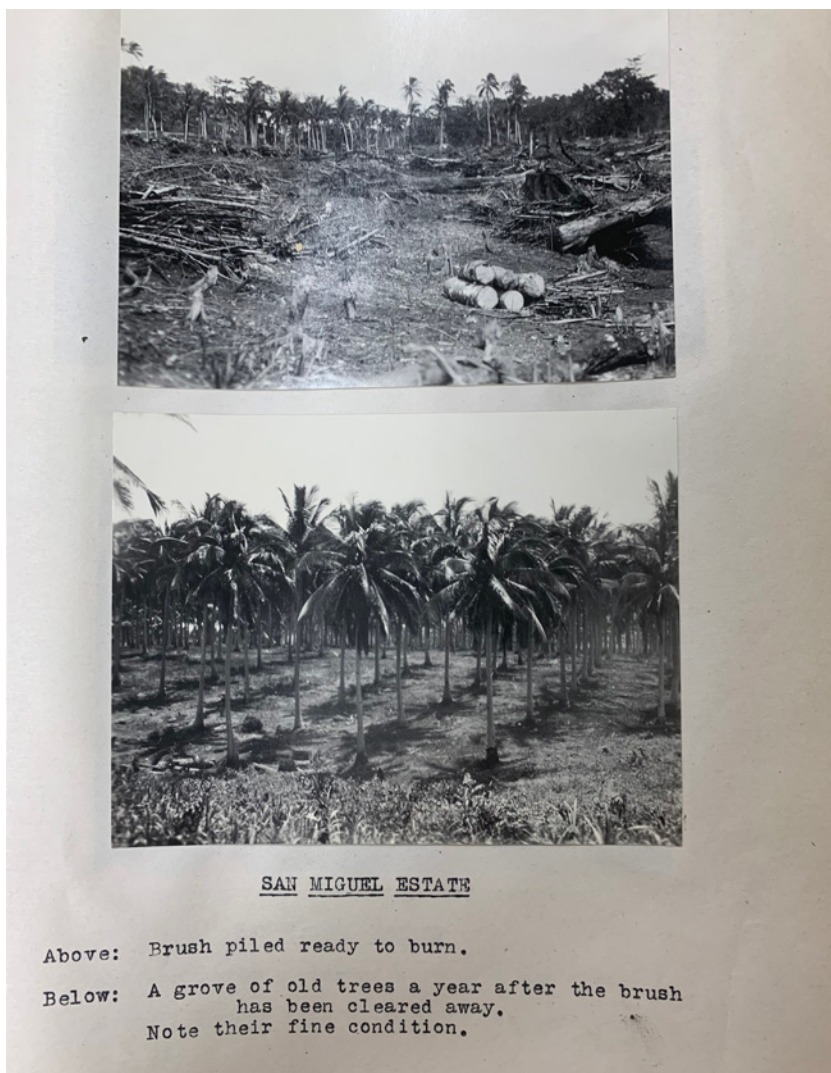


FIGURE 5.

After Image of the San Miguel Estate, with the Caption 'A grove of old trees a year after the brush has been cleared away. Note their fine condition'. Folder 57: Letters to George Worcester (brother), April 22, 1922, 1921-1923, Dean C. Worcester Papers.
Source: courtesy of Thetford Historical Society, Vermont.

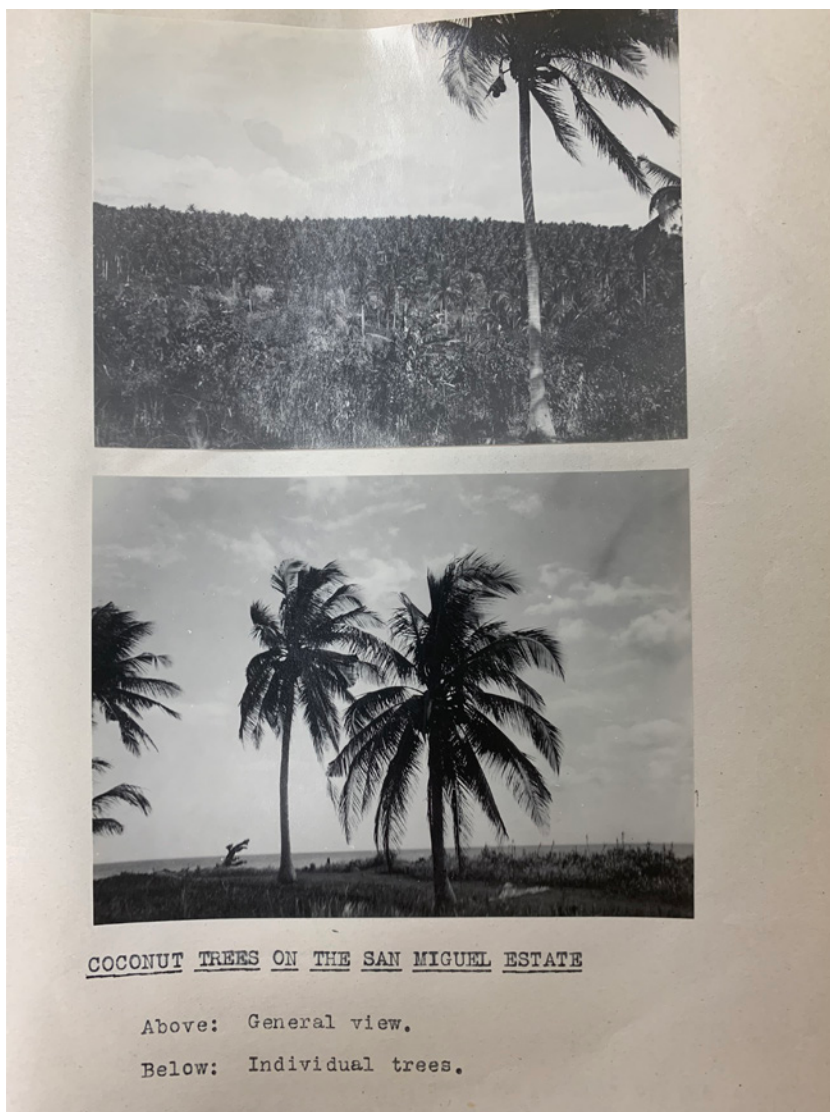


FIGURE 6.

Dean C. Worcester's San Miguel Estate. Folder 57, Dean C. Worcester Papers.
Source: courtesy of Thetford Historical Society, Vermont.

Before and after photography (Figures 4, 5 and 6) of overgrown fields razed for ordered planting did not simply document temporal change. The images were a means through which Americans contrasted their agriculture to that of the 'native planter' with whom they competed. The so-called native planter was a broad slur, inclusive of the small farmer for whom coconuts were an insurance crop to occasionally sell to representatives of processing plants, and of wealthier Philippine-born landowners. Indeed, the copra commodity frontier was a site of contestation and competition between Americans and the elite land-owning families who sought control over its trade. Cebuano tycoon Vicente Madrigal, son of a Spanish father and Philippine mother, who, like other landed elite, embraced a national Filipino identity, opened a competing oil refining facility near Worcester's. A promise from the Philippine National Bank to compel a Manila-based shipper to buy from Madrigal at an inflated price allowed him to offer local growers and pickers higher prices than those paid by Worcester (Mojares 1985).

Americans were quick to manufacture and document Philippine failures to follow scientific palm cultivation, marking scientific agriculture as a possession and trait of their own. A 1911 report on 'coconut conditions in Laguna', a province south of Manila, by BA employee O.W. Barrett, neatly summarises the American colonial attitude toward small cultivators, coconuts and cash in the Philippines. Trees were a means to the ends of turning nuts into copra and coconut oil for export. Any planting that did not maximise nut yield violated the principles of economic botany. Laguna, from Barrett's perspective, was in dire straits. Palms planted too close to one another raced toward the sun, their tall trunks discouraging high nut yield, 'probably not more than one-third of the normal amount for mature trees when well-spaced' (Barrett 1911: 152). The area's 'native planters' were 'getting only about 30 to 40 per cent of the proper income from their plantations'. This, Barrett insisted, was their own fault:

And since there appears to be very little or no loss from insects or fungus pests, and since the soil and the climate appear especially well suited for this culture, I firmly believe that said loss is due to the faulty system of planting, and to the lack of cultivation and live legume mulching in the plantations (Barrett 1911: 153).

The specimen view in Figure 7 reveals the engineered tree of the prison cropscape. J.B. Cooley, a former San Ramon warden now

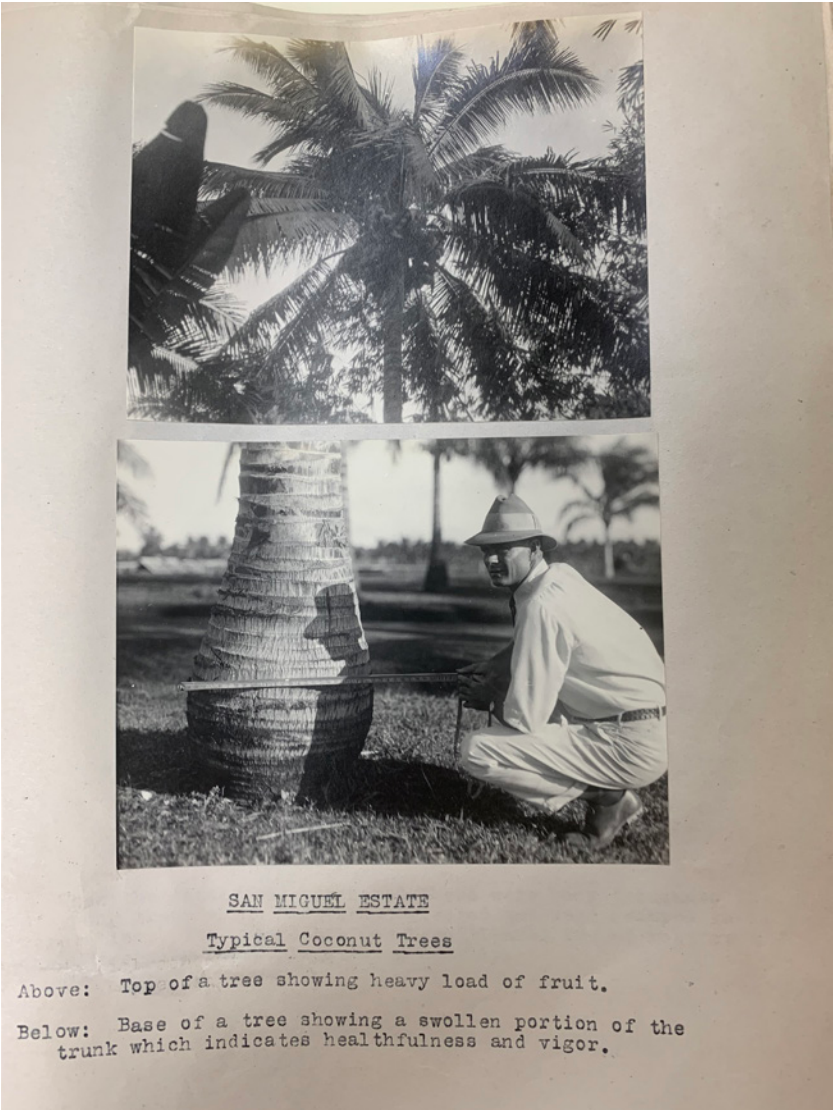


FIGURE 7.

'San Miguel Estate, Typical Coconut Tree'. Base of tree showing a swollen portion of the trunk which indicate healthfulness and vigor. Folder 57, Dean C. Worcester Papers.
Source: courtesy of Thetford Historical Society, Vermont.

employed as a field manager on Worcester's San Miguel Estate, squats with a measuring tape at the base of what is purported to be a 'typical coconut tree' after scientific agriculture. Its bottom trunk is swollen, a sign of 'healthfulness and vigor' manifest in the 'heavy load of fruit' atop. Copeland's 1914 planter manual, *The Coco-nut*, identified the Philippines as 'ideal coconut country' but emphasised that the stout high yield palm of the specimen view was reproducible anywhere (Copeland 1914: x). In this sense, and exemplifying what Moritz Von Brescius calls a 'mobile plantation', the prison cropscape was always meant to be reproducible – a situated place that, through the dissemination of planter manuals and the practices of scientific agriculture, was meant to be replicated in new spaces (Brescius 2025).

Despite the absence of prisoners and labourers in plantation photography, their presence and power haunts the images. Especially interesting is a 1916 photograph of San Ramon's 'coconut grove' (Figure 8). The trees are planted at distances of approximately twenty feet in neat rows, allowing officials to pave a road wide enough for carriages and cars down the main corridor. The road also allowed overseers to surveil pickers from some distance, policing especially the tapping of tree flowers for sap with which to make *tuba*, a potent and forbidden palm alcohol that was said to discourage nut production and therefore the transformation of maximum crops into maximum cash.

Moving to the post Second World War period, Oscar K. Moore's map of the coconut zone for *Economic Botany* attests to the mobility of the Philippine cropscape (Figure 8). Moore places the Philippines at the centre of a 2500-mile radius of coconut production. Industrial demand for copra recovered after the war but the prewar plantation coconut cropscape in the now independent Philippines had changed. The interwar period saw the departure of Americans, many of whom, like Worcester, had sold their holding companies to Lever Brothers decades earlier. At the behest of an American diary and seed oil lobby that blamed Depression prices on Philippine copra, the US imposed a three cent per pound processing tax and two cent excise tax on all copra and coconut oil imported to the US in 1930. The monies raised were returned to the Philippines Commonwealth treasury on the condition that it could not fund the production of copra, coconut oil and other allied coconut products, thus creating an uncompetitive market for US processors and finishers.



FIGURE 8.

Drive through coconut grove, S. Ramon Penal Farm. Philippines
Zamboanga City, ca. 1916.

Source: <https://www.loc.gov/item/2011648770/>, public domain.

Moore's bull's-eye, reminiscent of an aerial bombing maps, hinted at new and more dangerous applications to come. As the dairy lobby tarred coconut oil as inedible, chemists homed in on glycerin's industrial and warfare potential. Glycerin's wartime uses would only grow in scale and devastation. In 1943, Harvard organic chemist Louis Fieser combined naphthenic acid from crude oil with palmitic acid from coconut oil to produce a gel-like fuel he called 'napalm', the stickiness of which mitigated the need for bombing precision. The US Army debuted napalm in the Philippines in its attack on Japanese occupiers; napalm would again feature in tropical warfare in Vietnam, indiscriminately clinging to the bodies of its victims. Thus, in ways that Lyon could not have anticipated, the coconut was conscripted into a Euro-American war machine, turning what is too often and too glibly called the tree of life into a weapon of death.

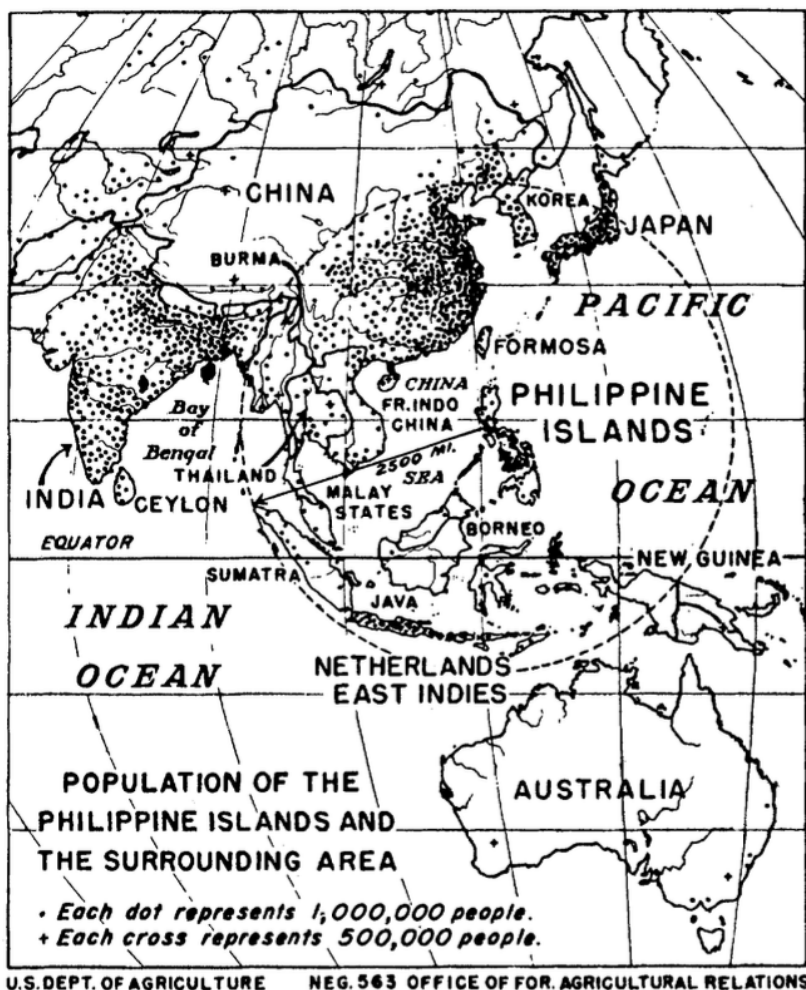


FIGURE 9.
 From Moore 1948: 126.

TO THE TAHANANG PILIPINO

The Coconut Palace is now the Vice-Presidential residence and is no longer open to visitors. Yet it still serves extractive ends now organised around a green economy. A quick web search reveals the building has been repurposed into the lexicon of sustainable luxury. According to one venture-capital funded builder, the Tahanang's 'coconut materials, natural textures and elements add a unique charm to the palace, proving that environmentally friendly design can be stylish and sustainable' (BillionBricks 2024).⁶ Imelda Marcos's aspirations for the Palace persevere and the coconut palm continues to work on behalf a state that acts as a labour and resource broker (Rodriguez 2015).

But from what perspective should we measure the Palace as a monument to sustainability? In terms of monetary cost, architectural historian Gerard Lico calls the Palace's 37-million-peso price-tag 'a high price to pay for advocating the coconut as a building material' (Lico 2003: 118). Building funds for the Palace came from the Philippine Coconut Authority created by Ferdinand Marcos to promote planting, modernise the industry and attract more World Bank investment, and a Coconut Levy placed on the small farmers powering the industry. According to the Philippine Coconut Authority, the area planted to coconuts expanded to 2.283 million hectares by 1975, bringing at least one third of the Philippine population into the coconut trade in some way. But the dominance of the trade was hardly unifying, despite the story told by the Coconut Palace. On Mindanao, Iranun Muslim entrepreneurs redirected copra away from Manila toward traders in North Borneo and Malaysia, setting the stage for armed conflict between the national government and southern separatists (Cerepak 2016). The Coconut Palace did not represent a unifying Filipino home or even a departure in the country's export agriculture. It instead asserted that profits from the international trade in coconuts and copra would flow through the national government in Manila, allowing the Marcoses and their cronies to grow rich from the cream skimmed off the top.

If sustainability is a measure of a balanced care relationship between people and palms, the coconut export industry encouraged by the Palace

6 BillionBricks is a venture-capital funded private developer with an emphasis on sustainable building materials.

is deeply unsustainable. Today, nearly 3.5 million smallholder coconut producers labour on farms less than twenty hectares in size. Farmers sell their copra and husks to middlemen traders who in turn sell to the large processing companies holding contracts with multinationals such as Cargill, P&G and Unilever. It is these multinationals that ultimately determine copra prices. Through these links, the palm and its fruit are rendered into glycerin for cosmetics, soap, medicine and explosives, its oil and desiccated meat into food, and its kernels into activated charcoal to filter water and whiten teeth. Without national support for farmer cooperatives, smallholders are indebted to middling traders, leading one advocacy company to refer to the coconut trade as ‘copra slavery’. The outsized impact of the coconut industry, the inequality within its labour arrangements and the susceptibility of old growth trees to bud rot and disease suggest, then, that the political economies and ecologies of the coconut are as unsustainable as the CCP’s reclaimed land in Manila Bay.

Far from a statement of national independence, the Tahanang Pilipino speaks to the repackaging of resource colonialism as development in the mid- to late-twentieth century. The Palace speaks to the Marcos’s vision of centralised power but is, in practice, a testament to the fragmentary nature of the coconut palm trade and its multiple possibilities. The inequality and violence within this trade should be a warning against repurposing the Palace, and the coconut itself, into a model for sustainability. This, to be sure, is not to foreclose the possibility of palm sustainability nor a return to its uses for building materials. Rather, attention to the coconut cropscape – the assemblages and stories that make crops rooted and moveable – asks that we look for and listen to those crop stories that are not so readily told.

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Cooking and Playing with the Chonta Palm



ABSTRACT

The chonta palm – *Bactris gasipaes* – is a part of the identity of the Afro-descendant communities that inhabit the Pacific coastlands of Panama and Colombia through southern Ecuador. Its fruit, *chontaduro*, was fundamental for the food sovereignty of those who made this area their home after escaping slavery and continues to be a nutritional source with multiple uses in regional cuisines. The wood stock of the palm is used in the construction of chonta marimbas, emblematic instruments of traditional Afro folk music. Both in the elaboration of chonta marimbas and in the culinary uses of *chontaduro* there is a great knowledge and intangible cultural heritage of the Afro communities of these three countries, knowledge that binds them together and transcends international borders. The article addresses this heritage with the aim of contributing to the understanding of how biased race and class issues have affected both culinary culture and music making.

KEYWORDS

Bactris gasipaes, *chontaduro*, chonta marimba, chonta palm, peach palm, Afro-descendant communities, music, Pacific music, food sovereignty, intangible cultural heritage, racism

Chontaduro is arrival in Cali, in the Valle del Cauca Department in Colombia. Although there are certainly better places to eat it, the ones sold at the airport are those everyone yearns for after months of being disappointed with those you find in Bogotá. The taxi ride to Cali from the airport is always accompanied by a small bag of chontaduros to provide taste to the landscape.

(Nicole Chapaval Ventura - Personal Communication)



*chontaduro*¹ with honey and salt. That's what returning home tastes like to people raised on Colombia's Pacific coast. That's the taste of home, of the bond with the homeland, the taste of the territory. And this fruit, in addition to being nutritious – classified in the twenty-first century as a superfood – condenses a part of the cultural identity of this rich and diverse region. The people of the Colombian Pacific find in its bright colours – red,

1 In this text I will use the term *chontaduro* to refer to the fruit of the chonta palm (peach palm or *Bactris gasipaes* Kunth). Other common names this fruit receives are: *pejibaye*, *pupuña* (*pupunha*), *pipire*, *pijuayo*, *pixbae*, *pixivae*, *cachipay*, *pifá*, *pibá*, *chima*, *tembe*, *chonta*, *kiri*.

orange, yellow and green – a compass, a beacon that marks for them the certitude of their place of origin.

The cultural identity of the Colombian-Ecuadorian-Panamanian Pacific coast – known in Colombia as the Pacific region – is also found in its music, in the sounds of the chonta marimba. The marimba as a percussion instrument comes from the African continent and, in the Pacific region, it marks the rhythm of life. For a large part of the population but mostly for Afro-descendants, the marimba and its music are present at births, baptisms, birthdays, celebrations, parties and, of course, farewells and wakes. In Afro communities the sound of the marimba remains a life companion from the very beginning to the end. And chonta, the wood from which its keyboard is made, comes from the same plant that produces the fruit that tastes like home: the chonta palm.

Thus, a large part of the cultural identity of this region inhabited by Indigenous peoples, Afro-descendant communities and mestizo populations stems from the same tree: the peach palm (*Bactris gasipaes Kunth*). This South American palm tree that was already culturally significant for pre-Hispanic communities acquired new dimensions thanks to the contributions of Africans who arrived in this part of the American continent after being kidnapped from their homeland and enslaved.

This text reflects on the cultural value, both tangible and intangible, of the peach palm for the inhabitants of the Pacific region as an important food source, which, for the Afro-descendant peoples, represents much more. It is an ecosystemic symbol, a connection to their spiritual life and a key part of one of their most representative musical expressions. There is also the question of the interaction of Afro-descendant communities with other communities in the expansion and consolidation of the peach palm as part of the cultural heritage of the region.

BIOGEOGRAPHIC REGION OF CHOCÓ

The biogeographic region of Chocó is the area located between the sea and the Andes mountain range in northern South America, stretching from Ecuador through Colombia to Panama. The Andes mountain range receives moisture from the Pacific Ocean and condenses it,

transforming it into one of the rainiest areas in the world,² with impressive watersheds rich in nutrients and equally powerful tributaries.

Although the Amazon and the biogeographic region of Chocó are separated by a vast mountain range, they share certain characteristics that link and connect them. This connectivity is documented, for example, in the passage of animals and in the distribution of plant species, and also because this corridor has been used as an outlet to the Pacific coastline by human communities since pre-Hispanic times.

ORIGINS AND DOMESTICATION OF THE CHONTA PALM

Both the Amazon Basin and the biogeographic region of Chocó pose a double challenge in the face of Western values of scientific certitude and its principles, when tracing archaeological remains or written sources. On the one hand, the environmental conditions of both regions make it very difficult for plant remains to survive for several years, as everything degrades easily. On the other hand, the communities that lived and still live there have ways other than writing to record their knowledge and history, including oral tradition, festivities and musical expressions that reflect not only their cosmogony and knowledge, but also their relationship with the environment.

The fact that certainties elude Western academia's gaze offers no ground to an assumption that there is no evidence of knowledge about the use of a species. Learning to read at the margins, to cross-reference information with other disciplines and to recognise the profound knowledge of the territory held by the different peoples who inhabit it is essential to providing a more just, if not a more complete, approach.

Having that in mind, the peach palm is one of the many plant species that seems to confirm the interconnectivity of the Amazon basin, the Andes and the biogeographic region of Chocó. Initial estimates indicate that the domestication of *Bactris gasipaes* Kunth occurred in the Amazon basin around 2000 BCE (between 4000 and 3000 BP, according to González-Jaramillo et al.). However, as shown later, domestication may have occurred much earlier, as suggested by the earliest archaeological remains of this plant that have been found in present-day Costa

2 Annual precipitation has been estimated at 13,300 mm³ per year.

Rica, dating from between 2300 to 1700 BCE (González-Jaramillo et al. 2022).

There are several reasons to mention domestication, firstly because there is an evident morphological differentiation between domesticated and wild species. In domesticated species, the fruits are larger and the stems of the palm trees appear to have fewer thorns. The second reason is how difficult it is for *Bactris gasipaes* Kunth to reproduce without human assistance (Clement 1988). Domestication, researchers claim, coincides with the establishment of the first sedentary communities in the Amazon basin we know of to date.

Information gathered by researchers of Amazonian communities (Sosnowska and Kujawska 2014, Patiño 1992, Clement 1988) points out that the stories and legends that comprise the cosmogonies of some Amazonian peoples in southern Colombia, Ecuador, Brazil and Peru mention that, after eating a fruit from the peach palm, it is essential to save the seed to later plant it near home. This very simple agricultural instruction, embedded in the myths that constitute the history of these peoples, highlights the cultural and nutritional relevance of the peach palm. At the same time, it allows us to see the sophistication of the relationships between communities and ecosystems.

Whatever the reasons for its domestication, this must have happened early in the occupation of the tropical lowlands, because the difference between the primitive pejiabayes³ (e.g., *G. microcarpa*, fruit size 4.4 g) and the most advanced landraces (e.g., Putumayo, 100.8 g) is enormous ... A change of this magnitude takes considerable time and requires specific breeding conditions, since pejiabay is allogamous. (Clement 1988)

That being said, in the scientific literature on *Bactris gasipaes* Kunth, doubts are usual about whether or not pre-Hispanic communities ate chontaduro directly as fruit. It is claimed that it was used to produce *chicha* (a fermented beverage), but few people in academia dare to affirm its consumption direct as a fruit. The fear of declaring such use may have two explanations, one would be that in order to be eaten by humans, chontaduro requires to be boiled in water for at least thirty minutes.

- 3 *Pejiabay* is another name for the peach palm and its fruit. When a species is relevant to human communities, the possibility of multiple ways of naming it increases. The linguistic argument also cited by Clement becomes relevant here: when a plant is culturally significant, there are words to name each of its parts in detail.

Following, there is a lack of scientific evidence (archaeological remains or written sources) to demonstrate that such sophisticated processing occurred in Amazonian communities in pre-Hispanic times. Doubts – if not biased interpretations – raised by Western scholars about the knowledge-base of pre-Hispanic communities are rooted in prejudice. They find it hard to accept that such ‘primitive’ peoples may have had such a sophisticated level of knowledge.

Fortunately, Latin American researchers with an ethnobotanical approach, such as Clement and Patiño, have said it clearly. Patiño stated in 1963: ‘*Bactris gasipaes* has been an important crop for human nutrition since pre-Hispanic times’. And Sosnowska and Kujawska summarised it this way:

Bactris gasipaes (peach palm), which is domesticated at population level, may have been one of the staple plants in the Amazon. This inference is based on its degree of domestication (Clement 1988) and its importance to many societies, as seen in their myths, legends and festivities (Patiño 1992).

According to the cosmogony of some Amazonian communities, the peach palm may be of equal importance to corn and cassava. Some even claim that the image of the tree of life and abundance is a peach palm, precisely because every single part of it has a use or, as Patiño claimed, ‘no part of it goes to waste’ (Patiño 1963).

In the pre-Hispanic communities of the Amazon, the peach palm was a source of excellent quality wood used for construction, but its main value lay in its hardness, which was ideal for making hunting tools such as arrows and bows. As a food, what is most certain is that its fruits were used to make *chicha*, which, depending on the fermenting time, could acquire a considerable alcoholic strength. The fruit was also consumed boiled and roasted and it is speculated – given the fruit’s rapid fermentation – that it was dried and turned into flour before fermentation occurred, which was then used to make a bread reminiscent of *casabe*, made from bitter yuca.⁴ From the heart of the palm and its shoots, hearts of palm were obtained, which were also a rich and nutritious food. The palm leaves were used to roof dwellings and weave fishing baskets. In this case, there was also an added advantage: when

4 Bitter yuca or manioc are identified as the toxic varieties of the genus *Manihot*. Amazonian communities’ deep knowledge of their land, as well as the foods produced there, led the people of this part of the world to develop a sophisticated method for cooking and transforming poisonous manioc into nutritious food.

immersed in water, the leaves of *Bactris gasipaes* release a substance that numbs fish, making them easier to catch. The trunk's spines were used as needles – useful in sewing clothing as well as for other purposes – the root provided a remedy for intestinal parasites, and the fallen old dead palm trees were the ideal organic matter for *mojojoyes* – the larvae of various species of *Phyllophaga* beetles – which are considered a jungle delicacy and a rich source of protein (Patiño 1963, Clement 1988).

Simply put: it is a perfect plant in every sense.

Pre-Colombian uses of pejibaye (Bactris gasipaes) as reported by Patiño (1963)⁵

Roots	medicine (vermicide)
Stem	bows, arrows, fishing poles, harpoons, flooring and panelling for habitations
Spines	needles
Leaves	thatch, basketry
Heart of palm	vegetable
Flowers (male)	ingredient in flavorings
Fruits (cooked)	direct consumption, fermented to make chicha (a nutritious, slightly alcoholic beverage), ground and dried to make flour, cooked with meat or fish, etc
Seed	direct consumption as nut

Upon their arrival in what is now Costa Rica, the Spanish conquistadors found *Bactris gasipaes* Kunth crops in that part of the continent. The presence of a species so far removed from its place of origin reveals at least two things: the aforementioned interconnectedness of the regions and the peoples who inhabited them, and the cultural importance of this species for pre-Hispanic communities⁶.

5 Taken from Clement 1988.

6 The dating of 2300–1700 BCE for the earliest archaeological remains of *Bactris gasipaes* – cited in the text by González-Jaramillo – leads to doubt either about the date of domestication estimated in by González-Jaramillo or about the dating of the remains found in Costa Rica, since they are too close to each other.

Once the conquistadors began to advance inland into the Americas, especially in northern South America, the presence of the peach palm was notable. It was found in populated areas and markets both in the Central Andean valleys and in the biogeographic region of Chocó. It was a culturally significant, colourful and highly valued species. This is how chronicler Pedro Cieza de León records it in his 'Chronicle of Peru', written between 1541 and 1550, upon arriving in the lands of 'the chieftain Nutibara and his dominion, and of other chieftains subject to the city of Antiocha', present-day Antioquia Department (state), Colombia:

Many beautiful rivers originate from the tops of the mountains; their banks were filled with fruits of all kinds, including very long, slender, and thorny palm trees. At the top of these trees, a bunch of fruit called pixivaes grows. This fruit is large and very useful, because it is used to make bread and wine. If you cut open the palm tree, you can extract a good-sized, tasty, and sweet heart of palm. (Illera (comp.) 2012)

THE ARRIVAL OF THE AFRO-DESCENDANT POPULATION

The Spanish conquistadors quickly learned the potential of the central valleys in present-day Colombia, especially the Cauca River valley, for agricultural crops. It began with rice, and shortly afterward, sugarcane. To this end, there was a large movement of enslaved people brought by force from Africa, who, by the end of the colonial period, had become the majority in what was then the Gobernación (Province) of Popayán.

The 1789 census transcribed by Francisco de Silvestre indicates that this Gobernación [of Popayán] had 64,463 inhabitants, of whom more than 35,000 were Black, distributed between 22,979 free people and 12,241 slaves. They were concentrated in the valleys of the Cauca and Patía rivers and in the towns along the Pacific coast. (Patiño Ossa 2012)

Added to this was the fact that the natural barriers of the biogeographic region of Chocó made it a possible, even desirable, destination for those who escaped slavery or achieved freedom. Thus, Afro-descendant settlements emerged along the riverbanks, and in the estuaries of the Pacific coast, which coexisted through market and cultural exchanges.

The Afro-descendant population found in the biogeographic region of Chocó a territory where they could live in freedom, building small towns along the banks of mighty rivers and understanding the jungle. A place where they could live in motion, where they could 'live *sabroso*'.

In her book *Vivir sabroso. Luchas y movimientos afroatrateños en Bojayá, Chocó, Colombia*, Natalia Quiceno emphasises that moving, inhabiting and travelling along the rivers, or as she puts it, 'being in motion', is part of the territoriality and, therefore, of the identity of an important portion of the Afro-descendant communities in this part of the continent (Quiceno Toro: 2016: 232). In this 'being in motion', in which family networks are distributed and rooted along watersheds, rivers of course act as highways along which people circulate, as well as essential goods for the body and the spirit: plantains, chontaduros (peach palm fruit), music (marimbas), and *viche* (a sugarcane distillate made by the Afro-descendant communities of the Colombian Pacific). This way of life, 'in motion', but also in freedom and dignity, is the basis of '*vivir sabroso*', a spiritual notion of profound wellness linked to the territory and the Afro-descendant identity of the Pacific.

COLLECTIVE MEMORY AND CULTURAL IDENTITY

The Afro-descendant population shaped the cultural identity of this particular region in many ways. Perhaps one of the most obvious contributions is in the kitchens, which, Patiño Ossa insists, were 'the domain of Black women'. In the biogeographic region of Chocó, for example, the plantain (*Musa spp.*) was brought to the Americas as a food staple for enslaved people, and acquired a prominence that remains. But perhaps a key point in determining the presence of the plantain among the Afro-descendant populations in the Americas – and here is a point that links it to the peach palm, as will be shown later – is that this plant represented the connection to Africa, to the land from which these people or their relatives had been forcibly removed. Thus, the plantain represented the celebrated 'warmth of home' in food, the tastes and aromas that allowed people an imagined return home, to childhood and better times, to the native land. Likewise, for Afro-descendant communities, the presence of a plantain tree in the yard of their dwellings or in the village meant a sense of belonging, a 'this is now my land, I am now from here'.

DANCING WITH CHONTA PALM

When the black man says marimba and guasá
his voice has the color of seaweed and mangroves,
the sweet provocation of the chontaduro,
the insinuating sway of the palm trees
the yellow of gold
and the feeling of nostalgia for Africa

(Mary Grueso Romero)⁷

The collective memory of Afro-descendant communities in Colombia allowed them to establish close ties to their land through various plant species. Many of these species – as is the case with plantains or rice and sugarcane – were based on the direct connection between these and Africa, while others were an adaptation based on the resemblance of some American species to plants with similar characteristics that were culturally significant on the African continent.

While for those with a twenty-first-century perspective this comparison may seem forced to the point of arguing that they find no resemblance in either the shape of the palm or in the shape of the fruit, collective memory – as will be seen with the marimba – is a powerful tool. It is something that allows peoples to build invisible bridges, bonds that are sometimes impossible for outsiders to imagine.

Such is the case of *Bactris gasipaes Kunth*, whose fruits may resemble the fruits of African oil palm *Elaeis guineensis*.⁸ And as Atinmo and Taiwo Bakre (2003) mention, like the peach palm, the African oil palm is also considered by various peoples in Africa as a ‘tree of life’ because each of its parts is of use and has representations in both the tangible and the intangible culture. I argue that there is a possibility that the

7 Cuando el negro dice marimba y guasá
su voz tiene el color de las algas y el manglar,
la dulce provocación del chontaduro,
el insinuoso vaivén de las palmeras
el amarillo del oro
y el sentimiento de nostalgia del África (Mary Grueso Romero)

8 ‘A palm fruit, the ‘tree of life’: it has an outer edible layer, the mesocarp; then a layer of shell, inedible, and the kernel inside, edible. The solution to this puzzle summarizes the botanical and cultural characteristics of the palm fruit’ (Atinmo and Taiwo Bakre 2003).

physical resemblance of the fruits of both palms, combined with the cultural importance of the American species for local communities – which resonated with the uses and knowledge borne by African peoples around oil palm on that continent – is what may have opened the gates for Afro-descendant peoples in the biogeographic region of Chocó to adopt *Bactris gasipaes* Kunth as their own, thus tending another layer of connection with their new land and a new dimension to the cultural value of the peach palm.

The marimba appears as this new layer of meanings and collective memory for those who inhabit the biogeographic region of Chocó. Music holds a special place in the spiritual life of peoples, and the Afro-descendant communities of the biogeographic region of Chocó are no exception. In many cases, the only link these peoples had in common was having arrived enslaved. They did not speak the same languages, nor did they share identical traditions. Music played a key role into bringing social cohesion among them, fostering the creation of a new collective cultural identity among peoples of very diverse origins. The collective memory of the Afro-descendant peoples preserved the memories of songs, rhythms, tunes and musical instruments that moved from continent to continent and acquired new forms and meanings, an example of the resilience, power and identity of intangible cultural heritage.

The Afro-descendant peoples of the Pacific coast, using their collective memory and recalling the instrument they played on the other side of the Atlantic, began to build marimbas with the wood of the *Bactris gasipaes*. The handling of chonta wood – which must be cut during the waning moon and dried for months to acquire the hardness that makes it so special – possibly stems from the exchange of knowledge with Indigenous communities who perfectly mastered these techniques, which are also essential to guarantee the instrument's durability in a region where humidity is often above eighty per cent. But let me be clear: among the many uses that pre-Hispanic communities gave to chonta wood, no evidence of its application in musical instruments has been found so far. And contemporary Indigenous communities in the biogeographic region of Chocó do not build marimbas nor play them. This is Afro-descendant knowledge and it appears to be a shift made by Afro-descendants in the use of peach palm.

Thus, the recreation of the African marimba with wood native to this side of the Atlantic gave rise to the chonta marimba, the identifying

sound of the biogeographic region of Chocó or as the people of the region play and chant in homage to the man who was a great marimba player:

Mr. Justino García, was a very popular man;
with a marimba in his hand, he made the shoreline tremble;
how it sounded, how it sounded, how that marimba resounded

(Inés Granja 1981)⁹

The sound of the chonta marimba travels down rivers, often in boats to attract fish, often as part of festivals held on the water, as is the case with amphibious cultures, and often to bid farewell to the dead. The spiritual meaning of its music is deep; it is attached to life and death. Along the coast, they say the marimba is attuned to the jungle, and that much of its spiritual power resides there.

COOKED AND EATEN WITH CHONTA PALM

In the city of Cali, they say the best chontaduros are found around hospitals and health centres. Relatives and friends often make a mandatory stop at street stalls before visiting sick people to eat them, as tradition and taste dictate, with honey and salt. On the one hand, if the trip has been long, the chontaduros will give them the energy they need to regain their strength. On the other hand, bringing a small bag of these fruits to those recovering in hospital is, in addition to a rich and nutritious food, a wish for a speedy recovery accompanied by the multiple vitamins and antioxidants chontaduro provides.

Acknowledgement of the valuable nutritional properties of chontaduro dates back to pre-Hispanic times (remember the teachings about saving the seed to be planted close to home), and it allowed Afro-descendant communities to achieve food sovereignty as they began to settle in these lands. Along the Pacific coast, plantain and chontaduro converged to establish roots and identity, primarily in traditional cuisines. However, unlike plantains, which are pretty popular in regional and nationwide recipes, even to some extent transcending class and

9 Señor Justino García, un hombre muy popular;
con su marimba en la mano puso a temblar el litoral;
cómo sonaba, cómo se oía, cómo retumbaba esa marimba.
Canción 'Homenaje a Justino García'. Words and music by Inés Granja (1981).

racial divides, chontaduro remained a niche food, closely linked to the region, but especially to racialised communities. The fact that plantains arrived in the Americas through Spanish colonizers – although they were not initially intended for themselves, but rather for their enslaved people – may have modified the cultural significance of this species, which was then no longer associated exclusively with racialised people. Chontaduro, by contrast, was often disparagingly categorised in Colombia as ‘food for Blacks and Indians’ or even ‘food for the poor’.

And perhaps this connection with racialised and impoverished people explains its disrepute. There is a clear contrast between the abundance of chronicles that record the presence and importance of this fruit in markets since the sixteenth century – not only in the biogeographic region of Chocó but also throughout much of the Andes and the Colombian Caribbean – and the scant trace of chontaduro to be found in regional or nationwide cookbooks, at least until the early 2000s (except as part of the props in photos of local cuisine).

The movement to recognise culinary traditions as intangible cultural heritage – which in Colombia dates back to 2006 – began to change that logic.¹⁰ In 2024, chontaduro flour was ‘discovered’ as a gluten-free food while the nutritional value of a single chontaduro is being compared to that of one egg. Chontaduro chips are increasingly found in stores, and Colombian restaurants include the fruit in several dishes, either as a side or as a main ingredient in their recipes. The reclaiming of the chontaduro has also been possible thanks to the enormous cultural and symbolic value this fruit holds, which has resisted the structural racism present in the region.

The chontaduro of the Pacific is yet another survivor of the coastlands. The plant is affected by both aerial spraying [of glyphosate] and by pests. It is still cultivated thanks to the persistence of coastal farmers who refuse to let go of the connection that the peach palm provides them between their culture and their music. Peach palm guarantees them food sovereignty and a sustainable economy.

(Andrés Ramírez Urbano – Personal Communication)

- 10 ‘It is often pointed out that, alongside increasing economic globalization and the expansion of lifestyles in modern industrialized society, processes of cultural homogenization have been taking place, often resulting in unwanted losses of linguistic and cultural heritage, such as musical, craft, and culinary traditions, folk medicine, and traditional knowledge of biodiversity’. Heritage Directorate of the Ministry of Culture of Colombia (2011).

CONCLUSIONS: DOES IDENTITY FIT INTO A PLANT?

The chonta palm is an essential species for the peoples who inhabited and continue to inhabit northern South America: it has been food, home, celebration, identity and a bond with their territory. It represents resistance and resilience, transformation and connection. However, as shown throughout this text, when addressing the history, domestication and cultural value of this plant, Western academia has dismissed the knowledge of the diverse peoples of the Amazon and the biogeographic region of Chocó. In contrast, it has favoured archaeological, archaeobotanical and written sources, which, as mentioned above, are scarce in this region simply because communities have other ways of recording their history and cosmogony.

Deep science and environmental knowledge also reside in oral, musical, botanical, architectural and culinary expressions as well as in other manifestations of cultural heritage. Understanding this offers a broader and more comprehensive view of the importance and meanings of *Bactris gasipaes*, the territories where it grows and the peoples to whom it is linked, those with whom its symbolic and cultural value has been consolidated. However, to do so, it is necessary to rid ourselves of colonial and racist biases.

The Indigenous communities of northern South America were essential in domesticating the species and safeguarding the knowledge and symbolism surrounding the peach palm, which in pre-Hispanic times was already important in daily life as well as in the spiritual dimension. The Afro-descendant peoples of the biogeographic region of Chocó recognised in the peach palm a connection to their place of origin that allowed them to set roots in this, their new territory. In this way, they strengthened their ties of ancestry and their bonds to Africa which are the essence of their cultural identity. Through these, they were able to create new layers of knowledge, equally powerful and culturally significant, such as the use of chonta wood for the construction of marimbas. Eating and dancing with *Bactris gasipaes* is inherently a symbol of resistance. It has defied structural racism, stigmatisation and persecution thanks to communities that have safeguarded this knowledge. They are the women and men who sell chontaduros, who cook with the fruit of the chonta palm and who compile recipes in their songs or

memorise woodworking procedures, who celebrate the chontaduro and dance with the sound of the marimba.

*The day I was born
Laughter and sorrow were born
Also were born dance and song
And was born love with the poem
There were born canchimalá [Ariopsis simonsi], piangua [Anadara tuberculosa]
And also prawn and shrimp were born
There were born borojó [Borojoa patinoi], chontaduro [Bactris gasipaes Kunth]
And also naidí [Euterpe oleracea] and milpesos [Oenocarpus bataua] were born*
(Zully Murillo)¹¹

Bactris gasipaes is a fundamental part of ‘*vivir sabroso*’, the concept of life wellness in Afro-descendant communities in the Colombian Pacific, which, again, consists of living freely and with dignity and sovereignty. The importance of this species to food sovereignty, spiritual life and the enjoyment of life of the racialised peoples of the biogeographic region of Chocó, places it at the centre of a reflection on how racial prejudices affect foodstuff, as well as how it affects science and academia, both of which have for decades hesitated to give the plant species its rightful place.

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11 *El día que yo nací
Nació la risa y la pena
Y la danza y la canción
Y el amor con el poema
La canchimalá, la piangua
Langostino y camarón
El borojó, el chontaduro
Nacieron naidí y el mil pesos*
(Zully Murillo)

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Ephemeral and Territorialised Oil Palm Trees



ABSTRACT

The oil palm agroindustry is advancing over many different territories worldwide, especially in Southeast Asia and South America, with impacts on forests and human and non-human communities. Production has expanded to supply refined palm oil and its derivatives, widely used in the manufacture of processed foods, cosmetics and cleaning products, as well as producing biodiesel. Because of this contemporary market demand, oil palm has become an agent of destruction, leading to critiques and denunciations from environmentalist agencies and civil movements. However, these discourses and actions seldom if ever mention the historical relationship of African and Afro-diasporic societies with the oil palm and remain silent on the colonial past responsible for transforming Central and West Africa into key territories for the production of palm oil for export markets. This is a topic already explored in historiography but so far not by anthropology to any significant degree. Based on ethnographic data, the present article analyses the historicity of the relational universe of oil palm in villages in the Mayombe forest region, showing temporalities and rhythms encompassed by a human-plant relationship. Inspired by this case study, I advance the concepts of ephemeral and territorialised plants, which could be extended to think about other ethnographic contexts.

KEYWORDS

Oil palm, palm oil, Mayombe, Central Africa, multispecies



INTRODUCTION

The oil palm (*Elaeis guineensis* jacq.) is native to West Africa, from where it spread to other parts of Central Africa. The plant has a deep historical, social, economic and cultural significance for various societies in Africa and among the African diaspora. The Mayombe Forest is recognised as one of the regions within the native range of the African oil palm, where the species maintains established natural populations (African plant database). It is an important tropical forest, sometimes called the ‘African Amazon’, which forms part of the Congo Basin, stretching from Gabon through the province of Cabinda to the Republic of the Congo and the Democratic Republic of the Congo. The region is home to some peoples, notably the Yoómbé, an ethnic group who speak

Kiyombe, a Kongo (Bantu) language forming part of the Kikongo Language Cluster.¹

In this article, I discuss the historicity of the relational universe of the oil palm in a Yoómbé community and territory, a group of seven villages here called MB.² I analyse how people situate themselves in time and describe their practices, oil palm trees and palm oil, focusing on stories passed down through generations, collective memories of Atlantic trade flows and the Belgian colonial period in the Democratic Republic of the Congo (DRC). In the process, I highlight the different temporalities and rhythms encompassed by a specific human-plant relationship.

Sophie Chao's ethnographic work discusses the oil palm tree at a time of the violent advance of agribusiness, drastically interfering in the lives of the Upper Bian Marind people of West Papua (New Guinea). In her book, she discusses an interesting counterpoint between the different agencies of the sago palm and the oil palm. According to Chao (2022: 207), plants can participate in both 'making live' regimes – in this case, the sago – and 'making die' regimes, such as the oil palm. Among its numerous contributions, her research is highly relevant here given her reflection on the speculative activity and categorisation of the plant by her interlocutors, seen by them as a foreign agent, a victim, with whom they wish to form relations.

A few years ago, during a similar period to Chao's own field studies, I was conducting ethnographic research in the Mayombe forest, where I came across a different type of relationship with the palm tree.

1 Kiyombe is classified by Guthrie (1948) as H16, part of the western branch of Proto-Central Kongo, which originates from the Kongo Language Cluster (KLC). This group was named following an examination of 95 varieties of Bantu languages, focusing on the broader Lower Congo region (Western Central Africa), where a continuum of related languages was identified (Schryver et al. 2015). Kiyombe terms cited in this article are written in accordance with the spelling indicated in the Kiyombe-French dictionary (Grauwe 2009).

2 My Ph.D. research (Vieira 2021) comprised various phases of fieldwork between 2016 and 2019. The first phase involved research with Congolese asylum seekers living in Rio de Janeiro (Brazil), while the second phase consisted of fieldwork in the province of Kongo Central (Democratic Republic of the Congo). The latter was divided into three periods (2017, 2018, 2019), totalling eleven months of research, five of which were spent mainly in the city of Matadi. For the other six months, I lived in a village in Mayombe, part of a group of seven villages (MB) situated in the Bula-Naku sector of the Tshela territory.

Oil palms and palm oil caught my attention because of their Atlantic history of human-plant co-constitution, which has ensured the maintenance of life among African and Afro-diasporic populations in the past and the present. Talking about oil palms and palm oil in West and Central Africa, or in Brazil, means touching on topics such as local cuisine, religious practices and processing techniques. They show close similarities to the practices and relationships of the sago palm in West Papua discussed by Chao, comprising a core pillar of relatedness in the community.

Unlike the sago palm, two distinct types of oil palm are found in villages where I conduct fieldwork in the Mayombe region: *yoómbe* oil palm (*dííba yoómbe*) and *phúútú* oil palm (*dííba phúútú*). The former refers to 'semi-wild' or 'spontaneous' oil palm trees, located not in plantations but in areas between the swiddens and restricted primary forest areas³. *Yoómbe* oil palms are part of an arrangement of beings (human, non-human and spirits). When associated with a plant, the category *yoómbe* indicates the involvement of humans in its ecology and a community's identification with it. People say that the oil palm is 'ours, from us, the Yoómbe'. Substances made from *yoómbe* oil palms, such as *mwuambe* (a sauce made from the palm fruits) and palm wine, are fundamental to relatedness – to making and maintaining kinship daily. At the same time, palm oil is the basis of the village economy. It is produced in machines built and operated by the inhabitants themselves, situated in the forest. The sale of 25-litre barrels of palm oil is the main way for households to earn money. These barrels also function as money (units of account, stores of value and mediums of exchange).

The transformation of this substance into money is related to the global demand for palm oil, which brings us to the second type of oil palm. The term *phúútú* is used in various Bantu languages and originally referred to the Portuguese. However, it has since become a generic term denoting everything that 'comes from outside' (foreign, white, European, Belgian), encompassing a fluid and imprecise sphere that evokes an image of Belgium, the former colonial power. The *dííba phúútú* (*phúútú* oil palm) refers to oil palms from selected seedlings planted in

3 Local customs prohibit any logging or hunting activities in this area of primary forest. The area is opened for communal hunting only if authorised by the ancestors following a ritual to consult them; this may take place once a year, but in some periods it may be years before it is opened.

plots during the colonial period in order to increase the supply of fruit for companies producing palm oil for export (Nicolai 2013). From the eighteenth century onwards, especially towards the end of the nineteenth century and during the first half of the twentieth century, palm oil became a global commodity, imported to supply a European market for the production of soaps and candles.⁴ Historiographical analysis has shown how palm oil trade and production were experienced differently in the African colonies. Under Belgian rule, oil palm plantations expanded significantly in the Congo (today the Democratic Republic of the Congo). Although palm oil was produced from small-scale harvesting, large plantation systems were introduced to enable the product to meet global demand. Much of its production had taken place in the 'Lever Circles' developed by the British entrepreneur William Lever, where the Belgian Congo Oil Plants (*Huileries du Congo Belge*: HCB) were installed and run on the basis of forced labour (Marchal 2001, Henriët 2015). The HCB did not operate in the Mayombe region, but other foreign companies did during the colonial period. The best known was the Mayombe Agricultural Cultivation Society (*Société des Cultures Agricoles du Mayombe*: SCAM), created in 1913 (Ma Pholo 1978).

The Mayombe villages were heavily impacted by colonial projects, turned into testing grounds for the palm oil agro-industry. But despite the investment, industrial production for export collapsed, while local and domestic production continued to be directed towards villages and towns in the DRC. Plots dating from the colonial period can still be found in villages today. Called *ndima léeta*, 'state plots,' these are now under the responsibility of village chiefs and are only infrequently visited by the inhabitants, as evidenced by the tall undergrowth now surrounding the palm trees.

The Mayombe region has not become a scalable landscape. First advanced by Anna Tsing (2015), this concept refers to the simplification of ecosystems through the transformation of forests and pastures into plantations based on the disciplinarisation of plants and bodies. As the author points out, though, changes brought about by scalability projects can be followed by the emergence of multiple ecological and economic

4 Jonathan E. Robins (2021) provides a long-term analysis of the oil palm, focusing on the transformation of palm oil into a global commodity. He discusses the historical and cultural relationship between Africans and this plant, encompassing the colonial experience and the expansion of agribusiness.

relationships, thriving in their ruins, what she called non-scalable landscapes. This last concept and Mayombe's history prompt various questions: what emerges in the wake of colonial projects? What remains and what is reinvented in the post-plantation era? How is the history of transforming people and palm oil into global commodities manifested in the daily life of a community?

Evidence suggests that palm oil was produced and sold in Mayombe prior to contact with Europeans. Products made from the *Elaeis guineensis* palm were marketed in Africa before the fruits, kernels and palm oil were imported into Europe. Indeed, in trade between Portuguese merchants and Africans, products made from the oil palm and the kola nut, as well as enslaved people, were commonly used forms of currency (Watkins, 2021: 61), so it was probably already part of internal trade flows. European interest in this substance has placed it on a different scale of value. This inflated valuation, in turn, has had consequences in the villages and possibly contributed to a specific arrangement whereby the products of the oil palm are subject to distinct property regimes. For example, fruits are collected from oil palms growing in the middle of the forest, near the food plots. The fruits used to make palm oil are privately owned, so people cannot harvest fruits from someone else's palm, although they can extract palm wine from palms that are not on their plot. Even if each person gathers fruit from the palms on their own land, the production of palm oil is a collective endeavour, carried out by the use of local machines situated in the forest. Men frequently lend each other jerrycans full of oil to help them pay off debts to urban traders.

To understand this specific arrangement, it is important to consider the Yoómbé people's relationship with the oil palm and palm oil over time, which brings us face to face with different temporalities and rhythms. In the first part of this article, I analyse Yoómbé tales to show how relationships with the oil palm unfold in a cyclical time of life, death and renewal. References to palm wine and the fruits of the oil palm can be identified, but we see no mention of palm oil or money. In the following two sections, I discuss the memories, accounts and explanations provided by village people regarding palm oil production techniques and the spatial traces within the village, to explore how the Mayombe oil palm became part of Atlantic trade flows and responded to the demands of production and trade for export. Finally, in the last section, I analyse the contemporary relationship of the Yoómbé with

the oil palm. At a time when palm oil production is geared towards meeting local demand in the nearest cities, other rhythms – such as the local market, the dry season and the rainy season – shape the relational configuration of the oil palm.

THE OIL PALM IN A MYTHICAL TIME

I had contact with stories told orally, some of which have also been published in small books.⁵ These are mainly known by adults and elders, since they were learnt in schools. The stories have a pedagogical character. They are resources for building and teaching Yoómbé culture and identity. Some tales suggest that relationships between people and the oil palm – or the beings and materials associated with it – are constituted through the sharing of technical knowledge and the Kiyombe language, in the course of active engagement with the land and its inhabitants (Ingold 2000: 133). This plant is situated in a mythical time, part of a cyclical relationship between life and death that is continually renewed, interconnecting men, women, oil palms and other animals. Palm wine and fruits used in cooking are present in these stories, but no mention is made of palm oil or the sale of this product.⁶ Palm oil is thus not presented as a traditional element of the Yoómbé relationship with the oil palm tree.

The story ‘The battle between the gazelle and the great leopard’ (Diocese of Boma 2010), for example, describes the palm wine tapster and the remains of the palm tree fruit:

A great battle is taking place in the Mayombe forest: the dispute between the gazelle and the great leopard. The gazelle is badly hurt and flees quickly, her blood is dripping down along the forest trail. She finds the palm wine tapster in his *lala*. The gazelle hides under a pile of *ziphusu*. The leopard is furious, he wants to find his enemy that got away. He follows the gazelle blood along the trail to kill and eat her. He too arrives at the palm wine tapster’s *lala* and meets the tapster. They both become scared when they meet. Next to them, the *ziphusu* is swinging to the rhythm of the gazelle’s breathing. The leopard says: palm wine

- 5 One of these books was published by the Diocese of Boma (2010) and introduced to me by the director of the village school.
- 6 Palm wine is a fermented drink linked to ancestors, extracted from the sap of the palm tree and widely consumed in Central and West Africa. This short story was adapted into the short film ‘The palm wine tapster’ (Vieira, 2023).

tapster, tell me where the gazelle is. Then the palm wine tapster says: the gazelle has ears, the leopard has eyes, the *ziphusu* sways, sways, the gazelle listens, the leopard sees, he sees. The leopard quickly opens his eyes wide to look for the gazelle. But he sees nothing, he finds nothing. He runs out of the *lala* to look for the gazelle somewhere else. The gazelle therefore finds life. The wine collector starts to say: gazelle, get out, go, because the leopard has no intelligence. The gazelle walks away very slowly. We have to open our ears and eyes to see the problems around us, where we live.⁷

The starting point of the story is a conflict, but the narrative revolves around the encounter with the palm wine tapster, who appears in an ambiguous position. He allows the gazelle to hide, but he also gives the leopard hints to find her. The plot is driven by the possibility of death, latent in the narrative. The contrast between the blood and the fruit remains is striking: one makes the leopard chase the gazelle, the other distracts him from his victim. The tensest moment of the conflict takes place in the palm wine *lala*, a space in the forest for resting and for storing fruit harvested from the oil palm tree. It becomes a place of refuge for the gazelle, guaranteeing its survival. The space allows the gazelle to 'find life'. In addition to death, the narrative thus turns to life, also mobilising actions inherent to the vital process: listening, seeing, breathing. It is the failure of these actions that causes the leopard to fail to achieve his goal.

When I asked what the story meant, one of my interlocutors replied: the eyes need 'to know how to see' (*kuzába móóná*). The use of the term *záába* (to know) indicates that the leopard failed to catch the gazelle because he lacked the knowledge to see. This interpretation of the tale

7 These stories were originally in Kiyombe and were translated by me with the help of a teacher from the MB school group who was giving me Kiyombe lessons. They thus went through several stages of translation – from Kiyombe to French and subsequently from French to English – which undoubtedly results in some loss of meaning in the text. In citing this and the other stories mentioned, I have written the Kiyombe terms according to the spellings presented in the book where this story was published (Diocese de Boma 2010). *Lala* is the term used to refer to spaces in the middle of the forest where the bunches of palm fruit are deposited. A small tent is often assembled nearby under which men gather and drink palm wine. It is in the *lala* that the fruit is often removed from the bunch, the remains of which are the pile of *ziphusu* – the woody remains of the bunches. It is a time-consuming task but necessary for the use of the fruit in cooking or, nowadays, also for the production of palm oil in machines. Palm wine tapsters are normally also fruit harvesters. However, the inverse is not true: there are very few palm wine tapsters, sometimes only one in a village, since it is a very tiring activity, requiring a great deal of skill.

leads us back to Ingold's formulation that ways of acting in the environment constitute ways of perceiving it (Ingold 2000: 9). They depend on skills and sensibilities developed through engagements with both human and non-human constituents of the landscape.

Some of the other stories found in the book were also told by adults in the village who had come across them as children. The central character of these tales, analysed by Julien Mbwangi (1999), is a kind of anti-hero called Nyimi. But Nyimi is not just a character in the story. He is described as a person from outside the village, who has come from Sekebanza (Central Congo) to 'provide training,' as one interlocutor put it, teaching the Yoómbé people techniques of rural activities and the correct use of the Kiyombe language. In 'Nyimi sleeps [*leki*] under the oil palm tree,' differently to the previous story, the palm wine collector is the main character, and the technique of extracting palm wine is the central theme⁸.

One day, in the morning, everyone went to make the first cut [*tenda madiba*] in the oil palm tree to extract the palm wine. After a while, in the afternoon, they made the second cut [*buela sinza*]. When evening came, they made the third cut [*buela kila*]. But when Nyimi, alone, went to get wine, he made one cut in the morning and a second in the afternoon. Then the village chief tried to advise him about the strong taste of palm wine: 'You, Nyimi, how often do you climb the palm tree to get palm wine?' Nyimi replied: 'Great chief, twice, once in the morning and once in the afternoon.' The chief listened and advised him: 'Nyimi, your [friends, relatives] will also make a cut [*babuezi lekila*] when evening comes, so that the palm wine will taste sweet. But what about you? Why don't you make the third cut on your oil palm tree?' Nyimi hears this and decides to sleep all night under his oil palm tree. At dawn, his friends go out to look for Nyimi, they see him and ask: 'Hey, you, we've been looking for you. Why did you sleep in the bush?' Nyimi says: 'The chief said that I don't make the third cut, so the palm wine gets bitter. I went to sleep [*lekila*] under the oil palm tree so the palm wine would be sweet.' Everyone listened to him and gave him advice.

The stories of Nyimi lose their meaning when translated into English since the narration plays with the multiple meanings of the same Kiyombe word. Nyimi messes up because he is a literalist: he is not guided by the dialogue with his interlocutor and does not understand the meaning of the word within its context of use. The term employed in this story to refer to the third cut made at the top of the oil palm

8 It is important to note that palm wine is made from the sap of the palm tree, which is extracted and left to ferment in a gourd or bottle suspended high up, just below the crown of leaves.

tree to extract palm wine is also refers to the term 'to sleep' (*lekila*). The chief advises Nyimi to make the third cut because it makes the palm wine taste good. But Nyimi understands the other meaning, so he sleeps under the palm tree. It is also interesting to note the shared knowledge of how palm wine is extracted and the everyday relationship of care that the palm wine tapsters have with the plant. If proper care is not taken, as in Nyimi's case, the result is a bad, bitter drink.

These stories explain how relationships between men and women, and between generations, are constituted. They are marked by accidental death arising from a breakdown in communication. But death is also linked to life and generation. Fruits are for cooking; they appear in a family register, inserted in relationships of reciprocity and mutual obligations. Mothers rely on the fruit harvested by their children. There is a cyclical dimension that renews itself but never ends. Death is not equivalent to the replacement of one generation by another, but allows for a continuous 'progenerative' process, transition points in the circulation of life (Ingold 2000: 145). In this context, death and generation are encompassed by life, not contrasted to it. As portrayed in these stories, through the oil palm, generations are 'happening' in people. And generations are also 'happening' in the oil palm itself, since it modulates in response to human action.

The association between life, death and generation also appears in how palm leaves are used when someone passes away. They may be placed on the ground, next to the body being mourned. People also take parts of the palm leaves and carry them in their hands, or tie them to their bikes or motorcycle, or on their heads. As well as communicating the fact that someone has died, the leaves also protect the wearer from the spirit of the deceased. This points to the sacred nature of the oil palm, linked to protection, which can also be observed in the centrality of these palm leaves in Afro-Brazilian religious spaces known as *terreiros*.⁹

Today, these stories are not taught in the school environment as much as they once were. Recovering them in this analysis is important, since they allow us to see a cyclical time, the relationship between life and death renewed through the oil palm. It is important to emphasise

9 Lody (1992: 17), for example, writes that the *marió* (palm leaf) is an attestation of protection and confirmation, a source for the material and symbolic life of the Orixás, Voduns and Inkices, which prevents evil from entering when placed on the doors and windows of the *terreiros*.

that none of these stories refers to palm oil or money. This absence suggests that, at the time these narratives were told, the oil palm was not primarily associated with either palm oil production or monetary value, in marked contrast to the relationship observed today.

PORTUGUESE TRADERS AND WHEN THE ANCIENTS MADE THE OIL

Signs in the landscapes of Yoómbé villages reveal contacts with the Portuguese and Belgians, as well as the region's participation in transatlantic circuits. The collective memories told orally evoke the time 'when their ancients made the oil palm' and the 'Portuguese traders' were active. These memories indicate changes in the techniques employed to make palm oil and in the units of measure employed to sell it, which elicits another temporality related to global flows.

Before Belgian colonisation and the subsequent standardisation of a mechanised technique through the use of local machines called *waksi* (uncertain spelling), there was already a practice in Mayombe of extracting the pasty liquid from the pulp of the palm fruit by placing the fruits in a hole in the ground and pounding them. These holes are still found in the forest and have been identified as spaces 'where the ancients made palm oil'. Called *zeta*, this technique resulted in a thick, concentrated oil.

The works of Susan Martin (1984, 1988) on Nigeria and Donna Maier (2009) on the Gold Coast and Togoland (southeastern Ghana and southern Togo) contain references to a technique, linked to women, that produced a 'soft oil', used for domestic consumption and local trade. The preparation of this oil resembles the procedures for making *mwambe* sauce in Mayombe villages. The fruit is placed in boiling water and then pounded in a mortar, where the fibrous pulp is separated from the stone. The technique involves female activities linked to fire, firewood, cooking and the pestle (Maier 2009: 12). Susan Martin points out that '... before the 19th century, palm oil production was seen by most farmers in southern Nigeria as part of the kitchen, a female activity. Women collected fallen fruit, which was boiled and pounded. Then they removed the kernel, washed and squeezed the fibers from the pulp' (Martin 1988: 32). This technique was time-consuming and

labour-intensive, but it guaranteed high-quality oil with a low percentage of free fat.

In addition to this technique linked to women, the authors mention another that was also used in different regions of the African Atlantic coast both before and during the colonial period. Associated with exports and linked to men, this technique depended on fermentation and did not follow boiling procedures. The end result was a 'hard oil' with a high presence of free fat, which becomes concentrated when the temperature is low.¹⁰ In 1840 in Dahomey and 1850 on the Gold Coast, the sources refer to this other method of making oil, in which the fruit was left in a heap in the open air or in fermentation holes, so that the pulp gradually separated from the fruit kernel. Water was added and the mass pounded with a mortar or was trampled down by people using their feet (Maier 2009: 12).

Similar procedures, with references to the hole and fermentation, are mentioned to describe the *zeta* technique in the text 'The oil palm and the oil palm orchard. A contribution on *Elaeis Guineensis*' (Bittremieux and Malonda 1945). It is unclear whether this technique was used only by men, but it certainly was not a female activity associated with cooking. The authors mention that the term *zeta* comes from the Portuguese word for oil, *azeite* (1945: 168). They also point out that this oil was sold to the Portuguese and Dutch companies present in Mayombe at the end of the nineteenth century before the arrival of Belgian companies. References to shifts in the value system could also be found in the text. Bittremieux and Malonda note that the ancients partially recognised the value of the *Elaeis guineensis* palm tree in Mayombe. They drank palm wine and made a sauce from the fruit, extracting oil and adding water. They then discarded the kernel or used it to light fires. Moreover, the authors add, after the white people arrived, 'palm oil has become wealth and palm fruit has become treasure' (1945: 147).

In an interview with an older man and woman, born in the 1960s, from a Yoómbé village where I did fieldwork, the same stories were repeated about how oil was made before the mechanisation of the technique and

10 Jonathan Robins (2021: 57) explains that, in the first half of the twentieth century, Africans living in different political and social contexts produced 'hard palm oil' for export to meet global demand for oil used in the manufacture of soaps and candles.

the construction of local machines.¹¹ Once the oil was ready, the ancestors would sell it to the Portuguese.¹² They also mentioned selling the fruit. There was a time when a Portuguese man called Mangoko (spelling uncertain) would come to buy palm fruit. The measure used was the *caisse* (box in French). They calculated the quantity of fruit by placing them in a wooden box and measuring how high it was filled. They were then paid in money, although the couple did not say what kind of money was involved. If the person sold enough fruit, they received a reward in the form of a gift such as a blanket, sardines or dried fish.

It is important to recall that West Central Africa was one of the primary regions of origin for enslaved people taken to the Americas and that the Yoómbé were among the ethnic groups identified as sources of captives by historians (Almeida 2014, Silva 2017, Mobley 2015). Jonathan Robins (2021) argues that the relationship between the slave trade and the palm oil trade was more complex than has previously been addressed in historiography, including the fact that enslaved Africans produced hard oil palm for export.

In the Mayombe villages where I conducted fieldwork, in addition to being linked to the trade in fruit and *zeta* oil (measured and priced), the Portuguese were identified as slave traders. Memories about this violent practice appear in the contemporary practice of selling a person for a *ngaánga nkíísí* and in the circulation of the material and spiritual force called *kímbiindi*, both already discussed in others works (Vieira 2021, 2025). I briefly mention them here to argue that Portuguese merchants

11 These two people were the head of the lineage (*fhúúmu dikáándá*) and the head of the women (*Mama fhúúmu*). The lineage chief attends meetings with the village chief and other men. The women's chief takes care of issues brought up by the women. The interview was conducted in Kiyombe. As I have only a basic knowledge of the language, one of my main interlocutors and friends translated some passages into Lingala, a language of which I had acquired an intermediate level of knowledge and which I used to communicate with people in the field.

12 One of the interviewees said that people went to Loango to sell. However, 'Loango' may refer to various different places. Loango-Buete is the name of a village a few hours' walk from MB. Chiloango is the name of a river between Cabinda and the province of Central Congo. And Loango also refers to the coast, the area from Cape Lopez in Gabon to Luanda in Angola, and to a port in the sub-prefecture of Hinda in the Republic of Congo. These are important spaces in the trafficking of enslaved Africans (Sommerdyk 2012, Mobley 2015, Florentino 2009).

encouraged the monetisation of fruits and relatives, contributing to a reconfiguration of these practices in a different scale of value.

COLONIALISM AND OIL PALM SELECTION

The *yoómbe* palm contrasts with another, the *phúútú* palm (white, foreign, European), which is also an *Elaeis guineensis* palm but is considered to originate 'from outside the village' since these trees derive from seedlings planted during the Belgian colonial period.¹³

The *phúútú* palms are organised in plantation plots called *ndiíma leéta* (state land), which today fall under the responsibility of the chiefs. The plantations are visited only infrequently by the village population, something evidenced by the tall grass surrounding the palm trees, revealing an absence of weeding. These plots were explained by the chiefs and other elder men as a project left behind by white people at the beginning of the 1930s, who set up a germinator, a space for growing oil palm seedlings. The villagers went to collect the seedlings for planting. Each village in the grouping had its own plot.¹⁴ The land was carefully planned by an agronomist, who arranged the oil palms in regular rows and specified the spacing between seedlings. Responsibility for maintaining two rows of oil palm trees was assigned to each Yoómbe man and his family, including his wife and children. The trees took about six years to grow and the harvested fruit would be sold to foreign industries producing oil in Mayombe. Some said it was for the *Compagnie des produits*, but there were also references to SCAM (*Société de Colonisation Agricole du Mayumbe*).

The group of villages where I did my fieldwork (MB) belonged to a specific history of palm oil production in Mayombe, which was different from the experience in the HCB (*Huileries du Congo Belge*) areas. In the Mayombe region, land concessions were launched for developing a railroad across the Lower Congo (now the province of Central Congo),

13 There is a lack of botanical research to verify whether the difference in categorisation and relationship with these oil palm trees also corresponds to the botanical variations of the *Elaeis guineensis* species. These variations are based on the fruit's endocarp and are discussed later in this section.

14 Three of the MB villages collectively used the same plantation, a remnant of their origins as a single village during the colonial period before their later division.

linking the town of Boma to the navigable basin of the Chilungo River (Heyse 1927: 4).¹⁵ This first concession opened the way for land grabbing in Mayombe and for land transactions by private companies.

During the government of King Leopold II (1885–1908), agronomists were also commissioned to establish oil palm plantations at administrative posts and in Catholic and Protestant missions (Nicolai 2013: 3). When arriving in the region, the Belgians had to deal with the Portuguese and the Dutch who had already settled on land acquired directly from local chiefs.¹⁶ According to Mananga Ma Pholo (1978), the first palm oil company in the region, SCAM, was established in 1913, with its headquarters in Tshela.¹⁷ These and other companies created specific zones for the purchase of fruits from local inhabitants, who collected them from the native oil palm trees (Ma Pholo 1978: 41).

Agronomy and botany were important parts of the Belgian colonial economy. From the 1920s, the Belgians launched studies to improve oil palm cultivation in the Congo basin and the Mayombe coastal region (Vanderweyen et al. 1953: 2). The INEAC (*Institut National pour l'Étude Agronomique du Congo Belge*) set up research centres throughout the colony.¹⁸ The most important of these was located in Yangambi, where a collection of varieties of the species *Elaeis guineensis* was assembled. These varieties were collected in the colony, but also came from other regions through exchanges of materials with IRHO (*Institut Français de Recherches des Huiles et Oléagineux*, linked to former French colonies in Africa) and SOCFIN (*Sociétés Financières des Caoutchoucs* in Malaysia)

15 The notion of 'vacant land' is linked to the apparatus of colonial occupation and expropriation, entirely ignoring the relationship of the original populations to the land and its resources. Belgian authorities adopted the land concession system, which allowed them to exploit the Congo's resources for the benefit of the metropolis. Under this system, private companies were given the right to the fruits of palm trees growing on supposedly vacant lands (Heyse 1947).

16 Starting with a decree in 1895, properties in Mayombe were registered under the names of Portuguese individuals, Portuguese and Dutch private companies, and Catholic and Protestant missions (Heyse 1928).

17 Even before the Belgian colonial period, Tshela was an important commercial hub connecting border regions such as Cabinda and the Republic of Congo. With the installation of the colonial authority in the city and the implementation of the railroad, commercial activities in Tshela were intensified (Di Mbumba 2017: 230).

18 One of INEAC's most important figures was the agronomist Leplae, who had a productivist and authoritarian vision (Poncelet 2018: 313).

(Vanderweyen et al. 1953: 3). The Belgian agronomists identified three variants of the oil palm tree: *dura* (D), *pisifera* (P) and *tenera* (T). The latter originated through a natural intraspecies hybridisation between *dura* (male inflorescence) and *pisifera* (female inflorescence). Belgian agronomists also invested in crossing D and P to reproduce T, a variety whose fruits have more pulp. They were the first to plant a monocrop of the T variety (Corley and Tinker 2004: 241). In the 1930s, INEAC distributed seeds from T x T crosses for commercial plantations in the colony, aiming to renew and replace native oil palm trees so as to increase the supply of fruit for industrial use (Nicolăi 2013).

The *ndiima leéta* (state plantations) were probably among those cultivated using oil palm seedlings of the T variant planted in Mayombe during this same period. These plantations were part of a system of 'cooperation between Europeans and Africans' created to promote the exportation of agricultural produce (Jewsiewicki 1977). Based on Africans supplying raw materials to European industries, which held a monopoly on processing and trade, this system was first experimented with cotton, then with palm oil and rice. It formed part of the Belgian colonial economy's initiatives to rationalise the methods of exploiting labor and resources, especially after the Great Depression of 1930. According to Jewsiewicki (1977: 171), the system led to the domination of a traditional, agrarian and black sector by a modern, industrialised and white sector. It also implied the integration of the local colonial economy into the wider global economic system.

As discussed in the previous section, however, people from Mayombe were already part of a global economy that sustained plantations in the Americas. What occurred were displacements and extensions of scalable landscapes, causing the disciplinarisation of a species – the oil palm – in the village territories. The reproduction and insertion of the *phúútú* palm was an experiment resulting from the circulation of botanical and agronomic knowledge between the metropolis and the colony, and between the colonies in Africa and Southeast Asia.

In Mayombe the production of industrial palm oil depended on native oil palm trees, not just those selected and introduced into plantations. Before 1960, two-thirds of industrial oil production came from fruit collected by villagers through extractive activities or from their small plantations (Ma Pholo 1978). Industrial oil was also produced at the same time as local oil, made in the villages. After the Second World

War, the administrative authorities introduced severe measures to prevent the inhabitants from making their own oil, thereby guaranteeing the supply of fruit to the industrial sector.¹⁹ The deterioration of relations between the local inhabitants and the industries, combined with the *Zarianisation* policy (1973) implemented during the government of Seso Seko Mobutu (1965-1997), were factors in the decline of industrial production (Ma Pholo 1978).²⁰ Local production for the domestic market continues today.

In 2005, non-industrial production in the country amounted to 190,000 tons. At the time, it was estimated that this figure could reach 300,000 tons by 2015. In the province of Central Congo, in the same year, the production of local inhabitants was estimated at 15,000 tons, while the agro-industrial sector produced just 150 tons.²¹

A LOCAL MACHINE AND THE TIMING OF THE VILLAGE MARKET

Nowadays in Mayombe, the relational universe of the *yoómbe* palm tree is governed by different rhythms related to the passing of the weeks, months and year. Houses and people are constituted through a relationship with the *yoómbe* oil palms situated in the middle of the forest, near the land cultivated for local food production. Palm wine is extracted from the top of the tree to be drunk in the village, brooms made from the leaves are sold in the local market, fruits are harvested to be cooked in the houses or processed in local machines and sold to city traders.

The introduction of a new technique for processing palm oil through the construction of locally made machines, known as *waksi* (uncertain spelling), brought a different rhythm to production. The MB group has

19 The colonial policy of the Belgian Congo did not encourage local production. This differed to Nigeria where the British considered palm trees to be the domain of African communities, did not invest in a policy of granting land to exploit them and encouraged local production (Marchal 2001: 362, Martin 1988).

20 The Zarianisation policy consisted of the progressive expropriation and nationalisation of companies and properties belonging to foreign owners or international groups, which had harmful effects on the economy, plunging the country into a deep crisis (MacGaffey 1987: 46).

21 These data were produced by a group of Belgian consultants (Agrer-Earth Gedif 2005).

more than thirty such machines located in the middle of the forest. Although there is no precise date for when the first machine was built in Mayombe, it is possible to trace their widespread use to the second half of the twentieth century, a period accompanied by a decline in industrial production. The expansion of mechanisation, along with increased oil production by local communities, supplied an internal market, particularly the cities of Boma, Matadi and Kinshasa. This shift was also perceived by local populations as an improvement in the quality of the substance: the oil came to be described as *nlaángu nlaángu*, ‘water, water’, a characterisation that emphasises its more liquid appearance in contrast to *zeta* oil, considered thick, solid and heavy. This transformation also entailed changes in units of measurement. Fruit was sold in boxes (*caisse*) and bags (*tsako*), while *zeta* oil was wrapped in leaves. Oil produced by machines, in turn, was initially sold in 100-litre barrels and is now commonly sold in 25-litre jerrycans. The use of the jerrycans facilitated the trade in oil, since they are easier to carry on a person’s back and can be transported by motorcycle, car or truck.

These jerrycans are exchanged for money and can themselves function as a form of currency. It is a product used as a unit of account. My interlocutors in the MB villages index jerrycan numbers to amounts of money. They say, for example, ‘I gave you the money for five jerrycans [*jaune*]’. Within the village, jerrycans of oil also circulate as a means of payment. They are used to pay the rent for land, the school, the hospital; and for the purchase of artefacts such as the machete, the hoop for climbing the oil palm tree, the knife for extracting palm wine. The material quality of the oil (it lasts for months without spoiling) also allows it to be stored and the jerrycan to serve as a store of value in houses.

The non-perishability of oil allows people to cope with seasonal difficulties. A second factor shaping the relationship with time within the oil palm relational universe in Mayombe are seasonal variations. There are two main seasons: the dry season between May and September and the rainy season between October and April. During the dry season, the oil palms bear very little fruit and there are weeks when no palm oil is produced in the mills. During the rainy season, although there is plenty of fruit and oil production, the roads are badly affected, meaning that traders are unable to travel to the village where the main market is held and/or cannot transport the jerrycans to the city. Some men take advantage of these fluctuations to make more money, storing the jerrycans of

oil in their homes to sell them only during the dry season, when there is a shortage and the price rises.

The weekly market in Bula-Naku, near the MB group, held on Tuesdays, is the third defining temporal feature of the palm oil production cycle. House routines are organised so that palm oil is produced in the days leading up to the market. Between Wednesday and Monday, the men go to their plots to harvest fruit from the oil palms; their wives and children accompany them to gather the fruit that has fallen around the trunk and then separate the fruit from the bunches. Monday is generally the day when the men help each other to make the oil, while the women cook the food that is served in the machine space.

TIME, TERRITORY AND HUMAN-PLANT RELATIONSHIPS

Throughout the preceding sections, the article has sought to raise questions rather than provide definitive answers. By not seeking to compile exhaustive data to fill gaps regarding a specific time and place, I have prioritised historicising the relational universe of palm oil by weaving together tales, memories and scholarly texts. I approach ‘history’ as stories that connect and overlap, offering more ambiguities than causal explanations. This has allowed me to investigate the categorisations and distinctions that my interlocutors make regarding oil palms, such as the *yóombe* oil palm and the *phúútú* oil palm, and to analyse the relationships they have established with them. I also highlight the distinct temporal dimensions encompassed in this human-plant relationship: a mythical time of the *yóombe* tales; the time of the ancients; the presence of white people; the time of the local market; and the seasonal variations in climate.

Analysing what is or is not remembered, when memories surface, how and by whom they are described, constitutes research data and enables us to explore people’s own conceptions of past experiences. At this point, it is equally important to reflect on how the ethnographer’s presence in the field can activate collective memories. The disputes over how I was to be classified brought me into contact with other presences from the past. Some suggested that I was the sister of Nyimi, the *Yóombe* anti-hero mentioned in the first section, whilst others suspected that I might be selling children, because I was white and spoke Portuguese.

Finally, they also raised the hypothesis that I was a major investor in the palm oil industry. These speculations allowed me to engage with the ‘times’ discussed here and how they contributed to historicising the relational universe of the oil palm, influencing what was or was not remembered and how this memory was actualised.

The historical context of the relational universe of the oil palm in Mayombe helps us consider other contexts and other human-plant relationships. As we know, the contemporary oil palm agro-industry is expanding to feed biodiesel production, the food industry and the cosmetics sector. For this to happen, the oil palm has been removed from a network of relationships, subjected to selection processes and meticulously reproduced in monoculture plantations. Given the current limited use of the colonial plantation plots in Mayombe villages, I suggest that the *phúútú* (foreign, outsider) oil palm trees mark the ephemeral and the contingent. Just as they were experimented on in Mayombe, selected seedlings of the *Elaeis guineensis* palm were replanted in other locations, continually altered to ensure the expansion of the agro-industry in the twentieth century.²² Chemical transformations of palm oil were also necessary to turn the product into a global commodity. Agriculture, chemistry and global trade are thus connected.

Modifications to the oil palm and palm oil developed through the circulation of seeds, knowledge, experts and entrepreneurs between two producing regions, West and Central Africa and Southeast Asia. Over the decades, production in these two regions has followed opposite trends (Giacomin 2018). The decline in palm oil exports in the DRC and other African countries over the second half of the twentieth century runs counter to the rapid increase in production in Southeast Asia.

The incorporation of palm oil into processed foods is also linked to the harmful effects on health identified in other fats, such as animal fat and trans fat. The solution found was investment in palm oil, which generated a ‘circular dynamic between increasing demand, large production, increasing supply, decreasing prices and volatility in retail prices’ (Gesteiro et al. 2019: 2). Yet refined palm oil has also come under criticism for issues related to health and the environment. For almost two decades, environmental movements, NGOs, researchers, political

22 This is one of the characteristics of the notion of scalability, its ability to expand (Tsing 2012).

parties and the media have been denouncing the use of palm oil in processed foods.²³ These critics have made refined oil ‘visible’ to consumers, showing the relationship between monoculture oil palm production and the destruction of fauna and flora. Palm oil, which has become an invisible fat in manufactured products, is thus increasingly visible in environmentalist denunciations and campaigns.

This contrasts with the *mafúuta ma ngáazi* (crude palm oil) made in Mayombe to be sold in the cities. What guarantees its continued local production and high urban demand is precisely its taste and strong smell – in other words, its particularity and visibility. Crude palm oil is a quality of the regional cuisine of the province of Central Congo, as well as the cuisines of other regions of the DRC, other African countries and Afro-Brazilian cuisine.²⁴

So while *phúútú* oil palm marks the ephemeral, *yoómbé* oil palm is territorialised. However transformed it may be by the effects of the white presence in Mayombe, it remains part of a relational configuration between people, plants and shared substances. Territorialised oil palm trees can, of course, be seen in other African and Afro-diasporic contexts, pointing to a multifaceted space composed by oil palm trees as agencies in making a living in the gaps of slave and colonial systems.

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- 23 Gesteiro et al. (2019) describe in detail the nutritional characteristics of palm oil and its derivatives used in the food industry.
- 24 As Mintz (1996: 96) points out, a cuisine needs ‘common social roots,’ a population that eats it frequently and becomes expert in its production, knowing how it should be made and what it should taste like.

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Palms of Progress: A Longer View of Pahang's Oil Palms



ABSTRACT

This paper explores the figure of the oil palm in Pahang, Malaysia, asking what the oil palm becomes if theorised from the social and environmental context of this particular state. Pahang is the largest state in Peninsular Malaysia. It has more hectares of land planted with oil palm than any other state in the Peninsula. The oil palm's roots in Pahang entangle in a complex manner with rubber, gold, tin, colonial systems of land tenure and taxation, political, religious and independence struggles, military occupation, and postcolonial development regimes. How, then, has the palm not only shaped the landscapes of Pahang, but been shaped by the unique contours of this place? How might tracing a more-than-human political and environmental history of oil palm from Pahang prompt a new understanding of this scale-defying global commodity – one that reveals the contingencies, contradictions and fragilities that have historically contributed to its making?

KEYWORDS

Palms, enclosures, Malaysia, scale, land development



he story of oil palm is often told as the archetypal crisis of high modernism: a global story of vast commodity networks and worldwide environmental impacts. But this essay argues that this broader story can only be understood with reference to the more contingent and situated histories of oil palm in the places where it is grown. This presents a scalar challenge that has methodological implications for how we might tell global more-than-human histories of palms. To make this claim, I draw on archival research conducted primarily in the National Archives in Kew, London, focusing on annual reports, political intelligence reports, secret notes and correspondence regarding the Malaysian state of Pahang. Through revealing the tensions, frustrations and contingencies of the early oil palm industry in Pahang – seen always-partially through the eyes and anxieties of colonial officials – the localised contingencies that have shaped the global oil palm industry today become clear. These contingencies lurk underneath the seeming order of colonial archives, appearing as gaps, omissions and un-taken possibilities traceable only through a reading ‘against the grain’ (Stoler 2010). But they are central to deconstructing

the story of oil palm as it appears today, challenging its seeming inevitability as an unstoppable technology of global capitalist expansion.

Exploring the rhetorics, politics and social contexts surrounding oil palm in this state reveals how, as Robins argues for the oil palm globally – it never produced violence *on its own* – but exposed, built upon and exacerbated pre-existing and contemporaneous injustices and dispossessions (Robins 2021: 222). Pahang is significant in the global story of oil palm: it is the largest state in West Malaysia, and the state in West Malaysia with the largest amount of its area under oil palm cultivation (13.2%) (Malaysian Palm Oil Board 2022). This area continues to expand: Pahang had the most approved new oil palm projects between 2001 and 2023 out of all Malaysian states (Low 2024). Tied with Johor, it produces sixteen per cent of Malaysia's supply, behind only Sabah and Sarawak, East Malaysia (US Department of Agriculture 2024), with Malaysia being the second largest palm oil exporting nation in the world, behind only Indonesia. But engendering this global reach are highly situated articulations of local politics, ecologies and histories, that were put in place well prior to oil palm's expansion in the region.

It is this longer history of oil palms in Pahang that this essay tells. Doing so has methodological implications. Not only does it demonstrate the construction of particular 'locations' as ways that the 'global' itself are shaped (Hanieh 2018: 4; Trouillot 2003), but it offers some caution against deterministic understandings of the role of particular commodities in shaping social history (Watts 2012). The oil palm industry in Pahang was contingent: it built on a legacy of counterinsurgent technologies that developed under colonial rule (when very little oil palm was planted) and that developed through the Cold War as technologies to enclose lands and thus contain populations. These were often violent technologies used to subdue people and places: mines, perimeter fences, propaganda, reservations, chemical weapons, union suppression, coercive labour regimes, agricultural restrictions and the colonial archive itself – its flurry of intelligence reports aimed at surveilling the intimate lives of the people of Pahang. These solidified the idea of Pahang as a wild frontier in need of taming through technocratic intervention, setting the stage for those tools of US imperialism, the loan and the development expert, to further these trajectories after Independence. It was only this sedimented history – in which palms themselves played a relatively short role – that meant that, by the 1980s,

it was possible for Malaysia to be placed as the leading exporter of palm oil in a 'veritable green tide' (Hill 2013: 2), which acted in turn to further enclose and alienate lands for state and private plantations. It is these longer histories – put in place before oil palms ever significantly appeared in Pahang – that today coalesce in the rows of palms that have come to characterise its landscapes. Telling more-than-human histories of palms, then, can involve looking beyond palms themselves.

In such a telling, the oil palm appears not as a monolith, but as a constellation of social and historical forces, ecologies and politics. In Pahang, these include the narrative construction of the frontier, processes of land enclosure and the racialised re-organisation of populations and the suppression of resistance in the interest of colonial capitalism. Peluso and Vandergeest's notion of the 'political forest', in which the declaration of lands as 'forests' has been used as a technology of state-making (2001); Hirsch et al.'s description of the 'powers of exclusion', by which power relations structure land access which in turn engenders new social formations (2011); and Li and Semedi's formulation of 'corporate occupation' to describe the spatial and political reorganisation of life produced by plantations (2021) offer a foundation for understanding these constellations of land, race and state-making in Southeast Asia. In Pahang, plantations – like forest reserves – offered a key technology through which 'wild' place and populations were pacified through the reorganisation of land use, access and ownership, this reshaping the texture of social life itself along racial lines (Bhandar 2014). What the story of Pahang also reveals, however, is the plantation and its management as an explicit technology of counterinsurgency, that worked *through* the narrative construction of the 'frontier' and resultant processes of land expropriation. Techniques developed for military occupation thus facilitated the entwined corporate and state occupation still found in Pahang today, through which the oil palm continues to flourish.

I begin the paper by describing early colonial attempts to reorganise people and places through the land and labour laws that undergirded the plantation, the mine and the wildlife reserve. Second, I explore how these processes of territorialisation were extended through counterinsurgency efforts, when frontiers between the wild (forest) and the managed (the surveilled plantation or labour camp) were reinscribed through psychological and chemical techniques. Finally, I explore how these layered counterinsurgent technologies set the stage for oil palm to

flourish after Independence – notably through Malaysia’s flagship land development schemes. These sedimented histories coalesce in Pahang’s palms, exposing relations that are at once locally specific and shape the global industry as we know it today, demonstrating the need for more-than-human methodologies that extend beyond the emergence of plant-species themselves.

PRODUCING THE FRONTIER

Pahang was always constructed in the minds of British colonisers as a ‘frontier’, whether of colonial expansion, resources, communist resistance or wilderness in need of taming (Noor 2011). The frontier is an ‘edge of space and time: a zone of not yet – not yet mapped, “not yet” regulated’, it is a project ‘in making geographical and temporal experiences’ (Tsing 2003: 5101), or the *potential* for resources, profit and control. Indeed, early British ‘Resident Advisors’ to Pahang in the late nineteenth century saw themselves as bringing Pahang out of ‘chaos’ into profitable order. Prior to the arrival of the British, a complex system of riverine commerce and alliances had resulted in a state of political flux, ‘an open, contested, and hybrid polity’ in which no regime ruled with impunity (Noor 2011: 30; Gopinath 1991). The gold trade was central, and Orang Asli (the Indigenous peoples of West Malaysia) were key agents in trade (Andaya 2002). As Farish A. Noor (2001) describes,

British colonial intervention would later arrest this state of affairs and render the meaning and place name of Pahang as *fixed* and, in the process, redefine it as a *Malay* state, albeit under *British* rule and administered according to the logic of *colonial governmentality*... the idea of Pahang was invented (p. 30).

Pahang’s first resident advisor, the twenty-year-old Hugh Clifford, viewed Pahang as being ‘the last outpost; the wilder, more exotic and dangerous face of British Malaya’, thus holding an ‘important symbolic role in the discursive economy of British colonialism in Malaya’ – in which men like Clifford were happy for Pahang to remain ‘remote and isolated’ to justify the need for the colonial project (Noor 2011: 61).

During the early years of colonial occupation, the administration introduced new land codes to alienate land for (foreign) interests and forest reserves. What had once been public land was divided and ‘protected’, often to create new timber trades (Kathirithamby-Wells 2005,

Baillargeon 2021). This was an ‘exercise in territorialization’ (Baillargeon 2021, Harper 1997, Sioh 2010) that had a profound impact on all inhabitants, but especially on Orang Asli. Many would have seen their forests converted to mines or rubber estates or cut through by roads, or been forcibly evicted in favour of forest reserves. The King George V National Park (now Taman Negara) was created in 1939 as a wildlife reserve in the interests of colonial big game hunting (Kathirithamby-Wells 2005). Batek Orang Asli inhabitants of this area were not consulted, and nor were they given land rights. Being ‘wild people’ (Manickam 2015), they were tolerated to remain in the wildlife reserve (Lye 2011), deemed ‘distinct and apart’ even from ‘other local races of Sakai’ (a racial slur often used to refer to Batek).¹ Dato’ Abu Samah Bin Haji Ali, State Secretary of Pahang, recorded that the ‘less wild’ aborigines cultivate some *jagong* and hill padi for both consumption and sale, demonstrating the depths of colonial conceptual links between race and land use.²

This period also saw the creation of ‘Malay reservations’: areas of land set aside for Malay use and ownership. These were to uplift the economic development of rural Malays but, in practice, they limited Malay opportunities outside agriculture (Kratoska 1983), confining them to specific areas (Baillargeon 2021), creating new forms of exclusion. Agriculture on reservations was controlled, and Pahang’s colonial records reveal intense frustration over the refusal and disinterest of farmers to adopt their new techniques for smallholder rubber and padi (for example wet over dry), which was blamed on the ‘conservatism characteristic of farmers everywhere’, reflecting the trope of the ‘lazy native’ (Alatas 1977).³ New crops were experimented with in stations in the Cameron Highlands where many Orang Asli would also have been living – such as tea, cinchona, cardamom, coffee, coconuts, cotton and gutta percha – destined for British markets.⁴ Aside from on a couple of estates, oil palm was relatively rarely planted. The main estate growing

1 TNA CO1071/252 AR [1933 ARSEPPP HGR Leonard, British Resident].

2 TNA CO1071/252 AR [1948 State of Pahang Annual Report, Dato’ Abu Samah Bin Haji Ali, State Secretary of Pahang].

3 TNA CO1071/252 Annual Reports [AR] [1938 Annual Report on the Social and Economic Progress of the People of Pahang [ARSEPPP] CC Brown, British Resident].

4 TNA CO1071/252 AR [1932 ARSEPPP HGR Leonard, British Resident].

oil palm was the Sungai Tekal estate in Temerloh, which in 1932 had 787 acres, growing to 1,238 acres by 1938.⁵

Enormous amounts of land were alienated for foreign interests in rubber, tin and gold. Tin and gold mining had long been conducted by Pahang residents using hand methods like *dulang* washing and, prior to colonial occupation, Chinese tin mines had long existed, using imported labour from China (Cant 1973). But it was with colonial land-use policies that new concentrations of foreign power were created in Pahang. The Raub Australian Gold Mining Company came to dominate. They conducted frequent surveys in the 'Pahang Gold Belt', a strip of country approximately of about 1,400 square miles, from Raub in the South up to boundary with Kelantan in the North. In 1932, the Company covered 11,753 acres, compared to the 7,451 acres alienated for gold mining by all other companies combined.⁶ For tin, the Pahang Consolidated Company was dominant, being the largest tin mining company in the British Empire. In 1937 alone, they were issued eighteen new permits over 34,548 acres.⁷ New sites of extraction required the re-routing of water systems – arteries of trade, travel and resistance for centuries – to service the mines when hydraulic methods were introduced.

Almost without fail, both mines and plantations used imported labour, people brought to Malaysia primarily from southern India and China under coercive conditions. Many worked their entire lives only to pay off the cost of their travel (Parmer 1960, Ramasamy 1992, Kaur 2014). On colonial rubber estates in Pahang, Indian deaths 'per mile' in 1933 were 12.7 per mile out of 2,913.⁸ When rubber prices fell, the newly unemployed were sent back (Jomo 1988). Across the region, techniques of labour control and suppression – such as indenture and the *kagani* system – similarly demonstrate the carceral logics suffusing plantations (Manjapra 2018).

The European-owned plantation thus represented 'a closed system':

5 TNA C01071/252 AR [1932 ARSEPP HGR Leonard, British Resident]; TNA C01071/252 [1938 ARSEPP CC Brown, British Resident]. The only other oil palm plantation documented at this time was Neram Tunggal (Lipis).

6 TNA C01071/252 AR [1932 ARSEPPP HGR Leonard, British Resident].

7 TNA C0171/252 AR [1937 ARSEPP CC Brown, British Resident].

8 TNA C01071/252 AR [1933 ARSEPPP HGR Leonard, British Resident].

While the estate itself existed within a privately owned and surveyed plot of land... the infrastructure, living arrangements, and social amenities within the plantation were minutely planned exercises in social control and stratification (Baillargeon 2021: 29).

Estates were tightly monitored by the government, who reported in detail in their monthly reports on housing, healthcare and welfare provision – as well as keeping tight surveillance on union activities. While majority Indian labourers on rubber plantations were concurrent victims of incarceration and state welfare, majority Chinese labourers often lived in makeshift camps at the edges of mines or in local towns. They are constantly referred to by their omission in colonial archives – with officials and bureaucrats expressing their frustrations that they could not access information about them or their employers.⁹ The pejorative ‘squatter’ was applied to detract from their claims to legitimate citizenship.

In 1939, C.C. Brown, the British Resident, wrote that ‘the economic possibilities of the 8,876 square miles of State land in Pahang are to a large extent unexplored...’¹⁰ And, as resource frontiers were drawn and redrawn across this alleged *terra nullius*, colonial authorities sought too to fix and separate Malaysia’s inhabitants along racial lines in what became a ‘geography of occupation’ (Baillargeon 2021, Malhi 2011). The plantation, the reservation, the wildlife reserve and the mine each operated to separate and control along racial lines that corresponded to livelihood and ecology: Malay farmers into reservations, Indian workers and Chinese ‘squatters’ on plantations and mines; and Orang Asli subdivided in terms of relative ‘wildness’. These worked to set Pahang up as a resource ‘frontier’, constructed as a wilderness to justify the need for the development of mining, the timber trade and agricultural expansion, with populations organised accordingly. Such attempts were met with constant frustration, for example when ‘Aboriginal’ (Orang Asli) peoples continued to practice swidden cultivation on land alienated for the Gunung Benom forest reserve,¹¹ or when Chinese ‘squatters’ (rural dwellers) grew food crops on land alienated for forest reserves or Malay

9 Such frustrations were often due to language incompetence, as described by Leow (2016).

10 TNA CO1071/252 AR [1939 ARSEPPP CC Brown, British Resident].

11 TNA C0171/252 AR [1937 ARSEPP CC Brown, British Resident].

reservations, denying the colonial authorities' racialised terms of land exclusion.

RESETTLING, REGROUPING, MORALE

The 'Emergency' (1948–1960) was a conflict between the Malayan National Liberation Army, who sought to make Malaya an independent communist republic, and the forces of the British empire. It is famed as one of the most 'successful' counterinsurgency efforts of the Cold War, later acting as explicit influence for the US strategies in Vietnam, who drew inspiration from the British focus on resettlement as a tool of suppression (Khalili 2013). Pahang, as a still largely still forested state, took on a central role for guerilla conflict. The networks of jungle paths, courier routes, and smuggling systems that spanned its forests had survived through the Japanese occupation and now became new Emergency battlegrounds: 'the forests bred their heroes and their myths' (Harper 1999: 49). On the eve of the Emergency's outbreak, rubber, tin, gold, and timber products continued to be Pahang's primary exports for global markets. Concern grew around both the security of these exports, and the state's lack of domestic rice production and its reliance on food imports from elsewhere in Malaya. Oil palm remained marginal, being planted over only 6,300 acres.¹²

As the conflict developed, colonial anxieties over the organisation of land, resources and people took on a newly psychological tenor. The capture of 'hearts and minds' was now used to justify the reorganisation of land, food and life to ensure the security of foreign capital by eradicating the 'CTs' ('Communist Terrorists'). This took shape under the Briggs plan which dictated new Emergency regulations (Khalili 2013). As defined in a 1953 policy document for the protection of mines and estates: 'The main impact of the ER (Emergency Regulations) is in the power of detention and deportation, the control of movement, resettlement and regrouping, the control of food and drugs and the imposition of curfews.'¹³ Malays were moved from villages into 'regroupment areas',

12 TNA CO1071/252 AR [1948 State of Pahang Annual Report, Dato' Abu Samah Bin Haji Ali].

13 TNA CO1030/17 Protection of Federation of Malaya Rubber Estates and Mines [Policy Resulting from His Excellency the High Commissioner's Meeting with Planters and Miners on 8th May, 1953].

labourers were moved to 'labour regroupment areas', Chinese 'squatters' were moved to 'New Villages' and many Orang Asli were moved to 're-settlement areas' (Baillargeon 2021, Leary 1995, Harper 1999). Across the country, areas were designated as either 'black' (strict curfews and food controls), or 'white' (slightly less repressive restrictions). When areas had been 'cleansed', they became 'white' (Sioh 2010). Pahang contained eighteen labour regroupments, 75 regrouped Malay villages and 64 New Villages (Baillargeon 2021: 32).

Fears circulated that Chinese 'squatters' and labourers and Orang Asli were helping the 'CTs', and they were placed under the most brutal surveillance, ostensibly for their welfare and development. Conditions were extremely harsh. Most suffered greatly, and many were killed. Those who refused to move were often shot, their homes and crops burned (Khalili 2013: 178). The 'wilderness' of Pahang was now inseparable from the communist threat (Sioh 2022), and the frontier narrative was used to justify both the reorganisation of races and the enclosure of land for the construction of 'moral citzenscapes' (Sioh 2010).

Plantations became key sites for the management of these psychic geographies. Planters were given patrol cover when visiting remote areas of their estates, and new licences were given for private security guards to carry and use firearms. Many Pahang rubber estates had new perimeter fences built which would also 'assist in the control of the inhabitants and of food'.¹⁴ Oil palms, being largely experimental at this time were the last outposts of the frontier, often situated in the remotest, hence 'worst bandit infested areas'.¹⁵ These estates produced anxieties for administrators. After Corry (the British Advisor) visited the aforementioned Sungai Tekal estate with the Chief Police Officer, he wrote in his secret notes that it was a 'dangerous and lonely estate', with its particular configurations of disorderly buildings proving difficult to protect or re-site. A new layout for its defence was suggested with all 'personnel' contained within 'two defended areas'.¹⁶ In New Villages, crops (themselves heavily restricted) were not allowed to grow

14 Ibid., NB there was no special protection put in place for hospitals.

15 TNA CO1071/252 AR [1948 State of Pahang Annual Report, Dato' Abu Samah Bin Haji Ali, State Secretary of Pahang].

16 TNA FCO141/7345 British Advisor Secret Notes [BASN] [12A Secret notes for the period 16 March-26 April 1951].

above a certain height in case they obscured the view of the guards (Khalili 2013: 178).

Forests, too, posed anxiety. To facilitate the 'domination' of 'deep jungle' areas, new 'jungle forts' were built. In 1950 the resident Advisor wrote in his secret notes of the need to 'clear' an area on the Pahang/Negeri Sembilan border of 'Sakais', 'whose pro-bandit activities call for the locality to be subjected to systematic bombing in the near future'.¹⁷ Trees and shrubs provoked anxiety for the cover that they might provide to 'CTs'. New roads were built to cut off areas of remote forest, and clearings on top of hills were created in order to provide command sites watching over resettlement areas, but this often provoked more danger, as felled trees 'provide excellent cover for bandit aggression'.¹⁸ In 1952, Trioxone (similar to Agent Orange, and provided by British company ICI), was used to defoliate the areas next to roads to prevent ambushers hiding under the cover of foliage, and to kill crops planted by 'CTs'.¹⁹ Cold War anxieties were scarred onto the landscape.

The movement of foodstuffs was of central concern, primarily for fear that civilians would share food with the 'CTs'. It was thought that if civilians had only just enough food to keep themselves alive, they'd be less likely to give it to 'bandits'. Rice was rationed, and the amount of unopened tinned food a person could buy strictly controlled. Homes and bodies were searched every day to check for food.²⁰ Reports repeatedly referenced 'dissatisfaction', 'discontent', 'unsettled conditions' and 'unrest' due to hunger and surveillance. But the 'hearts and minds' agenda dictated that people should not *mind* food raids and restrictions 'if they could be convinced that they were taking part in a joint effort against the Communists. The considerable degree of Military effort evident has helped this to be put over.'²¹ Further, 'a few local kills or surrenders' would help to 'vindicate' food restriction policies.²²

17 TNA FCO141/7345 BASN [8 Secret notes for the period 1–29 Sept. 1950].

18 TNA FCO141/7345 BASN [16A Secret notes for the period 9 June–1 July 1951].

19 TNA CO1022/26 Use of chemicals in clearing under-growth near ambush points and in destroying terrorist crops in Malaya.

20 TNA FCO141/7315 Monthly Political Intelligence Reports from the Mentri Besar, Pahang [MPIR] [no.3, 30 Sept. 1953].

21 TNA FCO141/7315 MPIR [no.6, 2 Jan. 1954].

22 TNA FCO141/7315 MPIR [no.7, 2 Feb. 1954].

Monthly political intelligence reports were produced for circulation, always containing headings on 'general state of morale' and 'government matters affecting morale.' Low morale was consistently linked with Communism, racial character and dirty conditions. In 1954, the Mentri Besar wrote that 'it was noteworthy that the most evident Communism in Bentong existed in its foulest slums...' ²³ Low morale was indicated by 'an absence of the spontaneous desire by the people in Raub to cooperate'. ²⁴ Morale could also be 'disturbed' by developments elsewhere, for example Nehru's visit to China, ²⁵ or the Afro-Asian conference in Bandung, ²⁶ resulting in descriptions of decay, disrepair, sadness or 'unsavori[ness]'. ²⁷ Morale could also be raised, for example by 'eliminating' CTs, ²⁸ or 'civic afternoons' with tea where villagers were encouraged to inform on others. ²⁹ In New Villages and Orang Asli resettlements, where officers often didn't have the language skills to speak with residents, morale was often indicated merely by 'contented looks', ³⁰ 'smiling faces' and an 'air of general contentedness'. ³¹ The best morale was when people spoke of a desire for *self*-help and entrepreneurialism, as when Malays in Pekan spoke of a 'desire to help themselves rather than rely on Government', when 'Aborigines' in Ulu Rompin spoke of a desire to build a school and fund it on their own, ³² or when 'Sakai' in a resettlement in Bukit Betong sold firewood 'encouraging healthy competition with local firewood contractors', demonstrating an emergent capitalist ethos. ³³

Strategies enacted to ensure the safety of British estate and mining interests in Malaya demonstrate the importance of 'incarceration in the

23 TNA FCO141/7315 MPIR [no.7, 2 Feb. 1954].

24 TNA FCO141/7315 MPIR [No. 11, 21 Apr.–20 May 1954].

25 TNA FCO141/7315 MPIR [No.16 21 Sept.–20 Oct.].

26 TNA FCO141/7315 MPIR [no.22A, 24 March–20 April 1955].

27 TNA FCO141/7349 British Advisors Monthly Diary [2 Diary for part of March 1948].

28 TNA FCO141/7315 MPIR [no.19A 21 Dec.–20 Jan. 1955].

29 TNA FCO141/7315 MPIR [no.21A 21 Feb.–23 March 1955].

30 TNA FCO141/7345 BASN [15A Secret notes for the period 11–20 June 1951].

31 TNA FCO141/7345 BASN [31A Secret notes for the period 1 Feb.–24 Feb. 1952].

32 TNA FCO141/7315 MPIR [no.33A 21 Feb.–20 March 1956].

33 TNA FCO141/7345 BASN [1 Secret notes for the period 14 Apr.–3 May 1950].

course of a liberal counterinsurgency' (Khalili 2013: 3; Neocleous 2011). The tactics used in such counterinsurgencies often slip between forms of violence meant to intimidate or persuade (Khalili 2013: 4). Indeed it was during the Emergency that the Aborigines Act (1954) was written, cementing restrictive and paternalistic regimes of 'protection' and the erosion of Orang Asli rights today (Idrus 2010). These were techniques of social engineering that aimed to protect British plantation and mining interests and to engender moral attitudes that would be friendly to these interests. Colonial speculations on the psychic lives of the native Other through their narratives of morale demonstrate far more about the colonial mindset than the subjects of their notes. Techniques of resettling and developing land became carceral, where one had to smile in order not to starve, demonstrating the profound link between land development, counterinsurgency, empire and the maintenance of a capitalist social order through psychic geographies.

SETTING THE STAGE

After independence, with the threat of insurgency remaining, development and defence were now inextricably linked, aimed at protecting international trade. The British continued sending arms to Malaysia,³⁴ which now came with conditional 'technical assistance' for development,³⁵ often in the form of development 'experts' and training programmes that came not only from Britain but also from US philanthropists and banks (Siegel 1977).³⁶ FELDA (Federal Land Development Authority) land settlement schemes were prime examples of this. They encouraged Malays to clear the jungles and plant rubber, and, in so doing, both become moral citizens of the new nation and conquer the forest/communist frontier. In its focus on social engineering, FELDA was the direct descendent of Emergency resettlement (Sioh 2010). Only the 'best and most disciplined members of rural society' were chosen as FELDA settlers (Harper 1999: 363).

The first FELDA scheme was in Lurah Bilut, Pahang in 1958. In the same year, a World Bank report on economic development in Malaysia

34 TNA FCO165/12 Malaysia Defence Aid: Correspondence.

35 TNA OD20/105 UK Aid to Malaysia.

36 Ibid.; RAC FA767 Box 42 Ford Foundation Records, Publications [Folder 524].

emphasised the need for rural development, with a focus on land settlement. Oil palm was noted as a capital-intensive crop, needing a high degree of skill in running the factory and marketing the oil, necessitating foreign 'experts'. It still only accounted for a 'small portion' of exports, but showed promise. A British Oil Palm Advisor was therefore appointed to FELDA. It was hoped that, through developing agricultural expertise, 'she [Malaysia] would be a perfect example to the rest of SE Asia and show what can be done without extremist government'.³⁷ By 1965, the World Bank had agreed to fund what became Malaysia's flagship oil palm development project: the Jengka Triangle in Pahang (International Bank for Reconstruction and Development 1987). US officials 'saw it as a key step in demonstrating the success of capitalist development in a corner of the world where the Cold War was heating up' (Robins 2021: 223). There were at least 110 indigenous families in the area, and many smallholders, despite it being depicted as an uninhabited swamp (Robins 2021: 222–23). Political technologies of land development and social control developed for counterinsurgency over the past fifty years thus set the stage for Pahang's first major oil palm project.

What the story of oil palm in Pahang shows, is how – as the editors of this special issue put it – global relations 'coalesce' in the bodies of the palms that still dominate Pahang's landscapes today. Pahang shows that the demarcation of lands as wilderness – associated with communist 'banditry' and the racialised Other – was used to justify the creation of the oil palm industry. Colonial narratives of care and concern were explicitly used to counter communist arguments about the capital-driven nature of British development despite evidence to the contrary (Noor 2011: 131). Warfare and technocratic welfare cemented their relation after Independence and throughout the Cold War, with British approaches to guerilla war and 'hearts and minds' in the forests of Pahang inspiring US military strategy in Vietnam and the Middle East (Khalili 2013). Tellingly, the RAND corporation wrote admiringly of Emergency food control tactics (Sunderland 1964). This helps to reveal some of the partial connections 'across disparate spatialities and temporalities' (as the editors put it) that oil palm today is both constituted by and creates.

37 TNA OD39/102 World Bank Consultative Group for Malaysia.

Today, the mundane violence produced by oil palm plantations has become infrastructural, representing the seeming ‘common sense’ (Stoler 2010) of postcolonial capitalism (Krupa 2022). Pahang shows how this seeming common sense has been produced by tools envisaged for war, shaping the ‘occupation’ they produce today (Li and Semedi 2021). But the ‘failure and fragility’ (Chao, Krupa and Li 2024) of the colonial project is also revealed in the archive through those who resisted: the ‘young Mandarin speaking Hakka woman’ who spoke out after a Bentong landowner dismissed the whole labouring force of his estate;³⁸ the ‘Sakais’ at Bukit Betong who ‘disappeared’ from the resettlement scheme;³⁹ the plantation workers in Bentong who blocked an estate road with their bicycles after wage reductions;⁴⁰ or the miners at Sungai Lembing who did weekend ‘go slows’ to demand proper safety.⁴¹

At the same time, in Pahang, the full force of oil palm plantations’ eventual violent expansion was constituted *in response to those very anxieties* produced by the failures and gaps of colonial and Cold War projects of supposed progress and domination. The construction of ‘insurgent’ populations justified the violence that allowed plantations to flourish. Today, the oil palms of Pahang are legacies of these anxieties. As these ‘coalesce within the bodies, careers and trajectories’ of these palms, thinking ‘across temporalities’ (to borrow the editorial framing) helps to uncover multiple connections. These are connections between the lifeways of palms, and the deathways of those deemed to lie on the wrong side of the frontiers that palms rely on; frontiers whose construction in Malaysia have an even longer history than the oil palm itself. A stark reminder of the need to look beyond palms themselves as we tell critical plant histories is that today in Pahang oil palm development is frequently used as a cover for rainforest clearance, without palms themselves ever needing to be planted (Low 2024).

38 TNA FCO141/7315 MPIR [no.7, 2 Feb. 1954].

39 TNA FCO141/7345 BASN [4 Secret notes for the period 9 June–1 July 1950].

40 TNA FCO141/7315 MPIR [no.4, 4 Nov. 1953].

41 TNA FCO141/7315 MPIR [no.37A 21 June–20 July 1956].

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Women Workers and Bodily Dispossession in Indonesia's Oil Palm Plantations



ABSTRACT

While many large-scale agricultural companies have adopted technocratic instruments as a part of their commitments to good agricultural practices (GAP) and sustainability, overuse of agrochemicals (pesticides and inorganic fertilisers) remains a largely unresolved issue. Detrimental to both agricultural workers and the ecosystem, concerns about toxic agrochemicals have increased among activists and scholars. Yet, the damage has been done and pesticide effects on the ecosystem and people are almost irreversible as extractive agricultural systems such as monoculture expand. Drawing from ethnography and focus group discussions among Indonesian oil palm plantation workers, I show how the irrefutable use of pesticides in the palm oil complex highlights the gendered dimension of the reproduction of the plantation economy and ecosystem. I conclude that the imperative use of agrochemicals functions as a patriarchal device that deepens workers' exploitation, land dispossession and the capitalist production of nature in the plantation economy.

KEYWORDS

Agrochemicals, workers, palm oil, bodies



Can we produce palm oil without these pesticides?' asked Maria, an oil palm plantation worker at an occupational safety workshop for oil palm plantation and mill workers in 2022.¹ Such a question is worth US\$67.3 billion, the total revenue of the global palm oil economy. It comes from a deep-seated personal concern; Maria had two consecutive miscarriages, and they both occurred when she worked on plantations. After listening to a facilitator detailing the impacts of agrochemicals on women's sexual reproductive health, she began to worry that her work with toxins caused her miscarriages. 'At first, my body was itchy, then I gradually became easily lightheaded.' She also noticed that more of her peers suffered from 'evil', 'untreatable' illnesses such as cancer and seizures. 'Older workers (above 50 years old) complained that their bodies were stiff, they had tremors', observed Maria, an indication that the workers might have

1 Transnational Palm Oil Labor Solidarity Workshop on Occupational Hazards and Environmental Impacts of Oil Palm Plantations, Bogor, 17–19 Sept. 2022.

Parkinson's disease, an illness that many scientists have correlated to pesticide exposure. When asked if she wore protective suits that could prevent the effects, she shrugged. 'It's so hot in the plantation, I cannot wear it. Either I'll die because of cancer, or I'll die because of heat.'

This article investigates agrochemical uses in Indonesia's oil palm plantations and their role in reproducing the violence and the exploitation of women workers that ultimately sustain the palm oil economy. The government of Indonesia and plantation companies often boast that palm oil has supported the country's economic development. However, palm oil expansion costs not only Indonesia's rainforests, but also workers' welfare and, even less discussed, women workers' bodies and health. In 2025, the Ministry of Manpower found estimated that there are at least sixteen million workers both in plantations and mills, confirming the narrative that palm oil provides jobs.² Palm oil labour is physically demanding and mentally taxing. Workers harvest fresh fruit bunches from the palm trees every two weeks, and each bunch could weigh up to 150 pounds. To keep up with this rapid production, plantation companies douse their trees with agrochemicals, a task predominantly performed by women workers. Women spray pesticides and apply fertilisers for seven hours per day over six to ten hectares of oil palm trees.

Existing research has shown the impacts of pesticide drift and exposure on women workers; such work critically highlights the precarity of women's labour, often overlooked in understanding risk in plantations. This article furthers such findings by centring the gendered dimension of agrochemicals and their role in sustaining the political economy and the ecology of labor on plantations. Drawing from ethnography and focus group discussions among women plantation workers and farmers, I find that agrochemical use corresponds to how monoculture exploits patriarchal division of labour and women's bodies for its growth. I conclude that the imperative use of agrochemicals illuminates how the plantation economy relies upon women's double deaths: the suffering from long-term agrochemicals that impede their reproductive health

2 'Pekerja Sawit Capai 16,5 Juta Orang, Kemnaker Dorong Lingkungan Kerja Layak', *HaiSawit*, 10 Sept. 2025. <https://haisawit.co.id/news/detail/pekerja-sawit-capai-165-juta-orang-kemnaker-dorong-lingkungan-kerja-layak>

and the gridlock of violent ecosystems fumed by toxins that worsen their life quality.

Between 2021–2024, I conducted ethnography of oil palm plantations in two provinces in Indonesia (Riau, North Kalimantan); I also attended focus group discussions with them in West Java and West Kalimantan, provided by my professional involvement in the Transnational Palm Oil Solidarity (TPOLS), a network and a hub for workers, activists and scholars who work towards just transition in global palm oil governance. Findings from TPOLS fieldwork and my research were discussed in the space I co-founded with a group of women researchers, plantation workers and activists, called the Indonesian Palm Oil Womxn Educational Group. Women plantation workers in this space provided inputs following their everyday work and organising experiences to centre their labour in the plantations' ecosystem of toxins.

Women workers are the primary informants in this article because oil palm plantations disproportionately employ women in agrochemical work. There were a few (two) plantation companies that deployed men exclusively for agrochemical work, and they shared roughly the same occupational concerns, albeit with different effects. However, even in the male-dominated maintenance work, male workers admitted that they still brought their wives to work with them, as the demand to spray and dust six to ten hectares within seven hours was unrealistic. These women were thus unregistered workers, offering 'free', unpaid labour, and still being affected by the toxins.

GENDERING TOXINS

Despite various conventions³ on agrochemical use, rural women working in agriculture rarely become the centre of safety campaigns, and even when they finally become 'a crucial policy target', the focus remains on best practices and policies that reduce the harm of agrochemicals (Chiavaroli 2024: 1561; Navas 2023). Many feminists have criticised approaches that overtly focus on occupational hazards and technical interventions, which tend to depoliticise agrochemicals. Focusing on providing solutions only for the impact, in other words, neutralises

3 Basel, Rotterdam and Stockholm conventions, among others.

agrochemicals as a political tool (Cusworth 2023, Vélez-Torres and Vanegas 2022). Not only is the use of herbicides and pesticides born out of irresponsible policies, but it illuminates the multiscalar political economy that depends on intoxicating soil, water and farm workers. The latest scholarship of ‘global pesticide complex’, or the global political economy of production and consumption of agrochemicals, highlights how toxins have historically accumulated the built and constitution of modern agriculture, leading to ‘pesticide-land nexus’ (Guthman and Werner 2026, Werner 2026).

The disproportional agrochemical effect on women and the neglect of their care thus highlight the ‘devaluation’ of women’s bodies that are rendered less worthy of being protected and yet still maintained to prolong both the plantation economy and the dependence on pesticides (Ojeda 2021, Mansfield et al. 2024). This article centres on the role of agrochemicals in reproducing injustice in reproductive work that women disproportionately perform (Mollett and Faria 2013, Collard and Dempsey 2017). By highlighting women’s labour and agrochemical landscape in oil palm plantations, I aim to integrate body politics and women’s environmental health into the study of plantations instead of treating plantation labour and health implications of such labour separately from the plantation economy (Guthman and Mansfield 2013, Chiavaroli 2024). After all, the depoliticisation of agrochemicals hides how much they have historically aided the expansion of agribusiness interests in monoculture at the expense of women’s bodies and labour. I focus on how disciplining women workers and their bodies in Indonesia’s oil palm plantations helps reproduce the monoculture ecosystem.

AGROCHEMICAL LANDSCAPE WITHIN INDONESIA’S PALM OIL LABOUR

The use of toxic agrochemicals is widespread in oil palm plantations, but rarely becomes a highlight in many campaigns that criticise the oil production, particularly in Indonesia, where even the problems of wages for plantation workers are barely addressed. Although there is a regulation for agrochemical use in oil palm plantations, the rampant use of prohibited agrochemicals (for example, paraquat) rarely becomes

the core issue in anti-palm oil campaigns. The majority of workers who spray and dust agrochemicals, at least in Indonesia's oil palm plantations, are women, thus reinforcing the patriarchal gendered division of labour that confines them to underpaid care or maintenance work (Sinaga 2021, 2024). Most of these women are also casual or temporary workers, a status that prevents them from accessing appropriate and necessary health infrastructure to respond to and mitigate the risk in working with dangerous substances (Sinaga 2025, 2023; Kinasih 2024). Hence, the risk of toxin exposure is disproportionately shouldered by women workers in oil palm plantations.

Women workers usually start their day at dawn, as the plantation company's truck picks them up to the meeting area in the middle of plantations for 'morning check-in' and the estate managers remind everyone of the daily work target. Typically, sprayers are expected to finish two to three gallons of liquid toxins and a sack of fertiliser, or spread agrochemicals across eight to ten hectares within seven working hours. The workers are highly specialised in making agrochemical 'cocktails', but they are often unaware of what the mixture contains. Per regulation, workers have the right to know if the ingredients can pose risks for them but, on the ground, they often neither realise the danger nor receive any thorough information. When women workers asked about the details of the agrochemicals, the estate managers either avoided the questions or lied about the hazards that might occur by playing down the effects.

Generally, oil palm plantations deploy this set of agrochemicals:

Agrochemicals Typically Used in Oil Palm Plantations
<i>Pesticides/Herbicides/Insecticides</i> · Glyphosate: herbicides – reactive carcinogens, highly poisonous. · Paraquat: herbicides, carcinogenic, highly poisonous. · Chlorpyrifos: pesticides, anti-termites, poisonous. · Bioinsecticide: anti-caterpillars and anti-worms, generally safe for workers but harmful to aquatic life
<i>Fertilisers</i> · Ammonium nitrate (commonly called ‘urea’): high-nitrate fertiliser, for the trees’ protein, chlorophyll growth, and water efficiency. Generally safe, but prolonged exposure and high concentration could lead to nausea and respiratory problems. · Monopotassium Phosphate (MKP): stimulating root growth. Generally non-toxic but overuse could lead to water pollution (algal bloom). · Potassium Chloride/Potash (KCl): strengthening branches, increasing soil fertility, resistance against pests, production volume, and fresh fruit bunch quality. Generally safe, but prolonged exposure could cause nausea. · Phosphorus (commonly called ‘TSP’): expediting the harvest, increasing the plant nutrition, stimulating new cells. Generally safe but harmful to aquatic life (decreasing oxygen in water). · Dolomite (Magnesium): base fertilisers, countering soil acidity from other fertilisers and pesticides. Unsafe in prolonged exposure, especially for the respiratory system. · Borax: strengthening the root (especially in the peatland), maintaining the size of fresh fruit bunches. Acutely toxic if ingested orally. Prolonged exposure could cause skin irritation and harm (male) reproductive system.

TABLE 1.
Lists of General Agrochemicals Used in Oil Palm Plantations
Source: Women workers’ workshop and reading group, 10 February 2025; interviews with plantation field managers and supervisors, 1 February 2023.

At the end of their shift, dusters and sprayers will clean themselves, but often there are no cleaning facilities in the plantations, so they rely on their water jugs, a nearby irrigation canal or a river. The lack of safe facilities for workers in oil palm plantations makes wild animal encounters, often deadly, common. Two of my male informants in Riau encountered wild Sumatran tigers and almost lost their limbs. Another worker in West Kalimantan recalled frequent sightings of crocodiles in the river where she usually drew water to clean herself after spraying pesticides. However, they mostly encounter poisonous snakes: the

Javan spitting cobra, the pit viper and the banded krait. Encountering poisonous snakes could be fatal, as hospitals are often more than an hour's drive away and rarely have antivenom. Simultaneously, the cleaning practice poisons the river ecosystem surrounding plantations.

Altogether, labour in oil palm plantations is dangerous and toxic: full of hazards, undercompensated and beyond the reach of occupational safety regulations. Occupational safety frameworks can barely address the challenges faced by many rural labourers, as the regulations are mainly adapted from urban and industrial workplaces. Furthermore, confining labour conditions to safety issues alone ignores the structure that sustains the toxic cycle of labour. Feminist scholars note that women plantation workers have become the supporting component of the palm oil economy, particularly through reproductive work exploited by plantations (Chatterjee 2001, Tilley 2020, Elmhirst et al. 2015), even as care work is 'toxic' (Sinaga 2024) in both its literal and figurative senses. The following analysis will foreground the service of agrochemicals in disciplining and furthering the exploitation of women workers and their bodies to support Indonesia's palm oil economy.

WOMEN WORKERS AND BODY POLITICS OF PLANTATIONS

Delilah woke up at 4:30 a.m. to prepare for her family's day before her own: her children's breakfast, her husband's equipment to clear and harvest some plots in the plantation today and, if they were lucky enough to pull some money this month, two of her children would bring lunch boxes filled with instant noodles, rice and small portions of vegetables. By 6:00 a.m. at the latest, she and Maria would go with their four fellow maintenance workers to spray around ten hectares of oil palm trees.⁴ They could not leave the area until their daily target was met, or they risked threats from their overseers (*mandor*) and having their daily payment cut. Perpetual cuts increase the risk of termination. Yet ten hectares of land were too much for Delilah, Maria and other women in the group, so they often worked unpaid overtime, as the quota took precedence over the excess uncompensated labour.

4 Ethnographic observation in District S, Riau. 16 July 2021.

Women are central to Indonesia's oil palm cultivation, especially in the daily maintenance. Their work ranges from spraying agrochemicals and weeding to manual watering when the plantations do not use automatic water sprayers. The patriarchal assumption of 'women's nimble fingers' found across agro-industries in the Global South finds a home once again in Indonesia's oil palm plantations: women are biologically designed to work better in jobs that require meticulous attention to detail, and they eventually dominate and 'feminise' the industry (Krupa 2022, Sanmiguel-Valderrama 2007). Women plantation workers must carry a sixteen-litre jug of agrochemicals and, more often than not, they do not wear hazmat suits due to the unbearable heat.⁵ Thus, their bodies absorb the toxins emitted by agrochemicals, increasing the risk of intoxication and contamination. Other dangers also arise from their deadly encounters with those considered 'pests' in plantations, such as stinging insects, snakes and even tigers and crocodiles in some places (Riau and West Kalimantan). Yet, these risks are not even considered collateral from which women can receive protection. Furthermore, the status of their health insurance is generally not guaranteed; the best they have is Indonesia's national healthcare (*Badan Penyelenggara Jaminan Sosial Ketenagakerjaan*), whose services are limited and not tailored to occupational risks in farm labour.

Patriarchal gender repertoires operate through interactions between the environment and the labor landscape on plantations, resulting in a disproportionate impact on women (Sinaga 2025: 3). Scholars have identified politics of death in plantation lives, in which non-human entities and human bodies, especially women workers, are rendered disposable (Chao 2022: 362; Singh 2006). Beyond the category of 'woman', however, lie the mechanisms of extraction that depend on remaking bodies and plantation ecosystems. By remaking, I refer to the process of corporeal and ecological dispossession, specifically of women plantation workers. From the dispossession of women's bodies to the plantation logic and economy that depends on agrochemicals, they also contribute and are integrated into the perpetual toxicity in plantations.

5 The protection is also rarely a full suit; it is often no more than a collection of an apron, a pair of rubber gloves, a helmet, plastic goggles and a K94 mask (N95 on good days; but it's never a gas mask).

'Cheap labour' often denotes such disposability and, for women, this disposability operates through invisibilisation (women as individual beings dissolved into a 'household') and hyper-exploitation (lower wages, even unpaid labour, and unclear employment status). Here, agrochemicals further the disposability and the dispossession of women workers' bodies through their daily toxic encounters. Furthermore, most women plantation workers are either non-permanent or simply unregistered. Desi, a young woman worker in Plantation A of District B in North Kalimantan said:

It feels like my body has no value or meaning [*tidak berharga, gak ada artinya gitu*]. I carry these pesticides. I worry if I will ever get clean from these toxins (*racun*), and then I have to go home, then my children would hug me, I have to sleep next to my husband. Will they be okay?⁶

Just like Maria, Desi suffered from a miscarriage that rendered her paralysed both mentally and physically. Her midwife urged her to have a total bed rest for at least a week, yet rest was something she could not afford. Three days after her miscarriage, she returned to work to help her husband spray and clear the palm trees, even though Desi was not officially employed by the company.

From waking up at 4:30 am, suffering multiple miscarriages, and their physical exhaustion, women's bodies and labour blend into the political and economic rhythm of plantations. What happened between women and plantations, and the subsequent environmental and health degradation that the former suffered, is not simply a rupture between human-nature, or a mere alienation of labour in plantations. Rather, the rupture is simultaneously mediated through and dispossesses their labouring bodies (Harcourt 2013, Yap 2008). Labour is both and reciprocally social and ecological (Moore 2011: 9); labour time adheres to the palm's biweekly harvest, as the harvest time also depends on workers' labour time and, for lack of better words, quality. In the case of women plantation workers, such a relation also exploits the 'naturalisation' of women's work that renders their labour and bodies appropriable, hence women's unregulated and unclear employment status, and unpaid casual labour in plantations (Mies 2014, Mies and Salleh 1990).

6 Ethnography interview in District S, Riau. 12 July 2023.

The naturalisation of women's labour in oil palm plantations creates this rather predatory relationship between the trees and the women workers. As palm trees continue to live and produce, women become sicker and are unable to conceive. Furthermore, women have also become the toxic landscape on which the operation of oil palm plantations has relied. In August 2023, TPOLS partnered with the Department of Public Health at a local polytechnic in South Sumatra and collected lactation samples from eleven women plantation workers. All their breast milk contained, mercury and/or copper – all heavy minerals that constitute agrochemicals. Plantations thus reterritorialise and take over women's bodies as part of their reproduction, extracting women's labour and bodies to sustain themselves. This also poses a problem for the families, as toxins transfer to children and other family members who may not be working in plantations through lactation or sexual activities. The contamination affects women and their families in the long term, making it generational, as children will carry the toxins. The dispossession thus transcends biological, temporal and spatial boundaries.

The growth of palm tree plantations thus hinges on the deterioration of workers' quality of life, particularly among women workers, given their uneven burden of social (re)productive work. Their frail health and labour super-exploitation are not merely a consequence of an extractive business or environmentally-unfriendly business decisions, but rather a prerequisite for the plantation economy. The persistent problem of 'ghost workers' (*buruh siluman*) or uncounted women's labour illuminates the tautological reasoning of plantation labour (Sinaga 2021): plantation companies will not make women permanent workers because they assume women's inability to work long-term, which eventually comes from the accumulated agrochemical exposures. The disposability of women's bodies in plantations, however, cannot simply be resolved by technocratic means, including better wages as compensation for the contamination. The dispossession of women's life quality, age and bodies also corresponds to the capitalist reproduction of the environment that begets the endurance of plantation toxic ecosystems.

THE REPRODUCTION OF TOXIC LANDSCAPE

The exploitation of women's labour through agrochemicals extends beyond wage theft and the deepening of precarious employment in agriculture. It highlights how gendered labour facilitates the reproduction of capitalist ecosystems, or the alteration of 'nature' that sustains plantation economies (Moore 2003). In other words, agrochemical exposure among workers not only boosts production but also shortens labour's life expectancy and generates profits for plantation companies. Furthermore, toxins directly maintain and reproduce an inhabitable and violent ecosystem that prolongs the plantation economy and creates a vicious cycle that traps women workers' worsening health and dying soil. If plantations, according to Ferdinand Braudel, are a 'capitalist invention *par excellence*', then it is imperative to understand capitalism beyond its political economic goal (Braudel 1992: 63); it is also a corporeal and an ecological quest. Agrochemical use in monocropping is an example of this, as such chemicals are 'an integral feature' of vulnerable crops that eventually demand more toxin inputs to grow (Scott 1998: 269). Hence, agrochemicals are not a simple, readily replaceable variable in plantation metrics; they actively build plantations.

For women workers, their laborious tasks on oil palm plantations also reshape their ecology and encounters with nature. Pinned down to plantations by way of their labour and the effect of agrochemicals, women's bodies become a part of plantation extractive and constitutive territories. Monocropping requires a disciplined and standardised ecological rhythm, embedded in the women workers' bodies and their labour. The ecosystem of plantations requires no other plants to grow or compete with them. Oil palm is a primary example of such a cultivation. Highly water-intensive, both environmentalists and plantation inhabitants confirm that it is difficult for other dry, hard crops (e.g., coconut, corn, peanuts) to survive. Thus, plantations are ecologically limited to support alternative dietary means. Delilah complained that she 'cannot plant anything' because 'the (palm) trees absorb all the water', making it impossible to grow their own food.

The restriction on planting means that families on plantations are highly dependent on food from outside the plantations, which could increase prices and, in turn, their meal expenses. For women workers particularly, it also means the loss of their private spaces. Feminists and



FIGURE 1.

A single, small coconut palm tree, surrounded by a bunch of oil palm trees. The coconut tree is thin, and it has not borne any fruit since it was planted 30 years ago. Source: author, 18 July 2021.

scholars of plantations have noted that women on plantations grow their own plots as a means of resistance, and that owning a ‘plot’ has historically been an act of resistance against the expansion of plantations (Jegathesan 2017, Wynter 1971). Yet, the character of oil palm trees and the draconian standardisation of oil palm plantations shrink that spatial and political possibility. Even when not explicitly staged as a resistance, a plot of one’s own still serves as a rehabilitative practice for women working in agriculture who demarcate their own land from the circuit of exchange value in plantations.

The limitations of food production also force women to seek alternatives on their own. When allowed, some women explained that they ate the individual fruit from the bunches. I say ‘allowed’ as some plantation companies reinforce strict rules that even individual fruits must be collected and sent to mills, instead of letting workers make use of them.

Others identify edible plants that grow in plantations, even though companies categorise them as weeds or invasive species (e.g., fiddleheads and straw mushrooms). The mushrooms are available in pressed fresh fruit bunches once the oil has been extracted. Such options are seen as more feasible and better than expensive and unhealthy processed or instant foods, especially for women workers with children:

Mimi and Riri, the two young girls (eight and seven years old, respectively) who accompanied their mothers spraying toxins in plantations, taught me about a certain *pakis* (fiddleheads) plant that they loved to eat for dinner. They took me to a dry ditch, and we squatted there for 15 minutes to collect the plant. The fiddleheads are thin, but they convinced me that it was delicious and 'made your tummy full'. Their mother, Darti, agreed. She added, 'It's better than feeding them instant noodles all week'.⁷

Two forms of degradation occur here: soil degradation causes nutrient losses that prevent women from producing their food and reduces the quality of plantations, rendering their lives unsustainable. Agrochemicals and women's labour thus become agents of metabolic shift in women's bodies: their malnutrition and exhaustion, all of which transform into the everyday life of plantations and constitute them (Barua 2025: 147–49). On the ecological front, agrochemicals and the nature of palm trees, which are highly water-intensive, increase heat and force the soil to retain more carbon, rendering the ground infertile and too dry to grow other plants. The situation exemplifies 'robbing the soil' and workers in its strictest sense (Marx 1990: 638).

Even as women can forage for their food to an extent, they still expressed concerns about the 'cleanliness' of these vegetables and mushrooms, as they have now understood agrochemical exposure and pesticide drift. The dispossession in plantations is thus cyclical and layered: from bodies that are contaminated and maimed, to ecosystems that cannot heal such contaminated and bruised bodies. In a way, the loss of nutrients and the lack of plots also function as other forms of land dispossession; the land no longer belongs to the workers who cultivate it, and neither does it provide for or sustain the sustainable lives of workers. From toxins, dry soil, unbearable heat, and undernourishment to food deserts, plantations enforce a violently toxic ecosystem that depends on the disposability and dispossession of bodies and environment.

7 Ethnographic observation in District S, Riau. 18 July 2023.

CONCLUSION

No one could answer Maria's question at the start of this article, either because it is technically too complicated to invent non-hazardous agrochemicals, or because the workers deep down understand that the answer is 'no': palm oil *needs* toxins to sustain it. Investigating how agrochemicals facilitate labour relations between women workers and oil palm plantations highlights the reproduction of the violent ecosystem. Agrochemicals do not just injure the everyday lives of women workers; they also help perpetuate the dispossession that women must suffer and survive at multiple levels. The dispossession by means of agrochemicals is gendered and layered, starting with women's own bodies, which are rendered disposable and whose life quality is perpetually worsened by the toxic ecosystems that they are mandated to create through their labour. Yet their bodily dispossession also corresponds to the environmental degradation that creates the capitalist ecosystem of plantations. This layered dispossession is not merely an effect or consequence of a bad business policy; rather, it supports the worldmaking of the plantation economy.

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‘Oil Palm Has Godfathers; Coconut Doesn’t Have Mourners’: The Racialised Politics of Plant Health and Pest Control in Tumaco, Colombia

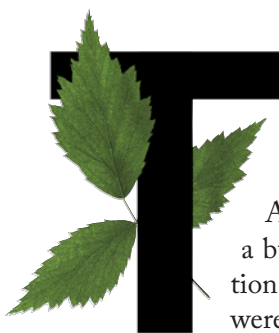


ABSTRACT

The South American Palm Weevil (*Picudo negro*) is my ethnographic entry point to study the racialised relations between oil palm and coconut palm in Tumaco, a municipality located on the Colombian South Pacific Coast. Oil palm agricultural scientists, small farmers and companies, and coconut palm experts and growers have blamed *picudo negro* as the primary culprit for the most damaging plant diseases affecting these trees in Colombia: bud rot disease (oil palm) and red ring disease (coconut palm). They have caused the near collapse of both oil and coconut crops in Tumaco. By following *picudo negro*'s traces, this paper argues that plant health measures to treat coconut and oil palm diseases operate as racialised technologies. Even though oil and coconut palms in Tumaco share the fact of undergoing lethal epidemics, they have experienced ruin, death, mourning, treatment and reparation differently. While oil palm plantations have received much attention, care and research from experts and national institutions, coconut palm ecologies have experienced systematic abandonment. I thus examine how the salvation of the oil palm, as the most 'promising' national (mono)crop, entails the erasure and eradication of the black ecologies, agriculture and knowledge stemming from the coconut palm trees.

KEYWORDS

Coconut palm, oil palm plantations, red ring disease, bud rot disease, *picudo negro*



ALKING AND CONVERSATIONS

I.

As we walked through Doña Violeta's oil palm crops, a buzzing sound intermittently disrupted our conversation.¹ While she showcased her cherished palms, which were the first she had cultivated, she gestured to the path leading to her *Huerta*, a diverse garden featuring avocado, plantains, cherry trees, herbs, chirarán, chillangua and some naidi palm trees. The buzzing persisted, but I refrained from investigating it further. When I asked why *la huerta* was separate from the palms, she said, 'La Palma can't grow well with other crops. She likes her own things – her

1 At the request of the inhabitants, farmers and workers of Tumaqueño, who have made my work possible during these last four years, I replace their identities with pseudonyms in this essay. Likewise, I do not mention the actual names of the plantations, villages and rural areas where coconut plantations and coconut crops are located.

space, water, and light; she doesn't want to share!² I tried to suppress a laugh, recalling another grower's sentiment: 'La Palma is a jealous plant'. However, the buzzing grew louder, prompting me to ask, 'What is that buzz? Did you hear it?' Doña Violeta eagerly pointed upward, exclaiming, 'Look! He's over there!' I finally spotted the source of the noise: a large *picudo*, or weevil. 'It's such a relief to find him', she remarked solemnly. 'When there are many, you lose your hearing to the buzzing, your eyes dart everywhere, and they even hit your head.' I pressed on, 'So, is he a *picudo*?' 'Yes, the infamous *picudo negro* – the plague! It's been a while since I've seen one here. It's not catastrophic – just one. I need to set more traps.' I paused, taking in the presence of the pest. 'The plague is re-emerging', she sighed. 'It's everywhere now.' This exchange unfolded in 2023 amidst the rural landscape of Tumaco.

II.

We sat in front of the home of Amelia, a Black peasant who, at more than eighty years old, professed her enduring love for the land. It was a hot day in Las Delicias village, but a refreshing breeze provided some relief. Our group included five people: Amelia; Alfonso; his nephew, who lived in the house next door; and Iván, Amelia's son, a researcher and professor from urban Tumaco about an hour away. Sol, one of Amelia's daughters-in-law, joined us; she and Alfonso rise early each morning to tend to their oil palm crops. The front of Amelia's house lacked barriers, surrounded instead by a garden of flourishing plants. If you stood before the front door, turned left, walked a few metres away from the sidewall, then turned right and continued for at least twelve metres, you would reach the backyard, where the back door was visible to the right. Many plants thrived in this vibrant space that Amelia called her garden, including a remarkably tall palm with a slender trunk that wasn't an oil palm. In a moment of silence, I asked, 'What kind of palm is that?' Iván redirected my question: 'Why has the *picudo negro* appeared in Tumaco? Do you know why, Andrés?' I admitted, 'I have no idea.' He replied,

2 All the quotations I use in this text from local inhabitants' words come from interviews I carried out during fieldwork between 2022 and 2024. Whenever I use their literal words, I will explicitly point out in quotations and with a pseudonym that I am referring to what was said by one of them.

The wood fever and subsequent monocrops, like banana and oil palm, destroyed their habitats, uprooting countless *naidi* palms. Now, this creature has to seek new homes – guess where? In other palms! Not just oil palms, but coconut palms too!

His tone was sober and slightly upset. Amelia added, ‘I still remember that brutal sound ... the repetitive, dry echo of trees falling like dominoes.’ Alfonso then looked at Amelia and said, ‘Do you also remember the chainsaw, aunt? It didn’t stop! That wild Brum Brum Brum ... It’s the worst human invention.’

III.

I waited for Emilio and Jairo, who were not far away. Moments ago, they had paused to greet a friend we encountered on our path, which offered a much-needed relief for my weary legs after almost two hours of walking along a narrow road lined with oil palm fields belonging to both small-scale peasants and large enterprises. While I waited, I found myself missing Alicia’s garden, which I had visited the previous week. Two ideas from our earlier conversation lingered in my mind. First, I noted how deforestation has transformed Tumaco’s landscapes and livelihoods into a pervasive and violent aural experience. What does a plantation sound like? I wondered, gazing at the rows of oil palms before me. This question intrigued me, but I hesitated to delve deeper, aware of the many other ‘research questions’ awaiting my attention. Second, I reflected on how deforestation undermined Tumaco’s insect ecology, particularly impacting *naidi* palms, a native tree cherished by both people and insects, especially the *picudo negro*. The former enjoyed their delicious, small purple fruits, while the latter found habitat among their fronds. I wanted to explore the *picudo negro*’s lifeways further – a pest considered one of the primary vectors of bud rot disease, deemed dangerous to oil palms by scientists, companies and growers alike. Scientific journals and bulletins from the National Center for Oil Palm Research frequently reiterate that *Rhynchophorus palmarum* is ‘a pest of great economic importance’. (Aldana et al. 2010: 5–8). When Emilio and Jairo returned, I shared my thoughts on the interconnectedness of deforestation, *naidi* palms and the *picudo negro*. Jairo smiled and recounted, ‘Andrés, once, I was in a meeting with a biologist from Nariño University who said he tracked a *picudo negro* he captured on an oil palm field. The next day, someone found it 300 kilometres away in a chontaduro palm!’ Astonished, I exclaimed, ‘Wow, that’s an impressive

journey!’ Laughing, Emilio added, ‘No way! That’s incredible, hermanito! Just imagine how he sprinted farther away when he lost his home!’

IV.

In June 2023, I spoke with Ronald and Alberto – Ronald, a Black peasant dedicated to cultivating coconut and cacao, and Alberto, an agricultural forest engineer and consultant who works primarily with small growers. We discussed how palm oil has dominated agriculture in Tumaco, leading to the marginalisation of agrarian alternatives. ‘There is only room for oil palms; consequently, there is only economic and scientific support for them’, Ronald asserted, highlighting the struggles cacao and coconut farmers face to defend their livelihoods in the region. Alberto was prepared to add to this, but Ronald gestured for his permission to continue: ‘Did you know, Andrés, that coconut has suffered five deaths in Tumaco? We, the coconut growers, have survived five pandemics, five extinctions.’ My confusion prompted me to ask, ‘What do you mean?’ He explained, ‘The red ring disease, caused by the picudo negro, has decimated our palms five times, yet we have never received any condolences from state officials or scientists.’ I expressed my shock, admitting I was unaware of this history. He concluded, ‘The picudo has flown from oil palm to coconut palms and has ruined everything. However, in Tumaco, oil palm has godfathers, while coconut has no mourners.’

I could write extensively about the knowledge shared by Black growers regarding the picudo negro, deforestation, oil palms, native forests and naidi palms. As I wove these stories into coherent narratives – my methodological and ethical responsibility as a researcher – I realised that oil palm soundscapes were just one part of a broader narrative. These stories, integral to the plantations, emerged through anecdotes, memories and rumours, layered with emotions. Generosity and trust were central to their expression. A mix of humility, accountability, excitement and gratitude shapes this note. The stories of coconut growers are not just data but vivid connections with the people I met, many of whom became friends. They embody ethics, intimacy and relationships, forming the backbone of this essay and driving my research. They taught me that beneath the oil palm shadows – echoing Diana Ojeda’s and Sophie Chao’s metaphor – other palm worlds, ecologies and species persist in Tumaco.

1. ARGUMENT AND ROADMAP

Building on the spatial metaphor by Diana Ojeda (2016) and Sophie Chao (2022a; 2022b; 2022c) this paper examines what unfolds in the shadow of the oil palm in Tumaco. While plantation logics never fully homogenise the spaces they occupy, I trace the racialised intersections of coconut and oil palm in the region. Drawing on multispecies studies, I explore how non-human life, particularly the South American palm weevil (*picudo negro*) and the plant diseases red ring and bud rot, shape this relationship. They serve as ethnographic entry points to understand how the coconut palm asserts its presence against oil palm's dominance. Equally important are the agrarian experiences of coconut growers, which both echo and challenge scientific papers, bulletins, and reports from Colombian agricultural institutions. This paper thus engages with Black peasants' narratives on the *picudo negro* and its entanglement with oil palm plantations and coconut crops.

In Colombia, agricultural scientists, farmers and palm experts attribute the most devastating plant diseases to the *picudo negro*: bud rot (*pudrición del cogollo*, PC) in oil palms and red ring disease in coconuts. Though both palms and their growers in Tumaco endure lethal epidemics, their experiences of ruin, mourning and recovery differ. Since the early 2000s, bud rot in oil palm has attracted extensive media coverage, scientific attention, financial aid and government support. Coconut, by contrast, has long faced neglect. Institutional documents not only minimise the repeated crises of the coconut palm but also blame Black peasants for the spread of red ring disease, racialising them as '*negroide africano*' and '*primitive farmers*' and attributing disease proliferation to their supposed ignorance and lack of discipline rather than to structural or environmental causes (ICA 1973, ICA 1975, Plaza Mora 1976, 1977).

This article advances one central claim. Plant health measures in Tumaco are not only technical responses to plant disease. They are a political field in which value, protection and treatment are unevenly distributed across plants and across the people who cultivate them. When bud rot threatens oil palm, institutions mobilise funding, research and public concern to protect the crop. When red ring disease devastates coconut palms, the crisis is minimised and responsibility is often placed on Black peasants and growers who cultivate them. I trace this asymmetry

through the movements of the picudo negro and through the repeated crop deaths that coconut growers describe as 'pandemics'. By following the insect between oil palm plantations and coconut groves, the paper shows how the protection of oil palm has often coincided with the neglect of coconut ecologies and the blaming and criminalisation of the Black peasants who cultivate them.

Here, the term politics is used in two related senses. First, it refers to institutional frameworks that govern plant health. These include phytosanitary policies, scientific research programmes, eradication campaigns and the allocation of public and private resources to protect particular crops. Second, the term also refers to the racialised narratives through which responsibility, blame and value are assigned to plants and to the communities who cultivate them. In Tumaco, these two dimensions are deeply connected. Decisions about which crops deserve protection, funding and scientific attention are inseparable from historical narratives that portray some agricultures as modern and productive while casting others as backward, irresponsible or disorderly.

The unruly presence of the coconut palm and its growers reveals multiple affordances in Tumaco. Crucially, Black peasants refuse the reduction of their homes to a landscape of violence and oil palm monoculture, a narrative long advanced by national agricultural campaigns, sociological reports, media, military officials and NGOs (Fedepalma 2002, 2014). At the same time, national agricultural experts and institutions have often portrayed coconut cultivation as chaotic and backward, framing Black coconut growers as the source of phytosanitary disorder. Thus, the national campaign against red ring disease often operates as a dual eradication effort: an explicit war on the weevil and an implicit effort to discipline or erase Black coconut cultivation.

The analysis unfolds in two parts. First, I introduce the central protagonists of this story: the black palm weevil, oil palm and coconut palm, and the plant diseases that have most afflicted them, bud rot and red ring disease. Second, I present conceptual and ethnographic contributions to the racialised affordances within the oil palm: the coconut-palm entanglement in Tumaco, as well as the agrarian and ontological significance of the coconut palm as unruly Black ecology.

2. THE SOUTH AMERICAN PALM WEEVIL AND THE PALMS

Picudo negro

The South American Palm Weevil (*Rhynchophorus palmarum*), or picudo negro, has been central to Colombia's oil palm agroindustry since the late twentieth century. Small and black, measuring 10 to 15 millimetres, it raises alarm among scientists, growers and workers (Aldana et al. 2010, 2010a; Aldana 2015; Quintero 2010). Widely recognised as the primary vector for the devastating bud rot disease, the picudo negro affects all four oil palm zones in Colombia: Northern, Central, Eastern and Western, the latter along the South Pacific Coast. This paper focuses on the Western zone, where bud rot surged in the early twenty-first century, nearly decimating the oil palm industry. Tumaco, at the heart of this region, has become a key research site for experts investigating the disease and its connection to the picudo negro.

This rising scientific interest in the picudo negro and Tumaco's role as a research hub are rooted in a broader history. Since the 1960s, the Afro-Colombian port city has been a focal point for government officials, investors and experts establishing commercial oil palm plantations (Prieto 2016, Serrano 2021). Here, efforts to sustain 'productive' crops have centred on pest and disease prevention. In Tumaco, the picudo negro is not only a vector for bud rot but also the primary cause of red ring disease, which has devastated the coconut palm, vital for Black peasants in the region for over sixty years.

The picudo negro uses its wings for travel, with its sense of smell guiding its feeding and reproduction. Often seen as a scavenging arthropod, it primarily feeds on decaying plant matter (ICA 1978; Aldana et al. 2010, 2010a; Aldana 2015; Lohr 2016; Quintero 2010; Sanchez 1967). Experts and local farmers note that the odour from diseased palms – whether affected by red ring or bud rot – attracts the weevil. Diseased coconut and oil palms thus become its habitat, food source and site for reproduction. The weevil feeds on the palms, laying its eggs inside, where larvae and pupae develop before emerging as adults (ICA 1978; Aldana et al. 2010, 2010a; Aldana 2015; Lohr 2016; Quintero 2010; Sanchez 1967). By inhabiting these palms, the weevil accelerates their decline and becomes a key vector for spreading red ring and bud rot. 'He carries the pest in his paws and beak', a coconut farmer shared

with me. 'When the oil palms started dying from PC (bud rot) in 2005, that bug appeared in swarms, and it came again to our coconut, and it died again.' He paused and then added: 'That was the fourth extinction.'

The picudo negro thus connects the divergent health and disease narratives of both oil and coconut palms in Tumaco. Though geographically distant, oil palm plantations and coconut groves are intricately linked. Oil palms have been planted at higher altitudes, away from the coast, near rivers and in forested zones, while coconut growers tend to settle along shores, mangroves and marine ecologies. The weevil bridges these spaces, carrying oil palm pests into coconut plantations and vice versa. The tension between oil and coconut palms reflects a dynamic geography, marked by the insect's flight through seas, swamps, rivers, forests and hills. As local farmers often say during our conversations: 'Tumaco is not only oil palm and violence; we are more than a simple monoculture.'

Scientific expertise and the palms

Oil palm trees arrived in Tumaco in 1960 through the Instituto de Fomento Algodonero (IFA), or Cotton Development Institute (Prieto 2016, Serrano 2021). Funded by the Colombian state in the late 1950s, the IFA sought to expand the oil industry. While cotton dominated, the institute also supported beans, corn, sesame and, later, coconut and oil palm (Ferrand 1959, 1964, 1951). National agricultural records show that oilseed promotion aimed to drive industrialisation, rural development, state territorial control and private land ownership. In particular, establishing oil palm in Tumaco required collaboration among government officials, national institutions, European scientists, private investors and Colombian experts in what institutional documents at the time described as *colonización empresarial*. Prieto (2016) and Serrano (2021) analyse this language to show how state agencies, private capital and technoscientific expertise worked together to reorganise land, labour and agricultural production around oil palm plantations in the region. Framed as a backward, impoverished and predominantly Black region in need of development, Tumaco was seen as an ideal site for Africa's 'promising' oil palm due to its perceived resemblance to Central and West Africa (Ferrand 1959, 1964, 1951). By the late 1970s and early 1980s, thousands of oil palms had taken root, reinforcing racialised and colonial legacies dating back to the nineteenth century and

continuing extractivist cycles from gold mining to tagua and timber (Leal and Restrepo 2003).

National and foreign experts have been crucial in promoting oil palm cultivation. Following a mission by Maurice Ferrand, an FAO agricultural expert, the IFA and other institutions launched scientific campaigns that positioned Tumaco as Latin America's top site for oil palm monoculture. The 1960 founding of El Mira Experimental Farm exemplified this focus, continuing research on plant health and breeding. Since the 1960s, publications, bulletins and advertisements have analysed Tumaco's ecology, noting its 'natural features' as drivers of pest and disease emergence. Bud rot, detected in the late 1970s and initially dismissed, became a major concern by the 2000s as experts and companies struggled to contain it. Meanwhile, pests like the picudo negro, responsible for red ring disease in coconut palms, gained attention. By the late 1980s, as bud rot grew more persistent, experts partnered with oil palm companies and large cultivators to establish the Oil Palm Research Center Corporation (*Cenipalma, Corporación Centro de Investigación en Palma de Aceite*) to investigate and contain the epidemic. Scientific research has long emphasised 'good agricultural practices' to control pests and plant diseases in oil palm plantations (Pérez Rojas 2012, Sanz Scovino 2016). Yet, from the 1960s to the late 1990s, most studies overlooked Tumaco's social, economic and cultural dynamics, as well as local agricultural knowledge and labour practices. This contrasts with other agrarian programmes, such as the coconut palm initiatives under the IFA's Program for the Promotion of Plant Oils.

Tumaco's present historical geography is shaped by tensions between oil palm and other crops. I examine how coconut and oil palm interact and conflict through plant diseases, insects and phytosanitary measures imposed by biologists, phytologists and agricultural engineers. Over the past forty years, red ring and bud rot have had unequal effects on these palms. Red ring has primarily devastated coconut palms since the mid-twentieth century, generating repeated crises for Black smallholders. Bud rot, by contrast, nearly collapsed the oil palm industry in the early twenty-first century.

Coconut palms were present in Tumaco by the mid-twentieth century, as shown by agricultural records and interviews with Black campesinos, though neither the records nor locals can pinpoint their exact arrival. This contrasts with detailed genealogies for oil palms,

documented by institutions like the Colombian Agricultural Institution (ICA), IFA and Colombian Agrarian Reform Institute (Incora), which trace their origins and dissemination routes. In contrast, coconut palms receive little attention; agricultural authorities focus instead on the 'cultural' and 'ethnic' factors they associate with coconut farming, framing it as a 'primitive' smallholder activity linked to backwardness and recurrent phytosanitary crises like red ring disease and the black palm weevil. Historical records from the ICA and IFA depict coconut palms as tied to unreliable and dangerous ecologies and knowledge, with the black palm weevil seen as thriving in these 'unruly' environments (ICA 1973, 1975, 1978; Plaza Mora 1976, 1977; Sanchez 1967, 1975).

In the archival materials I analyse, agricultural officials rarely describe coconut cultivation through explicit language of race. Instead, they frequently refer to 'ethnic' or 'cultural' factors when explaining the spread of red ring disease and the persistence of the picudo negro. I read this wording as a bureaucratic way of doing racial work. Within these documents, plant disease is framed as the consequence of the behaviour, habits and discipline of coconut growers, who are portrayed as lacking the hygiene, order and technical knowledge required for modern agriculture. Coconut plots are described as disorganised environments where infected palms are not removed, debris is poorly managed and farmers fail to follow phytosanitary recommendations. In this narrative, the health of coconut palms becomes tied to the presumed conduct of the Black peasants who cultivate them. (ICA 1973, 1975; Plaza Mora 1976, 1977).

At the same time, this cultural vocabulary does not fully conceal the racial logic that underlies it. Several of the same documents that attribute disease to 'ethnic practices' also employ explicit racial labels, including terms such as *negroide africano*, linking coconut cultivation to ideas of backwardness, irresponsibility and disorder. (ICA 1973; 1975; Plaza Mora 1976, 1977). The coexistence of these vocabularies is significant. References to culture allow institutional discourse to present its judgments as neutral technical expertise, while the occasional use of racial terminology reveals the hierarchy embedded in those assessments. For this reason, I do not treat 'ethnic' and 'racial' as synonyms. Rather, I analyse how the language of culture operates as a proxy through which racial assumptions circulate within agronomic and bureaucratic

discourse, shaping how responsibility for plant disease is assigned to Black coconut growers in Tumaco.

Furthermore, although institutional agricultural archives occasionally link deforestation to the spread of the picudo negro and red ring disease, this connection is seldom emphasised. In contrast, small coconut growers consistently note the relationship between forest destruction and the weevil's spread. Leal and Restrepo emphasise that the extractive wood cycle devastated Tumaco's forests until the mid-twentieth century (Leal and Restrepo 2003). This not only eradicated thousands of hectares for the timber industry but also disrupted local ecologies. For instance, the destruction of the naidi palm, a native species that once housed the picudo negro, forced the weevil to seek new habitats, such as the coconut and oil palms. Consequently, the coconut palm and oil palm, particularly the former, began to fulfill this ecological role.

This interconnectedness is displayed in the 'five pandemics' mentioned by Ronald earlier in this essay. The first pandemics began in the early 1960s, coinciding with deforestation for timber and the establishment of early oil palm plantations. Ronald and Alberto stress, 'You cannot understand one without the other.' The fourth and fifth pandemics, in the early 2000s and 2020s, align with the expansion of oil palm cultivation. Oil palms succumbed to bud rot, which fueled a surge in picudo negro populations. However, another factor links the oil palm crises and the recurrence of coconut crop extinctions in the twenty-first century.

A key phytosanitary measure against bud rot involved eradicating diseased palms and replanting disease-resistant species. This process attracted government, financial institutions and agricultural corporations. However, farmers, technicians and experts noted a significant issue in handling debris from felled palms. Jairo and Emilio explained that the remains should be burned, 'not only because the bud rot disease can survive in them, but because the debris "is a feast for the black palm weevil; it's its best banquet".' Instead, much of the debris was left to decay, which led to a rapid reproduction of the weevil. As a result, 'all those new bugs had to look for food and a home, and that's where the coconut palm and we, the coconut farmers, pay the broken plates again because the red ring reappeared', Jairo remarked.

In addition to the factors linked to oil palm plantations, the deaths of coconut crops reveal a significant issue: a lack of institutional support.

Ronald expresses frustration, saying, ‘Coconut is the crop of the poor; it is the crop of the blacks of Tumaco.’ He adds, ‘It is a crop that neither the government nor the wealthy care about, as the plight of the Black community in Tumaco has historically gone unnoticed by presidents in Bogotá.’ By contrast, crises in oil palm have triggered major financial and scientific responses, including the creation of Cenipalma in 1991, now Latin America’s leading palm oil research centre. As Ronald poignantly notes, ‘in Tumaco, oil palm has godfathers, while coconut has no mourners.’

Why have oil palm crops received financial rescue while coconut palms face neglect and decay? In the following section, I explore these racialised dynamics, drawing from critical agrarian studies, black feminism, disability studies and multispecies studies.

3. THE UNRULY PRESENCE OF THE COCONUT PALM

Space, health and racial affordances

The growth of oil palm plantations in Colombia presents a spatial paradox. While linking specific rural areas to global markets, it also connects various towns across the country, as palm monoculture spreads to almost all regions. The mobility of oil palm experts, workers and their agricultural practices reflects this paradox. Yet, the uniform landscapes of oil palm plantations are far from simple. Scholars like McKittrick (2006, 2013), Wynter (1971), Carney (2001, 2021), Wolford (2021), Thomas (2019) and Berman-Arévalo (2019) show how plantation logic – despite its homogeneity – has been persistently contested by local struggles for land, territory and food sovereignty. In Tumaco, the sterile rows of oil palms are disrupted by other plants and ecologies like coconut, cocoa and plantain, which resist the overwhelming expansion of monoculture. This essay builds on the ‘plot vs. plantation’ framework, showing how racialised narratives and practices around plant health in Tumaco mediate tensions between these two forces. The movements of the black palm weevil between crops exemplify how the spatiality of oil palm plantations exceeds their geographical boundaries, interlinking different ecologies and livelihoods.

Narratives of plant health and disease in Tumaco are embedded in a web of racialised ecological disablement. The crises faced by coconut

growers stem from a combination of financial, governmental and technoscientific discourses that have ignored, persecuted and punished Black coconut ecologies in Tumaco. I draw on Sunaura Taylor's concept of ecological disablement to show that the cyclical damage from red ring disease is not just a biological condition, but the result of decades of policies prioritising 'profitable' crops like oil palm over 'undesirable' and 'irresponsible' agricultures. While experts frame oil palm as a transformative project for Tumaco, they simultaneously scapegoat Black coconut farming for plant diseases and pests. According to these experts, the crisis is due to 'cultural' and 'ethnic' factors, namely that coconut growers are Black peasants (ICA 1973, 1975; Plaza Mora 1976, 1977). This view portrays them as incapable of sound economic decisions, dismissing science-based practices and locked in a tradition of harvesting rather than farming (ICA 1973, 1975; Plaza Mora 1976, 1977).

This web of ecological disablement has fostered a politics of care, determining who deserves assistance and who, as Judith Butler (2010) and Alexander Weheliye suggest, is deemed undeserving of life. The stark contrast between media coverage of oil palm disease outbreaks and those affecting coconut crops is revealing. This disparity is mirrored in scientific research, institutional support and financial rescue efforts. Bud rot in oil palms, especially since the 2000s, has garnered significant media attention, funding and scientific focus on eradicating diseased palms and replacing them with resistant species. In contrast, the fate of the coconut palm is almost oppositional, as encapsulated by Ronald in our conversations: 'oil palm has godfathers; coconut doesn't have mourners'. This reflects not only a framework where the coconut is seen as 'an ungrievable life', a life 'that cannot be mourned because it has never counted as a life at all' (Butler 2010: 38), but also frames the coconut's diminished value through capital. Having 'godfathers' implies both ethical recognition and emotional support, as well as, notably, economic sponsorship.

Judith Butler's concept of ungrievable life helps clarify how political orders distribute recognition, care and urgency unevenly. In *Frames of War*, Butler argues that certain forms of loss become publicly intelligible while others remain largely unnoticed or fail to register as losses at all. In Tumaco, the governance of plant disease reveals a similar distribution of attention. Oil palm epidemics mobilise state agencies, research programmes and financial infrastructures, while the destruction of coconut

groves rarely triggers comparable responses. Butler's framework therefore helps describe how recognition and institutional concern become unevenly allocated, shaping which ecological losses appear as crises and which are treated as peripheral or inevitable.

Black studies further clarifies the racial histories embedded in these dynamics. Scholars such as Saidiya Hartman (2017) and Alexander Weheliye (2014) have shown that modern regimes of value have long rendered Black life fungible and differentially recognisable. Hartman (2017) demonstrates how plantation economies treated enslaved people as interchangeable units of labour and capital, where suffering could be commodified and enjoyed simultaneously. As she points out, Black suffering has often circulated publicly as spectacle. Alexander Weheliye (2014) similarly argues that the distribution of humanity, recognition and wellbeing has historically been organised through racial hierarchies that determine whose lives are protected and whose subjugated and neglected. In Tumaco, these insights help illuminate why the devastation of coconut agriculture rarely produces the same urgency or institutional concern that accompanies crises in oil palm plantations. Coconut cultivation is embedded in Black territorial life, labour and subsistence, yet the losses associated with it remain marginal within state and scientific frameworks of agricultural value. When coconut palms disappear without sustained institutional intervention, the absence of meaningful response reflects broader histories in which the wellbeing of Black agrarian worlds has been treated as peripheral to the priorities of agricultural development.

The treatment of bud rot in oil palm plantations catalysed large capital flows, enriching major corporations, yet simultaneously undermining the lives of coconut palms and their growers. Drawing on Nirmala Erevelles' work (2011), I frame bud rot not merely as a biological ailment, but as a material process where plant impairment becomes a fetishised promise, more a symbol of potential profit than a lack. The spread of bud rot within the oil palm industry is driven by exchange value – investment, profit and capital accumulation. But this is only part of the story. As Erevelles suggests, impairment under transnational capitalism creates not just fetishised commodities, but material conditions that harm and degrade life and health. In Tumaco, the treatment of bud rot embodies a process that debilitates coconut ecologies, reactivating red ring disease and precipitating the cyclical extinction of the coconut

palm. Following Jasbir Puar's (2009, 2017) and Julie Livingston's (2009, 2017) work, I use 'debilitating' to describe the ongoing production of plant epidemics and ecological disablement in Tumaco, where the extinction of the coconut palm is a continuous cycle of harm. Thus, the spread of bud rot in the oil palm sector highlights how plant health measures intersect with a political economy that transforms plant disease into a commodity, all while perpetuating harm to Black coconut agriculture and its growers.

Oil palm agribusiness in Tumaco exemplifies racial capitalism, as scholars like Robinson (2000) and Melamed (2011, 2015) define it: the material and ideological co-constitution of race and capital. In Tumaco, the state, scientific experts and investors have leveraged Blackness as a key signifier to develop oil palm plantations and integrate capitalist logic into local economies.

Long before the arrival of oil palm plantations, Tumaco had already been incorporated into successive cycles of resource extraction. The environmental historian Claudia Leal (2018) shows that the Pacific lowlands have repeatedly been represented by national elites as a territory rich in natural resources but insufficiently developed by its inhabitants due to their supposedly racial, cultural and socio-economic inferiority (Leal 2018). At the same time, since the nineteenth century, extractive cycles organised around gold mining, tagua extraction, timber exploitation and marine harvesting have structured the integration of the region into national and global markets (Leal 2018, Leal and Restrepo 2003). Tumaco was imagined as abundant yet underused, while Black and Indigenous populations were portrayed as lacking the discipline or knowledge required to transform that abundance into productive agriculture. Such representations helped legitimise repeated interventions by state agencies, scientists and investors who presented new extractive projects as necessary forms of development, such as the above-mentioned corporate colonisation (*colonización empresarial*). Leal (2018) conceptualised this broader pattern through the concept of racialised landscape: a resource-rich space cast as backward through racialised claims of Black inferiority that legitimise occupation and extraction.

Oil palm plantations thus emerged in Tumaco within this longer history of extraction and racialised representations of the territory. As a local peasant and intellectual explained to me during fieldwork, oil palm operates as 'an accumulation of racial and economic violences,

a continuum of dispossession and extraction of value in Tumaco' (Fieldwork Interview 2023). From this perspective, palm plantations do not simply introduce a new agricultural activity. They reorganise earlier extractive dynamics. Landscapes once shaped by forest livelihoods, small-scale cultivation and coastal economies become increasingly structured around monoculture plantations and industrial processing plants. The expansion of oil palm therefore transforms not only land use but also the organisation of labour, value and authority in the region.

These transformations are particularly visible in the alliances between oil palm companies and small growers. Tumaco occupies a distinctive place within the Colombian palm oil industry. Among the five oil palm regions in the country, it is the one where a large share of production comes from small growers rather than large estates. For this reason, oil palm institutions often present Tumaco as an example of how oil palm development can incorporate small farmers, especially Black campesinos, into the agro-industrial economy (Fedepalma 2016). Yet the structure of these alliances reveals a deeply unequal relationship, as some inhabitants told me during my research. Small growers cultivate and harvest the fruit but do not control the extraction plants, which are owned by the five oil palm companies in the region. Without access to processing infrastructure, growers must sell their fruit under the prices and standards imposed by these companies. At the same time, the labour structure of the industry reproduces clear racial hierarchies. Field labour, harvesting and maintenance are overwhelmingly performed by Black workers, while managerial, administrative and technoscientific positions remain largely occupied by blanco-mestizo professionals.

A final dimension of racial capitalism in Tumaco appears in the uneven distribution of plant health initiatives across different crops. When disease threatens oil palm plantations, a dense institutional network mobilises to protect the industry. Government agencies, banks, insurance companies, research centres and private firms invest resources in controlling bud rot, financing eradication programmes and developing resistant varieties. The health of oil palm becomes a matter of national economic concern. The situation is markedly different for coconut cultivation. Despite the devastating effects of red ring disease on coconut groves and on the livelihoods of Black peasants who cultivate them, comparable institutional responses rarely emerge. There are no large-scale rescue programmes, no major insurance mechanisms and little

sustained scientific investment. Instead, coconut growers are frequently blamed for poor management or for supposed cultural deficiencies. In this contrast, the organisation of land, labour, capital and plant health reveals how some plantations attract investment, scientific attention and institutional rescue, while coconut groves and the Black agrarian worlds attached to them remain largely without comparable support.

These dynamics are not only economic arrangements but racialised ways of organising land, labour and life within the oil palm economy. In Tumaco, Blackness becomes a flexible category through which the industry organises production, blame and value. At different moments, Black peasants appear as labourers who sustain plantation work, as small growers incorporated into development programmes, and as subjects blamed for agrarian disorder or poor agricultural practices. These shifting positions show how Blackness is continuously reorganised to stabilise the palm economy and its institutional narratives. These plantations echo the racialised legacies explored by Black feminist scholars on the connections between race, labour and capital (Jackson 2020, King 2019, Hartman 1997, 2019). In collaboration with the state, the industry has transformed Blackness into a mutable commodity, enabling control and commodification of oil palm trees, land, people and even pests within global supply chains. Here, I follow Zakiyyah Iman Jackson's notion of plasticity, where Blackness is seen as infinitely mutable and can be managed and exchanged without limit (2020: 11). The expansion of oil palm, with its focus on plant health measures to combat bud rot, codifies spaces and bodies as malleable commodities for capital accumulation.

Coconut: Refusing fungibility

Nonetheless, it is important to note that Blackness itself is not inherently a fetishised object. As both Black scholars and Tumaqueños peasants have taught, Blackness defies the intent to make it fungible. Coconut ecologies, agriculture and livelihoods in the region refuse the logics of fungibility and accumulation that structure oil palm expansion. When we say that the coconut palm has refused financial, governmental and agricultural campaigns, we mean that coconut ecologies are not simply reactions to power but represent spatial and historical ways of inhabiting Tumaco in an entirely different manner. Black scholars have conceptualised refusal as a mode of living, embodying, experimenting

with, desiring and practising Blackness – one that exceeds fungibility and goes beyond merely opposing it (Fuentes 2016, King 2019, Hartman 1997, 2019).

Unlike oil palms, coconut palms were never the focus of large-scale initiatives. This imbalance reflects institutional enthusiasm for oil palms and a persistent view of coconut palms as unruly, shaped by perceptions of both the picudo negro pest and the 'negroide africano' farmer. Why has the oil palm been championed while the coconut palm not only remains comparatively marginalised but, when it appears, is defamed?

Based on coconut growers' knowledge and lessons, I argue that coconut ecologies in Tumaco carry a form of unruliness that, in contrast to the fungible character of oil palm plantations, refuses agribusiness logic and its racialised practices of commodification and environmental disablement. Amid the coconut palms, Blackness becomes an act of living otherwise: creating forms of collective labour, cropping systems, food practices, and relational ontologies that bind human bodies with coconut palms.

One reason for this difference lies in the material organisation of the two crops. Oil palm in Tumaco is embedded in a national and international commodity chain. Its fruit must be processed in industrial extraction plants owned by a small group of companies that control processing, pricing and commercialisation. These companies are connected to banks, insurance mechanisms and research institutions such as Cenipalma, which support the sector through scientific programmes and public investment. Because oil palm production depends on this infrastructure of processing, finance and export-oriented markets, plant disease in oil palm becomes a matter of national economic concern. Coconut cultivation follows a different logic. Coconut groves are mostly managed by small growers and circulate primarily through local economies rather than through stable export chains. In some cases, growers organise small associations to process and sell coconut products together, including coconut oil, cocadas, ice creams and other foods made from the fruit. These products occasionally reach buyers in other regions of the country, especially in central Colombia, but these commercial connections remain irregular and unstable rather than forming a permanent market. As one coconut grower in Tumaco explained to me, these initiatives depend on finding occasional buyers rather than on a fixed commercial infrastructure. Without industrial processing plants or

stable export contracts, coconut agriculture has received far less institutional investment and scientific attention. These differences help explain why oil palm diseases mobilise research programmes and financial resources while coconut epidemics are often treated as marginal problems.

These material differences also shape how coconut growers understand the palm and its history in Tumaco. In my interviews, growers repeatedly referred to what they call a 'previous coconut', the coconut of their ancestors. They could not identify a specific moment when the palm arrived, but they were certain that it has long been part of Black territorial life along the coast. 'I don't know when it arrived, but I know it is part of my blood and feeds on our work', Doña Manuela told me. Doña Graciela similarly recalled climbing coconut palms since childhood and described them as a presence that had always existed in her family's land. These accounts do not function as missing historical data. They express another way of situating history through kinship, labour and long relations with coastal land.

Institutional records from the mid-twentieth century provide only partial confirmation of this longer presence. Agricultural reports produced during the early promotion of oilseeds in Tumaco occasionally mention coconut as an already-existing crop adapted to local ecological conditions. Yet these documents rarely treat coconut cultivation as a development project worthy of sustained research. Instead, as I mentioned in the first section of this paper, coconut appears mainly in discussions of plant disease, especially red ring and the picudo negro. This asymmetry is significant. Oil palm enters the archive as a planned agricultural future supported by scientific expertise and state investment. Coconut enters as a preexisting Black crop that becomes visible to institutions largely through disease and blame. Situating coconut within this longer historical terrain helps clarify why growers narrate the palm through memory and ancestry rather than through the institutional timelines that structure the history of oil palm in Tumaco.

During my fieldwork, coconut farmers emphasised the collective nature of coconut farming. Unlike oil palm plantations, planting coconuts is typically not an individual task or paid labour. As Doña Manuela explained, 'You can call your neighbors, friends, and close relatives to help you clear the land, plant, and manage drainage.' This mutual assistance is grounded in the practice of 'Mano Cambiada', which means, in Doña Manuela's words, that 'you lend me your hand, and then I

lend you mine'. Ronald also highlighted the role of 'Mingas', collective agreements within the community to share tasks. For example, they may spend a week planting coconuts on a neighbour's farm, fostering community bonds through collective labour. 'Thanks to the coconut, we work together as a community', he said. Coconut farming not only strengthens collective efforts but also supports the organisation of agricultural associations and small businesses focused on production and distribution.

Coconut farmers also emphasised that, unlike oil palm, the coconut is essential not just as a crop but as a fundamental food. 'You can pick a coconut from the palm and eat it just like that or drink its water ... or use it as cooking oil, for coconut rice, fish encocado, lemonade, or delicious cocadas', Doña Manuela shared. Ronald added, 'With coconut, you can make thousands of dishes. That's why it's so important to us. It's the foundation of our diet and food sovereignty.' The coconut's versatility extends beyond food: Doña Graciela, an influential woman coconut grower, noted that coconut oil is used for lubricating tools, caring for machetes and even as a beauty product for hair and skin, and some even use it as a natural deodorant.

The coconut palm also involves epistemological practices, the creation of temporalities and the formation of interdependent ontologies between plants and humans. Growers describe this relation through ancestral memory and long histories of labour with the palm. 'I don't know when it arrived, but I know it is part of my blood and feeds on our work', says Doña Manuela. Ronald and Doña Graciela refer to it as 'the palm of the blacks' or 'the black tree'. Graciela recalls, 'I've always been perched in the branches of my coconut palms; I was born in those branches.' This view aligns with Katherine McKittrick's (2006) and Suzanne Roussi-Césaire's³ works, allowing for a Blackness that emerges from the co-constitution of plant and human lives. It is an interspecies ontology where the boundaries between human corporeality and coconut palms blur. It is embodied, situated in lived experiences, like Graciela's. It is an ontology rooted in the body, in the fleshy, lived experience of Blackness.

This formulation does not imply a biological affinity between Black bodies and plants. Rather, it refers to relations formed through everyday

3 All the items in the bibliography.

practices in a coastal territory where food, labour and land are closely intertwined. Coconut palms appear in cooking, in household economies and in the daily work of tending groves and processing fruit. Scholars working on Black ecologies have emphasised that such relations should not be read as evidence that Black life is naturally closer to nature. Tiffany Lethabo King (2019), for instance, develops the figure of the shoal to describe coastal spaces where land and sea meet and where different forms of life gather without collapsing into one another. The shoal is not a metaphor for harmony. It is a way of thinking about relations that remain partial, shifting and historically situated. Alexis Pauline Gumbs (2020) approaches interdependence through practices of listening and attention to marine mammals in *Undrowned*. She reflects on breath, care and collective life by thinking with whales and dolphins, showing how different forms of life can illuminate one another while still remaining distinct.

Black ecologies scholarship also helps situate these relations within coastal landscapes shaped by water, mangroves and estuarine life. J.T. Roane's work (2018) on Black ecologies in the tidewater examines how Black communities along the Atlantic coast developed ecological practices in environments defined by marshes, tidal rivers and coastal wetlands. Roane shows that these landscapes were not empty nature but places where fishing, oyster harvesting, rice cultivation and small-scale agriculture were organised through intimate knowledge of tides, soils and aquatic species. Black ecological life in these regions therefore involved continuous interaction with plants, animals and shifting coastal environments. His work demonstrates how coastal ecologies are shaped by situated and historical experiences of the communities who live and work within those landscapes.

In Tumaco, coconut growers describe relations with the palm in similarly grounded ways. Those relations appear in everyday cooking practices and in the preparation of foods made from coconut. They also appear in the use of coconut oil to care for machetes and tools and in the daily labour of climbing palms, harvesting fruit and processing coconuts in household spaces. These practices show how coconut palms are woven into everyday forms of work, food and territorial life, without turning that relation into a biological or essential connection between Blackness and nature.

These everyday practices also shape how the history of the palm in Tumaco is remembered and narrated. As mentioned earlier, growers refer to what they call the ‘previous coconut’, the coconut of their ancestors. For this reason, the inability to pinpoint the coconut palm’s arrival does not indicate ignorance. Rather, it underscores a critical ontological dimension of Black ecologies. The palm neither precedes nor follows Tumaco’s formation. Instead, it functions as a vital artery of the territory. As Doña Violeta shared with me, ‘Since I can remember, since my ancestors can remember, the coconut has always been in Tumaco.’ After a breath, she added, ‘The coconut is the unifying force for us, the blacks. It is like the heart that pumps us and takes care of us.’

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The Role of Palm-Leaf Manuscripts in the Preservation of Traditional Siddha Medicine in Tamil Nadu, South India





alm leaves have been vital in preserving and legitimising indigenous knowledge of science and medicine in India. Siddha medicine, one of the earliest traditional medical systems in the world, is often perceived as illegitimate or pseudoscientific (Weiss 2009: 39). For much of its history, knowledge of Siddha medicine was passed down orally, making it difficult to establish its legitimacy through documentary evidence. Siddha medicine was marginalised within India, overshadowed by colonial preferences for Ayurveda and Sanskrit texts (Kanagarathinam 2018). Palm-leaf manuscripts, however, provided one of the few sources of written evidence for Siddha medicine, enabling it to challenge such perceptions, root itself in the classical Tamil script and establish itself as a 'real' science both within India and globally. The medical wisdom contained in these palm-leaf manuscripts certainly substantiates the science of Siddha, along with the chemical processes of preserving the palm leaves themselves. Originating in Tamil Nadu, South India, Siddha medicine has evolved from its origins in alchemy, philosophy and religion to modern biomedical research in the use of poly-herbal medical compounds to treat disease and maintain health. While palm leaves can be a material witness in biochemically tracing the origins of Siddha medicine, the true dates are difficult to ascertain accurately but are estimated to date back to 2500 BCE (Pandey et al. 2013). Palm leaves enabled the earliest written documentation of Siddha medicine and therefore its survival to the present day. This meditation discusses how palm leaves preserved and historically sustained the knowledge economy of Siddha medicine in India.

The original palm-leaf manuscripts of Siddha medicine written by the very first Siddhars no longer exist. However, before the original palm-leaf deteriorated, the chosen disciples of the ancient Siddhars recorded and copied the information from the original manuscript to a new palm-leaf. Old and decaying manuscripts were then composted by being burnt in ghee or thrown into the river. As the oldest medium of written communication in Southern India, the palm leaf required methods of preparation and preservation that were, in and of themselves, scientific processes. The chemical process of preservation of the palm leaves allows the organic material to sustain a lifespan of about 300 years, preserving the Indigenous knowledge of medicine for

generations. The palm-leaf manuscripts we have today are the result of umpteen iterations of the transcription and preservation process.

In South India, recordkeepers wrote on palm leaves (from mainly *Borassus flabellifer* and *Corypha umbraculifera* varieties, commonly known as palmyra and talipot, respectively) because they were durable, cheap and readily available (Kumar et al. 2009). The preparation and preservation processes of palm leaves vary slightly across geographies within India. In Kerala (Tamil Nadu's sister state), palm leaves must be in a semi-mature condition when extracted. The leaves are then dehydrated and dried in the sun before being stripped into leaflets. The leaves are pressed with sesame oil, boiled with rice or turmeric juice, and re-oiled. This process removes acidic impurities in the leaves, making them more fire-resistant and waterproof. The palm leaves are boiled in a copper vessel where copper ions penetrate the leaflets increasing durability (Padmakumar et al. 2003). In some cases/regions, the recordkeepers protect leaves against insects and fungi by fumigating them with thymol vapours or submerging them in lime. Carbon black mixed with oil helps preserve the imprints of the ink. The application of sesame, camphor or lemongrass oil helps the leaves maintain the proper balance between flexibility and brittleness over time. Altogether, these preparation and preservation processes extend the lifespan of the palm-leaf manuscript to about 300–350 years, with some surviving up to 600 years (Ibid).

While palm-leaf manuscripts were a historically critical vehicle for the preservation of Siddha medicine, their modern survival is tenuous. Six hundred years is not forever. Especially in South India's tropical and political climate, the palm-leaf manuscripts remain vulnerable to decay. Neglect by the National Government of India, for instance, has led to these manuscripts being undervalued and discarded rather than cherished and preserved (Kanagarathinam and Lourdasamy 2023). Siddha medicine's vast literature, primarily in palm-leaf form, risks being lost forever, as only Classical Tamil scholars or Siddha doctors can translate and digitise the leaves. Family collections of these manuscripts are scattered across Tamil Nadu, often forsaken and deemed useless. Preserving these manuscripts is urgent. They hold significant historical and scientific value. The existence of palm-leaf manuscripts and the skill required to create them challenges colonial perceptions of Siddha medicine as unscientific, repositioning its knowledge as a truly scientific medical system both within India and in the global economy.

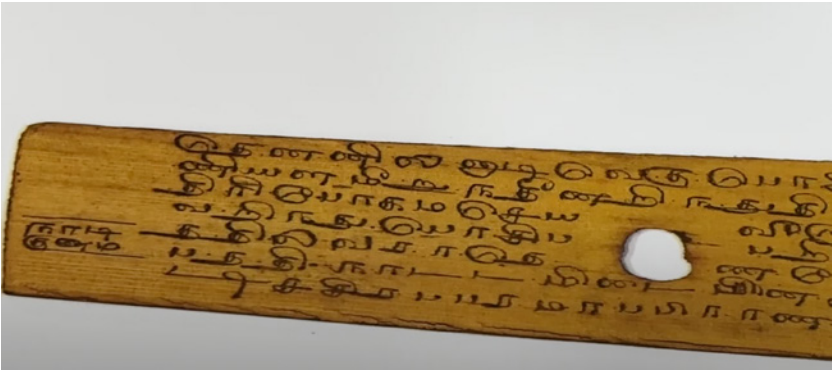
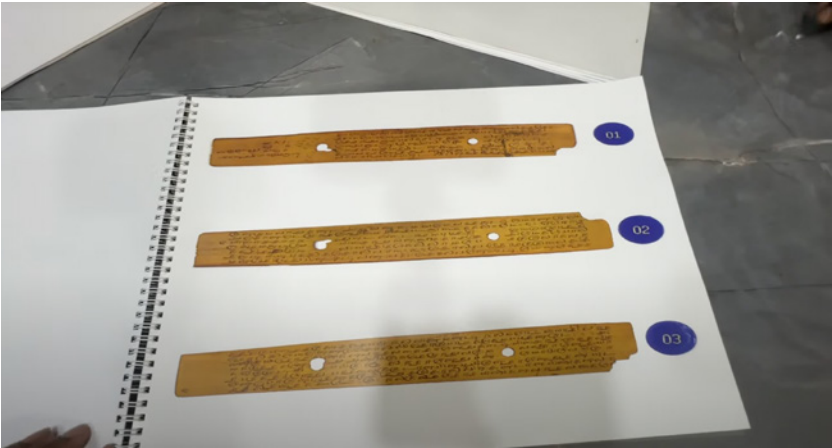


FIGURE 1.
Photos taken by Shruthi Kumar, 10 January 2024, at the Central Institute of Classical Tamil (CICT) in Chennai, India, showcasing CICT's preservation efforts with respect to Siddha palm-leaf manuscripts.

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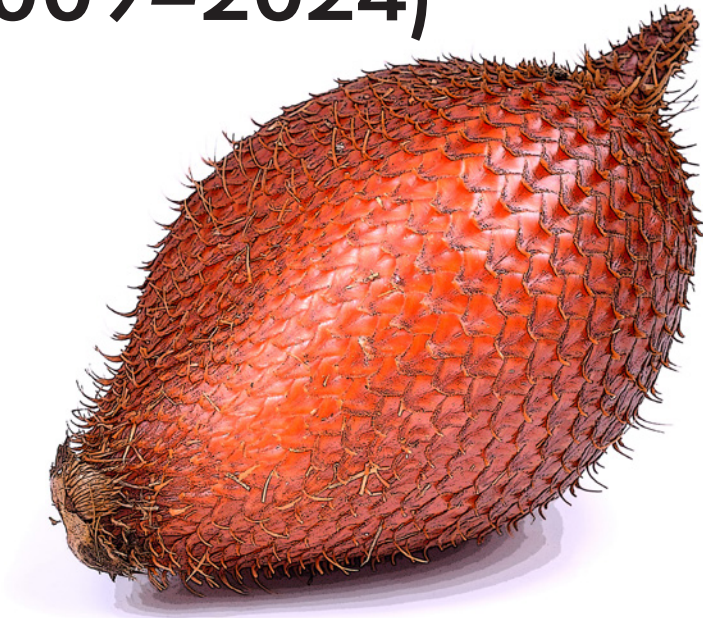
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Uses of Native and Exotic Palms in Ecological Restoration: Lessons From the Mashpi Shungo Reserve, Ecuador (2009–2024)



ABSTRACT

For its outstanding biodiversity Ecuador has been designated as one of ten megadiverse countries. Due to its location on the equator, it enjoys many climates, soils and diverse geological processes. In Ecuador, palms represent the group of native plants with the greatest diversity of uses per species. At the Mashpi Shungo Reserve in the Ecuadorian northwest, the authors have been working to restore degraded areas using regenerative practices through diverse agroforestry systems. We have explored working with a diversity of palms. To date, eighteen species of palms of 36 varieties have been used in restoration, which we have integrated with about 300 species of other plants. In this manuscript we report the mostly edible uses of these palms, focusing on the current and potential uses of two palm species, *Bactris gasipaes* and *Salacca zalacca*.

KEYWORDS

Palms, Ecuador, uses, Chontaduro, Salak



INTRODUCTION

Palms have been present on the planet for about fifty million years and, somewhat surprisingly, records allow us to estimate that their centre of origin was in what is now the Arctic (Henderson et al. 2019). Today, however, the greatest diversity is found in tropical areas around the world, with the highest diversity concentrated in America and Asia (Riffle et al. 2012). Throughout human evolutionary history, palms have appeared in historical records for more than 5,000 years; for example, the use of date palms is documented in ancient civilisations such as Mesopotamia (Sallon et al. 2008).

There are species that have adapted to climates as diverse as their growth patterns. Therefore, there are palms in dry forests and rainforests, and palms that grow from sea level to the high Andes. At these different altitudes, there are palms known as rattan (around 600 species), which mainly grow in the form of lianas and have thorns that allow them to 'climb' from the floor of the rainforest to the tops of huge trees, reaching heights close to the upper canopy. There are also undergrowth palms that have become famous as ornamental plants in indoor gardens in homes and buildings (mainly the genus *Chamaedorea spp.*).

Others are more common in the middle and upper strata, such as the famous açai palms (*Euterpe oleraceae* and *E. precatoria*), which produce an edible pulp with high levels of antioxidants that have earned them a place among the plants known today as ‘superfoods’. Reaching the canopy of the cloud forest are the Andean palms known as wax palms (*Ceroxylon* spp), which grow to a height of around forty metres, making them the tallest palm trees in the world (Ballik and Beck 1990, Henderson et al. 2019).

In Ecuador, palms represent the group of native plants with the greatest diversity of uses per species, with up to 27 different uses in the case of the fibre palm (*Aphandra Natalia* –Henderson et al. 2019). Complementarily, not only are there many uses per species, but 105 of the 136 palm species reported in Ecuador have some use (Valencia et al. 2013).

Given this significant diversity of uses and their presence in most of Ecuador’s climatic zones, in this manuscript we analyse the use of a variety of palms in the ecological restoration project where we have been working for the past twelve years on integrated management for conservation purposes, noting some progress in terms of the use of palms as non-timber forest products. We conducted an inventory of the types of palms cultivated in our farm. We present a description of each according to its current and potential uses. Subsequently we focus on two specific types of palms, one native and one exotic, and report the novel approaches to its cultivation and use that we have successfully achieved at our farm in the Mashpi Shungo reserve.

STUDY AREA

We work in the Mashpi Shungo Reserve, located in northwestern Ecuador, which is part of the Chocó Andino Biosphere Reserve. Mashpi Shungo is 56 hectares, protecting an important remnants of foothill rainforest and is located within the Metropolitan District of Quito, Parish of Pacto, Mashpi River Valley. The altitude ranges from 500 to 650 metres above sea level, with a tropical rainy climate and approximately 3,000 millimetres of annual rainfall.

Over the last fifteen years, an ecological restoration project with agroecological objectives has been underway in the areas of Mashpi

Shungo reserve that were degraded – approximately five hectares – using permaculture techniques that mainly include organic farming, agroforestry and zoning. Successional agroforestry, analogue forestry and syntropic agriculture have been used on the agroforestry plots.¹

INVENTORY REPORT

As part of the ecological restoration systems, eighteen palm species in thirteen different genera were inventoried, of which ten are native palms and eight are exotic. We decided to use exotic species because they are plants with interesting potential (soil restoration, food sovereignty, habitat, etc). According to several agroforestry systems, such as analogue forestry and syntropic agriculture, ‘foreign’ plants are not seen as a potential danger because they are never planted in monocultures. Rather, they are considered opportunities to associate and involve species that can grow in a diverse, healthy production system and fulfil ecological functions appropriate to the local context.

With respect to which palms to use in ecological restoration with an aim at ensuring agroecological production, several factors should be considered. Many palm trees take several years to grow and yield fruit: for example, in our experience, Salak can take up to four years and Chontaduro up to six. Once established and growing, the next logical step is to plan what to do once production begins. In small-scale projects, the great majority of farmers are pushed to sell their produce to middlemen, making it difficult to obtain a fair revenue. We experienced the same situation in diverse agroforestry. To overcome this, at Mashpi Shungo Reserve we have established an artisanal workshop to add value to the produce on site, create local jobs and establish a more direct channel of commercialisation. In the following, we provide a couple of examples in relation to two species of palm tree we are working

- 1 Successional agroforestry is a productive design that mimics natural ecological succession, gradually replacing pioneer species with secondary and climax species to maintain constant productivity and regeneration (Steenbock et al. 2013). Analogue forestry is the planning of agricultural systems that reproduce the form, structure and dynamics of a local natural ecosystem to achieve sustainability and resilience (Senanayake 1987). Syntropic agriculture is managing crops so that they produce their own fertiliser through high density of prunable species, generating organic matter, light control and rejuvenation of the system (Correa-Neto et al. 2016).

TABLE 1.

List of palm species, both native and exotic, use in ecological restoration agroforestry plots at Mashpi Shungo Reserve.

Common name	Species	Place of origin	Current uses by locals at the farm	Other potential uses
Salak (Bali, Light, Pink, Miri, Golden, Thornless)	<i>Salacca zalacca</i>	Java and Sumatra	Fresh fruit, dehydrated fruit covered with chocolate	Peel used for tea, living fence
Red 'sweet' Salak	<i>Salacca affinis</i>	Singapore, Peninsular Malaysia, Borneo, Java, and Sumatra	Fresh fruit	Living fences, agroforestry
Thai Salak	<i>Salacca wallichiana</i>	Malaysia, Thailand, Myanmar, and Sumatra	Fresh fruit, juice, sauces	Living fences, agroforestry
Morete	<i>Mauritia flexuosa</i>	Amazonia	Boiled fruits, oils	Ornamental, agroforestry
Mararay	<i>Aiphanes borrida</i>	Northern South America and Caribbean Islands	Juice of boiled fruits	Ornamental, agroforestry
Açaí 1	<i>Euterpe oleracea</i>	South America	Pulp, juices, ferment drink	Agroforestry
Açaí 2	<i>E. precatoria</i>	South America	Pulp, juices, ferment drink	Agroforestry
Jussara	<i>E. edulis</i>	Atlantic Rainforest Brazil	Pulp, juice	Agroforestry
Shimbi	<i>Oenocarpus mapora</i>	Amazonia	Pulp, juices, ferment drink	Agroforestry
Chapil/ Ungurahua	<i>Oenocarpus bataua</i>	Amazonia	Pulp, juices, ferment drink	Agroforestry
Chontaduro	<i>Bactris gasipaes</i>	Amazonia/ Caribbean	Boiled fruits, savoury or sweet dishes. Beetle grub from tree trunk	Agroforestry
Palma roja	<i>Cyrtostachys renda</i>	Sumatra	Ornamental	Ornamental
Palma de azúcar	<i>Arenga pinnata</i>	Tropical Asia	Sugar, alcohol	Agroforestry
Corozo, corozo de lata	<i>Bactris guianensis</i>	Central and northern South America	Pulp, juices, ferment drink	Agroforestry
Táparo	<i>Attalea allenii</i>	Northwestern South America	Fresh and boiled fruit	Agroforestry
Mocora	<i>Astrocaryum standleyanum</i>	Central America and Northern Amazonia	Fibres for weaving baskets	Agroforestry
Palma de fibra	<i>Aphandra natalia</i>	Northern Amazonia	Fibres to make brooms	Agroforestry
Palma enana	<i>Reinhardtia gracilis</i>	Central America and Northern South America	Ornamental	Ornamental

more intensively with, Chontaduro (*Bactris gasipaes*) and Salak (*Salacca zalacca*).

CHONTADURO (BACTRIS GASIPAES)

This is a tall to emergent palm tree, with fruits commonly eaten boiled in many parts of the neotropics, especially in countryside and jungle environs (Gonzales et al. 2022). In the areas surrounding our farm in Mashpi Shungo, it is used very differently. Chontaduro is densely planted, with the aim of harvesting as a very young plant to extract the heart of the palm, usually produced in large monocultures and highly dependent on agrottoxics (Freile 2020). Upon establishing the project, we were told by neighbours that we should follow this example. Aware of the negative impacts of this conventional plantation method, we decided to use this plant in a polyculture to demonstrate that it can be produced agroecologically without negative impacts and many benefits to the soil, the wildlife and the people. In the early years we did extract the heart of palm and processed it on site, introducing a new product to the market, i.e. a regenerative heart of palm. After a few years of managing, and once other companion trees started producing fruits, mainly native cacao, we decided to allow the Chontaduros to grow and express themselves naturally, achieving a greater size, bringing stratification to the agroforestry system, while generating shade, pumping nutrients from deeper in the soil and producing fruits

These fruits are very important for food sovereignty and are a great source of nutrients, in the shape of good fats, vitamins and fibre. We then learned how to preserve the cooked fruits, in a water and salt solution like that used to preserve the heart of the palm. The super abundant fruit production of the Chontaduro tree has served another unexpected function in the agroecological system; we noticed that, when fruiting, the local fauna prefers this crop over other star crops such as cacao.

Another edible product of great interest is the animal protein one can obtain when pruning one of the trunks of the palm. There is a beetle commonly known as Chontacuro (*Rhynchophorus palmarum*) that makes its life cycle on the rotten trunk. The harvesting needs to take place on a waning moon; after 45 days the beetle grubs are ready for harvest. The beetle grubs have been consumed traditionally by local populations in various regions of Ecuador.



FIGURE 1.
Chontaduro trees (left), chontaduro fruit (right).
Photo credit: Mashpi Chocolate.

Other uses we have explored involve the processing of the cooked fruits into flour, first cooking, then dehydrating and finally grinding into powder. We have used the flour in bread, soups and porridges. Other possibilities include using it for animal feed. More research is needed with respect to the potential uses of the Chontaduro fruit.

SALAK (SALACCA ZALACCA)

This dense and trunkless palm tree was introduced from Bali to Ecuador nearly twenty years ago by seed savers and fruit enthusiasts Jaime West and Mimi Foyle (West and Solano 2021). The fruit of this species is commonly known as ‘snake fruit’ and is very attractive for its skin scales resembling a snake; however the fruit doesn’t last long once harvested. The fruit has a dense and crunchy texture and its flavour has been described as a mix between pineapple and pear. We decided to dehydrate it and then cover it with chocolate made on the farm from the cacao intercrop with the Salak fruits. This product is an innovation and a good



FIGURE 2.

Chocolate covered, dried Salak (left), Salak whole fruit (right).

Photo credit: Mashpi Chocolate.

way to extend the shelf life of the fruit, allowing it to reach a wider public, using chocolate to tell the story of the integrated agroecological production system of our farm. The demand for the fruit is growing both locally, being sold at roadside shacks as well as in some organic markets in the capital. In the case of the processed chocolate-covered Salak we have also commercialised it in international markets, both in the USA and Europe.

FINAL REMARKS

Palm trees offer both opportunities and challenges. As we have reported in this essay, there are many current and potential uses for Chontaduro. However, we have experience that, at least in Ecuador, a racial stigma is attached to the fruit, as it is an ancestral food commonly looked down upon by lighter-skinned urban elites for being consumed by Indigenous

people and countryside communities. Such stigmas rooted in colonialism have prevented the broader public from benefitting from this and other heritage foods for centuries. In recent decades, the rebranding or refashioning of traditional foods within urban and global dietary and health trends as 'superfoods' has created unwanted impacts. These range from the proliferation of myths and unfounded beliefs about the adequate, presumably 'better', preparation or consumption of these foods, to the overexploitation of resources by certain chefs and the food/wellness industry. In addition, there are unfair advantages gained by the latter over the local keepers, both Indigenous and mestizo communities, of the knowledge that has made these culturally meaningful foods available to us today. Thus, the solution to de-stigmatising Chontaduro doesn't only lie in making its fruit trendy, but rather in educating the population to break with the racial stigmas rooted in the colonial mindset, and working with conscious and committed change agents, be it local cooks, chefs, health professionals or local authorities, to educate the public on the health, social and cultural value of traditional foods such as Chontaduro.

For example, in countries like Costa Rica, one can find small carts with boiled Chontaduro fruits ready to pick and take home, similar to how chestnuts are consumed in parts of North America. This practice could well be applied in other countries to encourage consumption, stimulating a deeper interest in plants in general and, more specifically, in culturally significant foods derived from palms and the diverse potential uses that palms can offer.

Similarly, working with exotic species of palms poses challenges and opportunities. Our farm in the Ecuadorian northwest, along with nearby farms from the Seed Savers Network of Ecuador, has been the centre of dispersion of this relatively new crop. Salak is now being cultivated mostly for self-consumption on farms in the coast of Esmeraldas, Manabí and the Amazon region. We have pioneered the promotion of its cultivation in agroforestry models and innovated its uses in Ecuador, particularly through our chocolate-covered dry Salak fruit. The challenge with new crops, and in particular new fruits, is a certain degree of resistance from consumers to unconventional products. Using a vehicle such as chocolate is a strategy to introduce components of our diverse agroforestry, emphasising yet little-known natives but also using exotics, to shine together with some better-known crops like cacao.

Finally, we see the need to highlight the different impacts created by methods of production of various species of palm trees. Large monocultures such as the aforementioned heart of palm, and the African oil palm, are detrimental to the common good and to both producers and consumers. The most preoccupying threats created by global monocrop cultivation of palms are the loss of soil fertility, poor water quality and quantity. In contrast, agroecological restoration practices are effective not only in regenerating soils and water cycles but also for the vitality of the crops that is then passed on to the producers/consumers, significantly contributing to improving the quantity and quality of life on the planet (West and Solano 2023).

As a common part of the natural landscape, we need to understand how to integrate palms in our productive systems such that the natural and cultural heritages are both protected, managed and respected.

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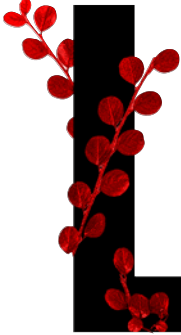
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Poem



‘La Chucula’



a chucula se prepara
Con la fruta del chontaduro
Se le pone leche de coco
También se pone maduro (x2)

Chucula vamo a tomá
Con la fruta del chontaduro
La tomaba yo de niño
Allá en el barrio ‘La Punta’ (x2)

Chucula vamo a tomá
Con la fruta del chontaduro
Y si no hay chontaduro
Le ponemos la chonta

Chucula vamo a tomá
Con la fruta del chontaduro (bis)
Y si no hay ya la chonta
Le ponemos la chontilla

Y si no hay la chontilla
Le ponemos el chapil
Chucula vamo a tomá
Con la fruta del chontaduro

La tomaba yo de niño
también la toma mi tío
Chucula vamo a tomá
Con la fruta del chontaduro

Allá en el barrio 'La Punta'
 La toman todos los niños
 Chucula vamo a tomá
 Con la fruta del chontaduro

Con la fruta del chontaduro
 Se prepara la chucula
 Se le pone leche de coco
 También se pone maduro

Chucula vamo a tomá
 Con la fruta del chontaduro.

ENGLISH TRANSLATION BY PILAR EGÜEZ GUEVARA

The chucula is prepared
 With the fruit of the chontaduro
 Coconut milk is added
 We also add ripe plantain (x2)

Chucula we are going to drink
 With the fruit of the chontaduro
 I used to drink it when I was a kid
 Back in the 'La Punta' neighbourhood (x2)

Chucula we are going to drink
 With the fruit of the chontaduro
 And if there's no chontaduro
 We put in the chonta

Chucula we are going to drink
 With the fruit of the chontaduro (bis)
 And if there's no chonta
 We'll put in the chontilla

And if there's no chontilla
We'll put in the chapil
Chucula we are going to drink
With the fruit of the chontaduro

I used to drink it when I was a child
My uncle also had it
Chucula we are going to drink
With the fruit of the chontaduro

Back in 'La Punta' neighbourhood
All the children had it
Chucula we are going to drink
With the fruit of the chontaduro

With the fruit of the chontaduro
The chucula is prepared
Coconut milk is added
We also add ripe plantain

Chucula we are going to drink
With the fruit of the chontaduro.

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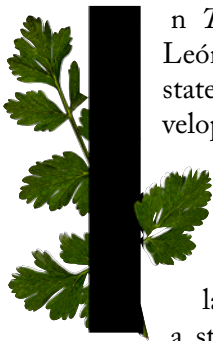
Book Reviews



Andrés León Araya.
The Coup and the Palm Trees:
Agrarian Conflict and Political Power
in Honduras

Athens: University of Georgia Press, 2023.

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In *The Coup and the Palm Trees*, anthropologist Andrés León Araya examines the dialectical relationship between state formation and agrarian politics in Honduras. He develops this analysis through a meticulous account of land reform policies and legislation in the post-World War II period. Ultimately, agrarian reform and the counter-reform that followed in the 1990s facilitated the transformation of so-called ‘unproductive’ lands along the country’s fertile Caribbean coast into a staging ground for experiments in neoliberal capitalism. Today the Bajo Aguán valley, a fertile plain along the north-central coast, is covered by vast expanses of oil palm plantations – a testament to this longer history.

León Araya demonstrates how the Caribbean coast of Honduras, often viewed as a peripheral geography, is an essential site from which to understand key political conjunctures in the country’s history, including the 2009 coup against Honduran president Manuel Zelaya Rosales. For many scholars of Latin America, the coup marked not only a rupture in democratic governance but also, perhaps more seriously, a threat to the state form itself. León Araya pushes back against this interpretation and dominant portrayals of Honduras as a ‘failed state’, which he contends

elide more complicated political and social dynamics in the country. Violence, uneven geographical development and dispossession are not aberrations of the state form; rather, he argues, they are central state-making practices that created the conditions of possibility for agrarian extractivism to take hold historically and to endure into the present.

The Coup and the Palm Trees is split into two sections. Part One lays out what he calls the 'pre-history of neoliberalism'. Building on the work of Italian Marxist Antonio Gramsci, León Araya demonstrates how the Honduran elite secured class domination over agrarian production and the state through a 'passive revolution'. This process entailed small concessions and reforms meant to appease more radical segments of the labouring classes, including organised peasant groups, as a means of advancing modernisation projects. Part Two brings us centrally into the contemporary moment, tracing how this earlier history of agrarian reform is tethered to the elite power grab in 2009 and the violence that ensued. Organised chronologically, the book insists on the centrality of land – its meaning, use and history – to processes of state formation.

The book opens with the 2009 coup and then weaves together the historical context that led to the coup and the subsequent deepening of 'state-narco relations'. He shows how militarisation and democratic state formation are closely intertwined throughout the twentieth century, which is of course inextricable from Cold War geopolitics and US anti-communist military operations in the region. Land redistribution policies represented a significant threat to capitalist enterprise and US corporate domination over the agrarian sector. However, León Araya rejects conventional accounts of Honduras as a passive receptor for US imperialism, a perspective he shares with other leading scholars of Honduras, including historian Suyapa Portillo. Working class peoples – landless peasants and smallholders – have been agents of change and radical political projects that not only contest elite power but propose important alternatives to the dominant developmentalist agenda.

León Araya argues that 'empty spaces', or land on the peripheries of the state and political power, are in fact vital to the state's political-economic prospects within the global economy. In the Bajo Aguán valley, agrarian reform policies were used to mollify peasant movements in the 1970s while at the same time converting peasants into productive citizens and central agents of the country's economic development. Chapter two details how the making of plantation landscapes in the

Bajo Aguán was crucially bound to the making of peasant workers. This dual process transformed Honduras into one of the top African oil palm producers in Latin America. Thus, taming the land to facilitate the growth of the palm oil industry was tightly tied to the taming of the unruly and unproductive peasant subjects targeted by these land reform policies.

Land, labour and struggles over the control of land rents are important drivers of social and political life at the national and regional scales, dynamics that he shows unfold along gendered lines. To understand the gendered dimensions of these struggles, he draws on oral histories and feminist theories of social reproduction. While men held formal leadership positions within peasant cooperatives and made most decisions over the commercial use and sale of land, women did much of the work needed to sustain the family and community. León Araya is among a small cohort of Central Americanists who are rescuing histories of working class, Indigenous and Black popular mobilisation in the region from oblivion, while also bringing ethnographic attention to the specific plight of landless peasants and their livelihood struggles in the face of a brutal state apparatus. Importantly, his work helps to clarify how and why outmigration from Honduras has spiked in recent years, without falling into standard narratives of state failure.

Beginning early in the twentieth century with the rapid expansion of foreign-owned banana plantations and subsequently with the rise of the palm oil industry, León Araya highlights the violence and dispossession upon which economic value within the agricultural sector is produced, and how these processes are indeed central to the formation of the Honduran state. These dynamics were on dramatic display after the 2009 coup when dozens of peasants from the Bajo Aguán were murdered and imprisoned for their activism. Like Garifuna, Lenca and other Indigenous land activists across the country, peasant groups continue to confront state violence and clamour for their right for a better future.

The Coup and Palm Trees offers a powerful historical and ethnographic account of the agrarian reform and counterreform in Honduras, deepening our understanding of state formation in the region as well as the various forms of contestation and struggle waged by peasants to 'stake a claim on the landscapes and value that they produced in the form of the oil palm plantation economy' (p. 193). This bottom-up

perspective raises additional questions regarding how the struggles advanced by peasant groups in the Aguán articulate with the struggles of Indigenous and Black communities along the coast. If the agrarian reform and counter-reform is a state-making project, then the territorial claims of Indigenous and Black peoples pose real threats to the state's developmentalist agenda. I suspect the interplay between these distinctly situated struggles will capture the attention of future researchers. León Araya's book is of broad relevance to historians, anthropologists and geographers of the region, and to scholars of peasant mobilisation and land.

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