Cultivating Knowledge: T. H. Pardo de Tavera and Philippine Medicinal Flora[1]

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Abstract

Trinidad Hermenegildo José María Juan Francisco Pardo de Tavera y Gorricho (1857–1925), a distinguished Filipino doctor and language scholar, was the Philippines' foremost intellectual from the late nineteenth to the early twentieth century. He assumed the inaugural chairmanship of the Department of Linguistics at the University of the Philippines Diliman, established on August 28, 1922. His timeless legacy is intricately woven into Filipino intellec-

[1] This paper, originally titled "Man of His Time, Man Ahead of His Time: Trinidad Pardo de Tavera, 1857–1925: Premier Filipino Filipinist," was initially presented as a lecture in commemoration of the 100th anniversary of the Department of Linguistics, University of the Philippines Diliman (UPD) on September 29, 2022. This presentation took place within the framework of a webinar organized through collaboration between the Filipinas Heritage Library (FHL) and the Department of Linguistics at UPD. The lecture served as a tribute to Trinidad Pardo de Tavera, one of the founders and first chairman of the UPD Department of Linguistics.

tual history, particularly through his scholarly pursuits, including groundbreaking research on Philippine medicinal plants.

In his 1892 masterpiece, *Plantas medicinales de Filipinas* (Medicinal Plants of the Philippines), Pardo de Tavera not only conscientiously documented Filipino healing practices but also affirmed the Philippines' distinctive role in the global scientific community. As contemporary global interest increasingly focus on local medicinal knowledge, Pardo de Tavera's work stands as a timeless bridge connecting the past to the future. It sheds light on the brilliance of Filipino intellect and underscores the enduring relevance of local healing knowledge, emphasizing its significance in the ongoing discourse on traditional medicine.

1 Introduction

This paper examines Trinidad Pardo de Tavera's 1892 *Plantas medicinales de Filipinas* [Medicinal plants of the Philippines] within the broader context of Philippine history and Pardo de Tavera's life in the late nineteenth and early twentieth century. This groundbreaking book explores Philippine traditional medicine, focusing on the collection, study, and identification of traditional medicinal plants and herbs that Filipinos have utilized to address common and everyday ailments, some of which date back to the precolonial period. With meticulous attention to scientific nomenclature, Pardo de Tavera also recorded his findings in local

languages and dialects thereby creating a comprehensive repository of local and traditional healing knowledge.

Highlighting *Plantas medicinales de Filipinas* in scholarly discourse is particularly pertinent at this juncture given the Philippines' acknowledgment as a biodiversity hotspot by the latter half of the twentieth century. This recognition underscores the country's remarkable abundance of plant species, many of which possess significant medicinal properties.

The Philippines stands out as one of Earth's most biologically diverse nations, ranking among the top 17 globally. Its terrestrial and marine environments are renowned for their significant endemism, with nearly half of its plant and animal species found exclusively within its 7,641 islands. In the latter part of the twentieth century, the Philippines gained recognition as one of the 18 megadiverse nations globally, positioning it as one of the most vital biodiversity hotspots on Earth. Boasting an estimated 13,000 to 15,000 plant species, 39% of which are unique to the country, it stands as the fifth largest repository of plant species worldwide, contributing 5% to the global flora (Convention on Biological Diversity, 2012). Among this vast array, over 1,500 species are identified for their medicinal properties (de Guzman, 2014, p. 220). Ongoing discoveries continue to underscore the richness of this biodiversity.

With 228 officially recognized Key Biodiversity Areas (KBAs), or sites that have concentrated and significant biodiversity, including threatened species, as well as those that are endemic or ecologically important, the Philippines is home to 855 globally significant species spanning plants, corals, mollusks, elasmobranchs, fishes, amphibians, reptiles, birds, and mammals. Moreover, the Philippines' exceptional agricultural ecosystem serves as the focal point for the diversity of rice, coconut, mung bean,

taro, and yam. It is also recognized as the center of origin and diversity for bananas in Southeast Asia (Convention on Biological Diversity, 2012).

By drawing attention to *Plantas medicinales de Filipinas* as a seminal work, we acknowledge Pardo de Tavera's pivotal role in documenting and preserving the traditional medicinal knowledge associated with the diverse flora of the Philippines. His comprehensive cataloging of medicinal plants not only expanded scientific understanding but also played a significant role in safeguarding local healing practices. Through his exploration of traditional medicinal plants Pardo de Tavera sheds light on the Filipino intricate healthcare systems predating colonial influence. In this regard, *Plantas medicinales de Filipinas* provides valuable insights into the precolonial Filipino heritage, fostering a comprehensive appreciation of the country's cultural and scientific legacy. These endeavors align with contemporary initiatives aimed at valuing, conserving, and ethically leveraging the Philippines' rich biodiversity.

This resonance is particularly noteworthy against the backdrop of ongoing progress in ecological consciousness and the evolution of conservation methodologies. Historically recognized primarily as a Spanish colony from the sixteenth to the nineteenth century, and later as an American colony in the twentieth century, the Philippines now invites a fresh exploration of its medicinal flora within the context of its rich and diverse natural heritage.

2 The Life of T. H. Pardo de Tavera[2]

Trinidad Hermenegildo José María Juan Francisco Pardo de Tavera y Gorricho (1857–1925), commonly known as T. H. Pardo de Tavera, was born to Spanish lawyer Félix Pardo de Tavera and Juliana Gorricho, daughter of wealthy landowner José Dámaso Gorricho, whose union created a prosperous family lineage. Pardo de Tavera hailed from an illustrious Filipino family with Portuguese roots. Raised in Cabildo Street, Intramuros, Pardo de Tavera's father, Félix, and uncle, Joaquín, studied law at the University of Santo Tomas. Pardo de Tavera had two other siblings, a brother, Félix, and sister, María de la Paz who married renowned Filipino painter Juan Luna (Manuel & Manuel, 1955, pp. 313–347; Santiago, 1994, p. 112). The Pardos de Tavera had a distinguished ancestry, including figures such as Juan Pardo de Tavera or the Marquis de Magahon (1472–1545), Spanish bishop, diplomat, and cardinal who left a significant mark in sixteenth century Spanish ecclesiastical history (Izquierdo, 1994, p. 30).

In the complex social landscape of Pardo de Tavera's era where racial categorizations held sway and lineage and physical attributes were significant in defining social hierarchies, he was identified as a *cuarteron*, denoting his three-fourths Spanish ancestry (Santiago, 1994, p. 112). While modern science has shifted away from rigid biological categorizations of race, the enduring societal perceptions at that time still framed race as a distinct aspect of ethnicity in daily life. Within this context, physical characteristics remained influential in determining group affili-

[2]A bibliography detailing the life and works of T. H. Pardo de Tavera is included at the end of this paper.

ations, shaping the context within which Pardo de Tavera's identity was perceived within the broader societal framework of his time.

Following the passing of his father Félix in 1864, Pardo de Tavera and his siblings found refuge under the care of his uncle Joaquín who had no children of his own. Joaquín later became a member of the *Consejo de Administración* (Council of Administration) in the Philippines, an influential advisory body to the Governor-General composed of prominent civil, military, and ecclesiastical figures. In the aftermath of the 1868 Glorious Revolution in Spain marked by political discontent and the unpopular rule of Isabella II, Joaquín became a proponent of reforms in the Philippines. This position put him at odds with the *peninsulares*, a development Joaquín had not anticipated.[3] On January 21, following the 1872 Cavite Mutiny, Joaquín and other leading Filipinos were arrested and accused of involvement in proclaiming the establishment of the Philippine republic. Joaquín was detained in Fort Santiago, his residence was searched, and his communications were monitored. He was also barred from practicing law. During the court martial proceedings, Joaquín asserted his standing as a respected citizen who had made significant contributions to the state, with the expectation that Governor-General Rafael Izquierdo would vouch for him. However, Izquierdo distanced himself from Joaquín, claiming that Joaquín had long been under suspicion as a member of a secret anti-government group. Trial documents, however, suggest that the government was engaged in a broad vendetta against suspected Filipino subversives (Artigas y Cuerva, 1996, pp. 153–155, 167–177; Paredes, 1994, pp. 347–417).

[3]The term "peninsulares" refers to Spaniards who were born in Spain and residing in the Spanish colonies. Their birth in Spain granted them the highest social standing in the colonies.

On February 15, 1872, Joaquín received a four-year exile sentence and on March 14, 1872, he was transported to the Marianas where he resided with his wife for the duration of four years, from 1872 to 1875. Although pardoned in 1875, Joaquín was barred from returning to Manila so he chose to reside in Paris with his wife, Gertrudis (Artigas y Cuerva, 1916, p. 181). Reflecting on the events in 1872, Pardo de Tavera said:

> Nada vino á destruir la desconfianza y el recelo que, desde los sucesos de Cavite y su cruel represión, existía entre españioles y filipinos, entre estos y los frailes principalmente. Muchos añios debían pasar para que se cicatrizaran las heridas abiertas en tantas familias que sufrieron los injustos castigos impuestos por los consejos de guerra. Pero nada se hizo para hacer olvidar aquella enorme injusticia: al contrario, continuamente se recordaba con el fin de mantener un sano temor, lográndose sólo mantener un descontento creciente. Desde entonces se adoptó el sistema de dar carácter politico á cualquier cuestíon que surgía entre españoles y filipinos. Cualquier acto contrario á un fraile era siempre interpretado como una demostración de sentimientos antiespañoles. (Pardo de Tavera, 1906, p. 71)
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> [Nothing emerged to dispel the deep-seated mistrust and suspicion that had persisted since the events in Cavite and the harsh repression that followed, particularly between Spaniards and Filipinos, and notably between them and the friars. Many years had to pass for the open wounds (*heridas abiertas*) inflicted by the unjust sentences handed

> down by the courts-martial to begin to heal for the affected families. However, no efforts were made to allow this grave injustice to fade from memory; instead, it was consistently recalled, perpetuating a climate of apprehension and fueling a growing discontent. Consequently, a pattern emerged wherein any issue arising between Spaniards and Filipinos was politicized, with any action against a friar being invariably construed as an expression of anti-Spanish sentiment.]

While still a student, Pardo de Tavera bore witness not only to his uncle's exile to the Marianas but also to the shifting social status of their family in Spanish Manila. In 1873, he earned his Bachelor of Arts degree from the Colegio de San Juan de Letran. Subsequently, while pursuing his medical studies at the University of Santo Tomas, he received an invitation from his uncle to further his education in Paris. Seizing the opportunity, Pardo de Tavera pursued his medical studies at the University of Paris, where he obtained his medical degree in 1880. Notably, he became the first Filipino to publish a medical article in a professional journal. In addition to his medical endeavors, Pardo de Tavera dedicated himself to the study of Malay. In December 1885, he obtained his diploma in the Malay language from the École Speciale des Langues Orientales Vivantes (now known as the Institut National des Langues et Civilisations Orientales) (Zaide, 1993, pp. 302–303; Santiago, 1994, pp. 112–114, 115–117).

As the Philippine-American War loomed, Emilio Aguinaldo appointed him Director of the Division on Diplomacy, although he resigned in 1898 due to conflicting views with Aguinaldo on Philippine independence (Majul, 1960, p. 158; Constantino, 1975, p. 233).

3 T. H. Pardo de Tavera's Intellectual Odyssey: Vision of Progress for the Philippines

Under the Americans, T. H. Pardo de Tavera was appointed a member of the United States Second Philippine Commission under William Howard Taft on September 1, 1901, alongside Benito Legarda and José Luzuriaga (Artigas y Cuerva, 1916, p. 663). Appointed by President William McKinley on March 16, 1900, the Second Philippine Commission, often referred to as the Taft Commission, wielded both legislative and executive authority. Despite its predominantly executive role, the Taft Commission played a crucial part in enacting laws from September 1900 to August 1902 (Malcolm, 1921, pp. 93–96).

Prior to assuming the role of Commissioner, Pardo de Tavera had already gained recognition from Spanish authorities. Despite his family's history which had led to him being labeled a "filibuster," he was appointed as a member of the Spanish Consultative Assembly (Constantino, 1975, p. 233). This acknowledgment was largely influenced by the nineteenth-century realization among Spanish intellectuals and some administrators at that time that Spain had limited knowledge of its colonies, including the Philippines, a deficiency crucial for effective colonial rule. This knowledge gap was also considered a contributing factor to the erosion of Spanish control over its colonies. Segismundo Moret y Prendergast, *Ministro de Ultramar* (Minister of Colonies/Overseas Minister) in 1870, expressed his dismay that the Philippines *es más conocído en el extranjero que en nuestro propio país* [was better known abroad than in our own

country].[4] Such was his concern that he eventually established two professorial chairs at the Central University of Madrid devoted to the study of the Philippines and the Filipinos, among other related endeavors (Montero y Vidal, 1895, p. 537; Thomas, 2016, pp. 41–42).

In 1884, Pardo de Tavera underscored these observations by citing the limited involvement of Spanish writers in Philippine ethnography (Pardo de Tavera, 1884, pp. 5–6). As a result, the landscape of Philippine ethnography in the nineteenth century bore a significant influence from German and Austrian scholars, the most notable was Ferdinand Johann Franz Blumentritt, suggesting a greater interest from these scholars compared to their Spanish counterparts (Thomas, 2016, p. 43). Three years later, Pardo de Tavera noted the contrast between Java and the Philippines. While Java possessed a rich array of precolonial artifacts including temples, statues, chronicles, and literary traditions ripe for historical exploration, the Philippines lacked such tangible monuments, statues, or extensive literature that could provide comparable historical insights. Faced with this reality, Pardo de Tavera embarked on a quest to devise alternative methodological approaches to derive historical insights from the limited materials available to him (Thomas, 2016, p. 34; Pardo de Tavera, 1884, pp. 5–6).[5]

[4]The Ministry of Overseas, also known as the Ministry of Overseas Affairs, Ministry of Overseas Territories (in Spanish, *Ministro de Ultramar*), or simply *Ultramar*, held authority over Spanish territories from 1863 to 1899. This office managed the administration of the Philippines, Cuba, Puerto Rico, and the Carolinas, Marianas, and Palaos.

[5]Pardo de Tavera's comparison between Javanese and Philippine history, drawing parallels between temples and literary traditions, echoes the concept of civilizations proposed by cultural anthropologist Robert Redfield. Redfield's framework emphasizes the interdependent "great" and "little" traditions as essential for understanding social change. However, critics have scrutinized Redfield's model for its inherent hierarchy,

In 1887, equipped with scientific training and empowered by a Spanish royal commission from Regent Queen Maria Christina of Austria granting him authority to apply his medical expertise in the pursuit of scientific advancement, Pardo de Tavera embarked on a journey from Paris to Manila. His mission was to study the medicinal properties of Philippine plants. This commission, which led to his groundbreaking 1892 work *Plantas medicinales de Filipinas*, was just one of numerous recognitions he received from the Spanish government (Anargyroi, 2020). In a letter dated October 19, 1887, addressed to Blumentritt, José Rizal, the esteemed national hero of the Philippines, corroborated Pardo de Tavera's affiliations with the Spanish government in Manila. Rizal wrote:

> As many in Manila are apprehensive about my visits, I no longer call on Pardo. He holds government commissions, and I would not wish to soil his white gloves with my hands that are stained from writing novels. These occurrences are not uncommon in my country, but, deep down, we remain friends, at least as far as I am concerned. (Rizal, 1961, p. 144)

Blumentritt (1853–1913), a Bohemian schoolteacher, wrote extensively about the Philippines, drawing inspiration from his childhood fascination with the Spanish colonial world, likely influenced by the books and artifacts of his Peruvian uncle. The family tale of his father's lineage from a governor-general of the Philippines was most likely also crucial in shaping his specific interest in the country (Craig, 1913, pp. 68, 82;

which associates little traditions with peasants and great traditions with the elite, raising concerns about its potential bias.

Sichrovsky, 1987, pp. 4–7). His deep affinity for the Philippines sets him apart as the first European Filipinist in the modern era who championed the Filipino movement for reforms during the Spanish colonial period, a distinction that is notably ironic since his strong connections with the Philippines never translated into a personal visit to the country.

Blumentritt is widely celebrated in the Philippines for his lasting friendship with Rizal, a bond that left an indelible imprint, shaping not only their own lives but also resonating through the annals of Philippine history. Rizal's careful preservation of their exchanges provides invaluable glimpses into his life and the societal landscape of the Philippines during that era. For historians and scholars, their extensive correspondence is an indispensable resource shedding light not only on Rizal's life and legacy but also offering a panoramic view of the broader historical context of the Philippines in the late nineteenth century.

Returning to Pardo de Tavera, his inclusion in the Taft Commission, alongside Legarda and Luzuriaga, marks a significant milestone in Southeast Asian history. It represents the first instance where colonial subjects were afforded both a voice and a vote within the highest echelons of a colonial administration in the region (Cullinane, 2003, p. 148). Historian Michael Cullinane highlights Pardo de Tavera and Legarda, both hailing from Manila, for their "impeccable Americanista credentials" (2003, p. 66). Pardo de Tavera, in particular, was hailed as "the interpreter of American intentions towards the Philippines," and "right-hand man of Governor-General Taft in the establishment of civil government" (Kalaw, 1926, as cited in Mojares, 2006, p. 147). Luzuriaga, representing Negros Occidental, epitomized a provincial elite pivotal in staunchly opposing local resistance to American rule in the

island province, being "most active in preventing the insurrection from gaining any foothold in that important island" (*Report of the Philippine Commission*, 1901, pp. 16–17; Cullinane, 2003, p. 66). In his book, *Ilustrado Politics: Filipino Elite Responses to American Rule, 1898–1901* (2003), Cullinane offers a careful examination of Pardo de Tavera and his contemporaries' actions, providing a window through which the political terrain of late nineteenth and early twentieth-century Philippines may be viewed. This insightful narrative shows how Pardo de Tavera and the Filipino elites skillfully navigated the intricacies of the new colonial order, leveraging their positions to ascend to national leadership during the period of American rule in the country.[6]

For Pardo de Tavera's critics, his association with the Americans appears self-evident. Nevertheless, it is essential to acknowledge that Pardo de Tavera's personal and familial background, along with his observations of his fellow Filipinos' experiences under Spanish colonial rule, deeply influenced his political beliefs. As he himself stated:

> The Spanish, in the ultimate period of our relations with them, did not treat us as colonies, but liked to have us treated as an integral part of the homeland. We were not

[6]See Michael Cullinane, *Ilustrado Politics: Filipino Elite Responses to American Rule, 1898–1901* (2003). Cullinane's insightful study, anchored in meticulous research, takes readers on a journey through the political landscape of the late nineteenth and early twentieth century in the Philippines. It sheds light on the nuanced responses and calculated maneuvers of the ilustrados, including Pardo de Tavera, as they grappled with the challenges and opportunities presented by the American colonial administration. Against the backdrop of historical transformation, Cullinane provides a deeper understanding of the multifaceted strategies that Filipinos employed to assert influence and shape the trajectory of their nation. Cullinane's work serves as a captivating window into a pivotal period in Philippine history, where the interplay of politics, power, and national identity unfolds with intricate precision.

> a part of the Spanish colonies, but a part of the Spanish nation. Naturally that created in us a sentiment of nationality as we considered ourselves as a real part of "The Patria Espanola" [Spanish homeland]. Personally I was led to the consideration of how I might become useful to her, and during the Spanish epoch I became acquainted with the errors of that administration, and for the benefit of my country, I wished to work together with the Spanish then in power, in order to correct some of the abuses and modify the situation. (Norton, 1914, p. 98)

Pardo de Tavera's alliance with the Americans was not without complexity given his family's history of adversity under Spanish rule. This sentiment is reflected in Rizal's letter to Blumentritt dated September 4, 1888. Rizal wrote:

> The Pardo family received a letter from their daughter-in-law informing them that Trinidad Pardo de Tavera has been forbidden to treat patients. Beware! Is this the first blow against Pardo? Pardo de Tavera has many enemies among the Peninsular Spaniards in Manila. Of that I am sure, but I thought that they would behave with more prudence. (Rizal, 1961, p. 198)

One year later, in 1889, following Pardo's return to France, Rizal conveyed his observations about Pardo de Tavera to Blumentritt in a letter dated May 8, 1889. He wrote:

> T. H. Pardo de Tavera has just arrived. He says that life in the Philippines is becoming impossible. They wanted

> to search his home and confiscate his books, if he had not left immediately. He believes if conditions do not improve, before the lapse of ten years, a great revolution will break out. Be careful with this opinion; I am imparting it to you as a good friend. (Rizal, 1961, p. 255)

Given his personal experiences and understanding of colonial dynamics, Pardo de Tavera arrived at a pivotal juncture where forging strategic alliances became paramount in envisioning a new future for the Philippines and the Filipinos. In this regard, it is possible to infer that in the aftermath of the Spanish-American War and the subsequent Treaty of Paris in 1898, which signified the transfer of the Philippines from Spanish to American control, Pardo de Tavera perceived an opportunity to break free from the yoke of Spanish colonialism. Acknowledging the futility of resisting the Americans and recognizing his compromised position, Pardo de Tavera was also aware that the shifting landscape of colonial powers marked a definitive turning point. This presented a chance for reform and a departure from the enduring injustices that had plagued Filipino lives for centuries (National Historical Institute, 1996, p. 87). By aligning himself with the Americans, Pardo de Tavera envisioned the possibility of a new chapter in Philippine history. He said:

> I did not take part in the revolution against Spain, nor did I know the inside workings of the Katipunan, which was the force which brought about the revolution. I worked with the Americans for the establishment of peace and for the new organization, for I had confidence in the principles of justice of the American people and the generosity which

> characterizes their history, and each act of my political and private life has been guided for the thought of the benefit to my people of their coming to these islands, and for the harmony and friendship between the Americans and Filipinos. (Norton, 1914, p. 98)

It seems that Pardo de Tavera's decision to side with the Americans was not merely a practical response to geopolitical realities, but also a calculated move to leverage American governance in addressing the longstanding grievances of Filipinos. In doing so, his cooperation was a purposeful step towards realizing his vision of a more progressive and just future for both the Philippines and the Filipinos.

Pardo de Tavera fervently promoted social transformation by endorsing contemporary Western values deeply rooted in Anglo-Saxon traditions. He saw these values as pivotal in propelling social, political, and cultural advancement, with education serving as a catalyst for both individual and societal progress. Alongside advocating for healthcare as an intrinsic right, he vigorously supported political reforms and anti-corruption initiatives, aware of their critical importance in nurturing transparency and accountability in governance. He also advocated for civil liberties, including freedom of speech, assembly, and expression as indispensable elements of the progressive ideals that shaped his social philosophy and agenda for national development (Mojares, 2006, pp. 213–230).

During an assembly of teachers in Baguio, Pardo de Tavera seized the moment to tackle the pervasive *legado del ignorantismo* (legacy of ignorantism) perpetuated by Spanish friars. He attributed this phenomenon to the religious orientation of the educational system enforced during

Spanish rule, which he likened to a spreading *lepra de la superstición* (leprosy of superstition) (1920, p. 36). Highlighting the broad impact of this influence and its profound implications for the nation's advancement, he stressed that it was not just a concern for Filipinos but also all residents of the Philippines indiscriminately. According to him:

> Como hasta la llegada de los americanos la enseñanza en Filipinas fué siempre y exclusivamente religiosa, y dirigida por los sacerdotes romanos, la persistencia de antiguas supersticiones son una demostración del fracaso de la educación religiosa. Tendrían por excusa los misioneros culpar a la rudeza invencible del filipino, que podríamos admitir por cortesía y para evitar discusiones. Pero lo grave no es que ellos *no pudieron quitar* algo de la supuesta cabeza dura del indio, sino el tremendo caudal de supersticiones que durante más de tres siglos, esos misioneros *han hecho penetrar* en esa misma cabeza con tan grave perjuicio para su mentalidad y su moralidad. (Pardo de Tavera, 1920, p. 28)
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> [Until the coming of the Americans education in the Philippines was always and exclusively religious, under the direction of the Roman Catholic missionaries. The persistence of these old superstitions are proofs of the failure of religious education. Missionaries will perhaps attribute this to the supposed stubbornness of the Filipinos, a notion we shall concede to for politeness and to avoid contention. However, what matters is not their inability to eradicate these superstitions due to the

> perceived obstinacy of the Indio, but rather the extensive propagation of superstition over more than three centuries and how these missionaries inculcated these in his mind (*han hecho penetrar*) to the detriment of his mentality and his morality.]

Pardo de Tavera's support of American rule in the Philippines was rooted in his belief that Filipinos lacked crucial values necessary for progress, which he asserted could be acquired through a secular, scientific education, a model that the Americans purportedly possessed. In the same speech, he said:

> Para que la educación sea útil, tiene que formar en el individuo el *sentido de responsabilidad* mediante el libre automático ejercicio de la razon. El cumplimiento del deber sera su objetivo; para conseguir tal fin es indispensable desarrollar en el hombre la voluntad por medio de la cual luchará contra los instintos bestiales, contra los impulsos sentimentales, contra todo lo que se halla en oposicion a los dictados de la razón. Mentalidad logica para saber lo que debemos hacer, para poder trazarnos un camino justo que seguir: Voluntad, para lograr sobreponer los dictados de nuestra razón a los impulsos de nuestros deseos. Este es el objeto de la educación laica, de la educación de las escuelas sin Dios, aquí con las escuelas del gobierno… . (Pardo de Tavera, 1920, p. 36)
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> [Education is most effective when it instills a sense of responsibility in individuals through the unfettered exercise

> of reason, guiding them toward fulfilling their duties. This entails developing their willpower to overcome instinctual and emotional impulses that contradict rationality. The primary objective of education is to cultivate logical thinking and determination, empowering individuals to prioritize rational decision-making over personal desires. This form of lay education aims to equip individuals with the tools necessary to navigate a just path guided by reason. This is the aim of secular education, which is provided in what are often termed "godless schools," or here [Philippines] in government schools… .]

Pardo de Tavera faced significant criticism for his vocal pro-American stance, particularly from Filipinos advocating for Philippine independence in the early decades of the twentieth century. Even contemporary scholars and authors have censured him for his political position. One prominent figure was Nick Joaquin, National Artist of the Philippines for Literature, recognized as one of the most significant literary figures alongside Rizal. Joaquin wrote:

> The fate of [José] Burgos (the garrote) and of [Antonio María] Regidor (exile) put an end to the idea of eventualism. The Creoles that come after—mostly educated on the Continent and affiliated with the Masonic Order—are already frankly *filibusteros*—that is, subversives—and their greatest spokesman is Marcelo H. del Pilar, the Creole who undoubtedly possessed the most brilliant mastery of Spanish a Filipino ever wielded but whose talent got deadened by journalistic deadlines. But the extremist develop-

> ment of the Creole as filibustero was Trinidad Pardo de Tavera, a man who came to loathe both the Malay and the Spaniard in himself so intensely he became the first of the *sajonistas*[7] and, as a member of the Philippine Commission of the 1900s, fought for the implantation of English in the Philippines, in a virulent desire to uproot all traces of Spanish culture from the islands. For good or evil, Trinidad Pardo de Tavera, whom we hardly remember, was one of the deciders of our fate. [emphasis added] (Joaquin, 1977, p. 69)

Examining the basis of Pardo de Tavera's confidence in American values reveals a nuanced connection between his pro-American sentiments and his steadfast commitment to the welfare of Filipinos. However, while these convictions were motivated by a genuine desire to witness the prosperity of the Filipino people and underscored his belief in the advantages of American ways of life, his involvement in the "nationalist narrative" cast a shadow over his accomplishments (Mojares, 2006, p. 121). For Teodoro A. Agoncillo, one of the pillars of Philippine historical writing, "Pardo de Tavera should have been shot for his betrayal of the Revolution" (Agoncillo, 1997, p. 551).

In 1900, he established the Federal Party that fervently championed the annexation of the Philippines as a state within the American Union. This move, while reflective of Pardo de Tavera's pro-American stance, would eventually become his most significant misjudgment. The repercussions of this decision reverberated through the national elections

[7] *Sajonistas* are individuals who embraced the American way of life, including their fashion choices and cultural habits.

of 1907, where the electorate rejected the Federal Party's platform. In a notable shift, the Filipinos endorsed Sergio Osmena and Manuel Quezon's Nacionalista Party (NP). The NP's rallying cry for "immediate, complete, and absolute independence" resonated with what appeared to be the aspirations of a nation yearning for self-determination.

Pardo de Tavera's vision for a closer integration with the United States, as embodied by the Federal Party, collided with the prevailing sentiment of the time—a fervent desire for autonomy and nationhood. He envisioned the Philippines being admitted to the "American union" and believed that an independent Philippine state was not the most "dignified" option (Cornejo, 1939, p. 353; May, 1983, p. 359). In hindsight, this stands as Pardo de Tavera's most profound divergence from the nationalist tide, a decision that would be scrutinized by generations to come. Pardo de Tavera passed away on March 26, 1925 in Manila (Zaide, 1993, pp. 302–303).

4 T. H. Pardo de Tavera and Plantas medicinales de Filipinas (1892)

In an era dominated by the triumph of Western scientific traditions and the ascendancy of modern medicine over conventional beliefs, Pardo de Tavera navigated the complexities of two colonial periods—Spanish and American—witnessing the Philippines' transition into the modern era and leaving an indelible mark on Philippine culture through his scholarly writings on different aspects of Philippine life, including Filipino medicinal practices based on traditional medicinal plants.

In 1887, seven years after earning his medical degree from the University of Paris, Pardo de Tavera received a Spanish Royal Commission from Regent Queen Maria Christina of Austria, known for her intelligence and strong leadership qualities. Due to his family's history and the prevailing perception of his family by the Spanish government in the Philippines, it was probably challenging for Pardo de Tavera to return to the Philippines on his own. Owing to his academic achievements, he managed to secure a Commission directly from the Queen of Spain herself, enabling his return. Departing from Paris to Manila, Pardo de Tavera's goal was to explore the medicinal properties of Philippine flora, leading to his groundbreaking 1892 publication, *Plantas medicinales de Filipinas*, a project he had personally funded (Mojares, 2006, p. 130).

Pardo de Tavera's *Plantas medicinales de Filipinas* represents the third significant contribution to the study of traditional medicinal plants in the Philippines. Preceding works include Francisco Ignacio Alcína's "Breve resumen de las raíces, hojas o plantas medicinales mas conocidas" [A brief summary of the best known medicinal roots, leaves, and plants, etc.], a chapter in his 1668 *Historia de las Islas e Indios de Bisayas* [History of the Bisayan people in the Philippine Islands: Evangelization and culture at the contact period]. Alcína's work offers insights into precolonial medicinal practices, cataloging plants and herbs that Filipinos used to treat common ailments. Another notable work is Francisco Manuel Blanco's *Flora de Filipinas según el sistema sexual de Linneo* [Flora of the Philippines according to the Linnaean system], first published in 1837. This comprehensive botanical text describes approximately 1,200 species. Regarded as the inaugural extensive botanical study of Philippine flora

during the Spanish colonial period, Blanco's work is significant for its systematic exploration of plant life in the Philippines, including those plants with medicinal use.

Plantas medicinales de Filipinas is a remarkable work, notable for being both financed and meticulously crafted by a Filipino with an exceptional educational background who also happened to be a colonial subject. Educated during a period of vibrant intellectual ferment and reform in post-revolutionary France, an era that German philosopher Walter Benjamin referred to as "the capital of the nineteenth century," added further depth to Pardo de Tavera's personality and accomplishments (Benjamin, 1978, as cited in Mojares, 2006, p. 127). Nevertheless, it was not only the France of the 1870s that inspired Pardo de Tavera's *Plantas medicinales de Filipinas*.

By mid-sixteenth century, botanical gardens have become integral to a continent-wide (i.e., European) intellectual movement, typically affiliated with universities and overseen by physicians and apothecaries, serving as physic gardens. In 1593, Henri IV authorized Pierre Richer de Belleval, a physician, to establish the Montpellier Botanical Garden for the medical institution affiliated with the University of Montpellier, with the aim of promoting health through the study of medicinal plants. By the sixteenth century, Montpellier emerged as a prominent center for botany, with the discipline being taught at the Faculty of Medicine. The Royal Garden of Montpellier stands as the oldest botanical garden in France. In 1635, King Louis XIII commissioned Guy de La Brosse, a prominent French botanist, medical practitioner, and pharmacist who was also his physician, to build a botanical garden specializing in medicinal herbs. This garden, initially called Jardin du Roi and later

Jardin des Plantes, marked the inception of Paris's first botanical garden and the second in France, following the creation of the Montpellier garden in 1593 (Duval, 1982, p. 31).

As French territorial expansion led to gardens becoming symbols of French political culture, these endeavors gained further momentum, particularly during the seventeenth and eighteenth centuries. The botanist René-Robert Cavelier, Sieur de La Salle, known for his exploration of the Great Lakes region in the United States and Canada, as well as the Mississippi River, sent walnuts, mulberries, oaks, and various other tree species from Canada to the Jardin de Roi in France to support reforestation efforts (Duval, 1982, p. 31). The context of France's monarchical pursuits and legacies likely played a role in shaping Pardo de Tavera's exploration of Philippine medicinal plants. One indication of this influence is the Royal Commission he obtained to write *Plantas medicinales de Filipinas*.

4.1 Plantas medicinales de Filipinas: Insights into T. H. Pardo de Tavera's Personality

Originally published in Spanish in 1892, *Plantas medicinales de Filipinas* was later translated into English by Jerome Thomas, a United States Army Surgeon. The translation, published in 1907, was intended to facilitate the study of local medicinal plants by American medical officers for possible use of the American Army throughout the Philippines, as well as a resource for botanists and pharmacists in general (Schneider, 1902, p. 162). The initial section of the translated book comprises an English translation of the Spanish edition originally released in 1907, as well as the original Spanish text publish in 1892, which is the primary

basis of this research paper. Interspersed between the two versions are vivid illustrations depicting the plants referenced within the text.

The book comprises 341 pages, divided into sections detailing medicinal plants along with their scientific names, popular names in the principal Philippine language or dialect these plants are called, descriptions, and uses. It also includes an index categorizing plants based on their qualities, along with assorted notes on their medicinal properties. In addition, there is an alphabetical list of common ailments treated by these plants. At the end of the book is a general index for further clarification and reference (Alzona, 1980, p. 3).

In the preface, written in Paris in April 1892, Pardo de Tavera describes how he was assigned by the Spanish government to study the medicinal plants of the Philippines. Despite his attempts to ship samples to Paris for scientific analysis and testing, the plants were inadequately packed for the long ocean journey. Regrettably, due to improper packing none of the specimens survived the voyage (Pardo de Tavera, 2000, p. 222). He wrote:

> Desdichamente, al salir de Manila confié el cuedado de ambalar mis plantas á una persona inexperta, que hizo la torpeza de poner en medio de ellas algunos tubérculos suculentos, que en el viaje entraron en descomposición, destrozando así, con la humedad que despedieron, las plantas secas que allí había. (Pardo de Tavera, 2000, p. 223)
>
> [Unfortunately, before departing from Manila, I delegated the responsibility of packing my plants to an inexperienced individual. Regrettably, this person made the imprudent decision to intersperse succulent tubers among the speci-

> mens. As a result, the tubers began to decompose during the journey, emitting moisture that damaged the surrounding dry plants, ultimately leading to their destruction.]

Pardo de Tavera's candid remarks regarding the packing of his plants offer valuable insight into his intolerance for inefficiency and his willingness to address inadequacies. In this light, *Plantas medicinales de Filipinas* also provides a glimpse into his personality. It is therefore unsurprising that he became increasingly critical of the Spanish and, eventually, the Americans towards the latter part of the first decade of the twentieth century. Similar scrutiny extended to certain members of the Philippine revolution. His meticulous attention to detail and refusal to accept incompetence, even in the seemingly mundane task of packing plants, may also mirror broader attitudes towards governance and administration. This suggests a possible link between his personal experiences and frustrations with bureaucratic inefficiency, and his subsequent political stance advocating for reform under American rule.

4.2 Expanding the Reach of Philippine Medicinal Flora

Plantas medicinales de Filipinas demanded extensive efforts from Pardo de Tavera, encompassing fieldwork for 214 specimens organized according to family and genus, along with scientific and local names, morphology, anatomy, chemical properties (when applicable), habitat, uses, and preparation. The book includes correlations of the medicinal use of some plants with other countries, such as Brazil and India, for example, in the case of the mango tree (*Mangifera indica* L.). Drawing

from the work of Edward John Waring, surgeon in the British East India Company and author of *Pharmacopoeia of India: Prepared Under the Authority of Her Majesty's Secretary of State for India in Council* (1868), Pardo de Tavera wrote:

> La almendra que se encuentra dentro de la pepita, desicada y pulverizada, se administra como antihelmintica á la dosis de 1, 50 á 2 gramos, en la India y en el Brazil. Esta misma almendra se emplea en Filipinas para combater la disentería y la diarrea. (Pardo de Tavera, 2000, p. 283)
>
> [The desiccated and pulverized kernel found within the seed (of the mango fruit) is administered as an anthelmintic at a dose ranging from 1.50 to 2 grams in both India and Brazil. The kernel is similarly used in the Philippines to combat dysentery and diarrhea.]

Pardo de Tavera notes the identification of similar plants also found in other areas, such as the betel or *buyo* (*Piper betle* L.), which is popularly used in the "Orient." Pardo notes:

> Con la hoja de esta planta, un poco de cal de ostras apagada y una rodaja de la bonga ó nuez de arec, se hace un masticatorio, usado en todo el extremo Oriente, que se llama buyo en Filipinas. (Pardo de Tavera, 2000, p. 388)
>
> [A mixture of the plant's leaf, a small amount of slaked oyster lime, and a slice of *bonga* or areca nut creates a chew, widely utilized throughout the Far East and known as *buyo* in the Philippines.]

The *buyo* or betel leaf was a common delicacy enjoyed across the Philippines and other Southeast Asian countries. It is typically chewed alongside a seed or nut from the areca palm (*Areca catechu* L.), or *bonga* (areca nut), which has a white core. The *bonga* is sliced lengthwise and placed within the rolled betel leaf, along with a small amount of very moist quicklime. This rolled concoction is then placed in the mouth and chewed. In the Visayan Islands of Panay and the Province of Negros Occidental, this practice is referred to as *mamâ*, with the resulting mixture termed *mam-ín*. During the American colonial period in the Philippines, the Americans noted the use of betel among Filipinos. In its February 1852 issue, *Harper's New Monthly*, the oldest continuously published monthly magazine in the United States, reported the widespread and commonplace use of betel that Americans had observed. It reads:

> In Manila everyone smokes, everyone chews buyo—man, woman, and child, Indian or Spaniard. Strangers who arrive there, though repudiating the habit for a while, soon take to it, and become the most confirmed buyo eaters in the place. Two acquaintances meet upon the paseo, and stop to exchange their salutations. One pulls out his cigarrero and says, "Quiere usted fumar?" (Will you smoke?) The other draws forth the ever ready buyo case, and with equal politeness offers a roll of the buyo. The commodities are exchanged, each helping himself to a cartridge and a cigarrito. A flint and steel are speedily produced, the cigars are lit, and each takes a bite of buyo, while the conversation is all the while proceeding. Thus three distinct operations

> are performed by the same individual at the same time—[chewing], smoking, and talking! The juice arising from the buyo in [chewing] is of a strong red color resembling blood. (Project Gutenberg, 1852; see also Planta, 2017, p. 44)

The book was accomplished through interviews with locals and most likely indigenous healers, laboratory analysis, and a thorough study of scientific literature and existing works on Philippine botany. These works include Manuel Blanco's *Flora de Filipinas* (1883), Fernando de Santa Maria's *Manual de medicinas caseras para consuelo de los pobres indios en las provincias, y pueblos donde no hay médicos, ni botica* [Manual of home remedies for the relief of the poor Indians, in the provinces and towns where there are no doctors or pharmacies] (1815), and Ignacio Mercado's *Libro de medicinales de esta tierra, y declaraciónes de las virtudes de los árboles y plantas que están en estas Islas Filipinas* [Book of medicines of the Philippines: Declarations of the virtues of trees and plants indigenous to these islands] (1698). Mercado's records of his findings on local plants and their medicinal properties were later on incorporated into Blanco's *Flora de Filipinas*. Blanco's work remains the foremost comprehensive book on botany and Philippine flora during the Spanish colonial period. Santa Maria's meticulous documentation of traditional medicinal plants and herbs using local and commonly recognized names facilitated their identification. Notably, Santa Maria's *Manual* stands as the sole translated publication on Philippine medicinal plants and herbs written in Tagalog between the eighteenth and early twentieth century. Its accessibility in the local language suggests widespread use among Filipinos (Planta, 2017, p. 128).

4.3 Pioneering Advocacy: T. H. Pardo de Tavera and Local Medicinal Knowledge

Plantas medicinales de Filipinas is not only a catalog of Philippine medicinal plants but also a testament to Pardo de Tavera's faith in the indigenous healing practices and local medicinal knowledge of the Filipino people.

By meticulously documenting these plants and their traditional uses, Pardo de Tavera not only preserved valuable botanical information but also validated the efficacy of Filipino traditional medicine. Through his work, Pardo de Tavera sought to bridge the gap between Western scientific knowledge and indigenous healing practices. He recognized the importance of incorporating local wisdom into the broader framework of medical science, acknowledging the centuries-old tradition of Filipino healers and their deep understanding of the healing properties of native plants. He said:

> La aplicacíon de los vegetalesque en la terapéutica hacen los curanderos filipinos, es Mirada con desprecio por ciertos medicos, por se completamente empírica. Este desprecio es injustificado; en todos los medicamentos más racionales, más científicos que hoy empleamos, el primer paso, la primera etapa del proceso seguido has su final desarollo, se debe al empirismo, que se funda en la experiencia diaria, en la observacíon de resultados obtenidos en determinado caso, que de padres á hijos han conservado generaciones enteras. Falta la explicacíon científica; pero esas primeras nociones, debidas frequentemente á la casualidad ó tal vez á la supersticíon, han tenido á menudo por base fundamental

> la observacíon de hechos que, no por ser fortuitous, dejarán de ser positivos. (Pardo de Tavera, 2000, p. 223)
>
> [Some physicians view the therapeutic practices of Filipino "herb-doctors" (*curanderos*) with skepticism, dismissing them as purely empirical. However, this criticism is unwarranted, as empirical methods form the foundation of many of the most rational and scientifically accepted remedies. Empiricism, rooted in daily experience and generations of observation, serves as the initial step toward the development of these remedies. While the scientific rationale may be absent, the origins of these practices often stem from chance occurrences or superstitions, which nevertheless are based on tangible observations and phenomena.]

While the focus of the book is on the medicinal uses of the plants included in the list provided, these plants generally serve various purposes predating the colonial period and range from being food or medicine, depending on their preparation, intended use, and the individual's health condition.

An interesting example is the coconut (*Cocos nucifera* L.), which Pardo de Tavera considered, along with sugarcane (*Saccharum officinarum* L.), the most indispensable plant in the Philippines. He wrote: "Es quizas la planta más útil de Filipinas: sin ella y sin la caña no se comprendería la vida en el Archipiélago" [It is arguably the most indispensable plant in the Philippines; life in the Archipelago would be incomprehensible without it and sugarcane] (Pardo de Tavera, 2000, p. 414). In the context of the cholera epidemics then, the coconut was not only a fruit but was a vital component in the quest for a cholera cure. In his 1663

Labor evangélica: Ministerios apostólicos de los obreros de la Compañía de Jesús en las islas Filipinas [Evangelical work of the Jesuit missionaries in the Philippine Islands], Jesuit missionary Francisco Colin recounts the 1628 cholera epidemic and writes:

> El año de mil seiscientos y veinte y ocho corriedo en esta ciudad de Manila un genero de peste, que en pocas horas quitaba lu vida, particularmente a gente flaca de estomago, o mal mantenida, dieron los nuestros en aconsejar este remedio del aceite del Manunggal, con tan buen suceso, que se dijo no habia muerto ninguno de los que lo tomaron con tiempo.
>
> Usanlo "el Manunggal" hecho polvo o raspado, y desleido en agua tibia o en aceite de coco. (Planta, 2017, p. 106; see also Colin, 1904, p. 102)
>
> [In 1628, a devastating plague ravaged the city of Manila, claiming the lives of those with weak stomachs or poor health in a matter of hours. The locals turned to *manunggal* oil, and its efficacy proved remarkable. It was widely reported that none of those who promptly consumed it succumbed to the disease.
>
> Use the powdered or scraped form of the *manunggal*, diluted either in warm water or coconut oil.]

According to Jose P. Bantug who wrote on the history of medicine in the Philippines, the infusion of *manunggal* by traditional healers, known as *herbolarios*, effectively combats cholera and alleviates stomach ailments when administered promptly. *Manunggal*, also known as bitterwood

(*Quassia indica* [Gaertn.] Noot), is renowned for its diuretic properties. The preparation of *manunggal* oil, which deviates from typical essential oils or plant extracts, involves mixing coconut oil with macerated pieces or scrapings of the *manunggal* bark. This oil is either ingested as a purgative in doses ranging from 30 to 60 grams or applied topically to the abdomen for relief of stomach pains or indigestion (Planta, 2017, p. 107; see also Bantug, 1953, p. 27). In *Plantas medicinales de Filipinas*, Pardo de Tavera describes the chemical components and therapeutic properties of the *manunggal*. He wrote:

> El leño y granos continen un principio amargo muy intenso. Del primero se hacen en Filipinas copas y que se llenan de agua durante seís á doce horas, y que,bebída luego, es útil en las enfermedades del estómago, porque contiene los principios amargos que dijimos.
>
> Vrij ha extraído de Las semillas del manungga un 33 por 100 de un aceite amarillo claro, constituído, según Oudermans, por 84 partes de oleína por 16 de palmitina y estearina.
>
> El principio amargo contenido en la raíz, el leño y la corteza, fué descrubierto por Blunse, que lo dío el nombre de samaderina; es una masa blanca, cristalina, foliada, más soluble en el agua que en alcohol, fusible. Los ácidos nítrico, y chlorhídrico la coloran en Amarillo. El ácido sulfúrico forma immediatamente una coloracíon rojo-violácea, que desaperace, depositándose cristales irisados en forma de barbas de pluma (Dujardin Beaumetz y Égasse, 1889).

En filipinas hacen los curanderos un aceite de manunggal que no tiene nada que ver con el proviene de las semillas. Es simplemente un aceite de coco, en el que han puesto en infusíon raspaduras del leño. Este aceite lo usan como purgante, á la le dosis de 30 á 60 gramos, y en fricciones en los reumatismos y contusiones; asimismo sobre el vientre los cólicos y digestiones lentas. El aceite extraído de los granos se emplea en la India, en fricciones, en el reumatismo.

La deccoción del leño, y aun sus polvos, se dan en las fiebres, en las dispepsias, y, en general, como tónico.

INFUSIÓN:	
Raspaduras del leño	200 gramos
Agua	500 gramos

Por copitas durante el día, en el cólera, las fiebres, dolores del estómago, diarreas. (Pardo de Tavera, 2000, pp. 273–274; Planta, 2017, pp. 69–70)

[The bark and seeds of the *manunggal* are intensely bitter. In the Philippines, cups are made from its bark and filled with water for six to twelve hours. Drinking the infused water with the aforementioned bitter principles afterwards is effective in treating various stomach disorders.

Vrij[8] has obtained 33 percent of a light yellow oil from *manunggal* seeds, composed, as noted by Oudermans,[9] of 84 parts of olein and 16 parts of palmitin and stearin.

Blunse discovered the bitter principle in the roots, seeds, and bark, and named it *samaderina*. It appears as a white, crystalline, foliated mass, more soluble in water than in alcohol, and capable of melting. Nitric and hydrochloric acids impart a yellow color to it. When exposed to sulfuric acid, it immediately turns red-violet, eventually depositing iridescent crystals resembling feathered whiskers after the coloration fades (Dujardin-Beaumetz & Égasse, 1889).[10]

In the Philippines, traditional healers produce a type of *manunggal* oil distinct from the oil extracted from the *manunggal* seeds. This preparation involves infusing coconut oil with *manunggal* wood chips. This infused oil is used as a purgative, administered at doses ranging from 30 to 60 grams, and applied externally to the abdomen in colic or

[8]Johan Eliza De Vrij (J. E. De Vrij, 1813–1898), pharmacologist and quinologist, Superintendent of Chemical Researches in Dutch Java and author of *On the Cultivation of Quinine in Java and British India* (1865), translated from Dutch. See Wellcome Trust Corporate Archive, "M0001362: Reproduction of a Portrait of J. E. De Vrij (1813–1898), Dutch Doctor and Pharmaceutical Chemist" (1930); and Rohan Deb Roy, "Fairest of Peruvian Maids: Planting Cinchonas in British India" (2017).

[9]Antoine Corneille Oudemans (1831–1895), chemist and director of the Delft Institute of Technology. See Lewis Pyenson, *Empire of Reason: Exact Sciences in Indonesia, 1840–1940* (1989).

[10]George Octave Dujardin-Beaumetz and Ed. Égasse, *Les plantes médicinales indigènes et exotiques, leurs usages thérapeutiques, pharmaceutiques et industriels* [Native and exotic medicinal plants, their therapeutic, pharmaceutical, and industrial uses] (1889).

> indigestion and with pressure therapy to alleviate rheumatism and contusions. In India, the oil is used topically with pressure therapy for rheumatism.
>
> The decoction of its bark and bark powders are given for fevers, dyspepsia, and, in general, as a tonic.
>
> | INFUSION: | |
> |---|---|
> | Bark scrapings | 200 grams |
> | Water | 500 grams |
>
> In small doses during the day, for cholera, fevers, stomach pains, diarrhea.]

Pardo de Tavera notes that the plants identified and listed in *Plantas medicinales de Filipinas* alongside their respective functions, primarily using Tagalog common names for identification, are all formally included in the pharmacopoeia of India. The specific localities from which these plants were sourced include San Mateo and Angono in Rizal Province and San Miguel, Manila. However, it can also be assumed that Pardo de Tavera also gathered plants from the Cavite area, his mother's hometown.

There are no distinctions as to endemic or imported plants. An example is the local name of the *kasuy* (*Anacardium occidentale* L.), which is a translation of its English name cashew, indicating that *kasuy* is most probably imported (Pardo de Tavera, 2000, p. 282). Apart from Tagalog, other major Philippine languages such as Visayan, Pampango/Pampangan, Ilocano, and Bikol were also included in the listing of local names. Here, attention is drawn to Pardo de Tavera's use of "Pampango" instead of "Kapampangan" to refer to the language

in Pampanga, suggesting that during his time, the standardization or consensus on terminology for Philippine languages had not yet been established. Certain plants, such as *kabatiti* (*Rhamnus wightii* W. and Arn), are classified under Tagalog rather than Ilocano names (Pardo de Tavera, 2000, p. 282), indicating the need for a more thorough examination of the book to ensure optimal utility.

4.4 Maximizing the Benefits of Philippine Medicinal Flora: Practical Guide

Despite the apparent abundance of local medicinal plants in the Philippines, Pardo de Tavera pragmatically acknowledges their scarcity, particularly among physicians in both Manila and provincial areas, unless these plants are officially recognized in European and American pharmacopoeias. Consequently, he emphasizes the importance of actively procuring and maintaining a reliable supply of medicinal plants for future use, especially within families. Stressing proper preservation methods, such as drying in shaded areas, he aimed to prevent putrefaction or fermentation.

Pardo de Tavera identifies Plaza de Binondo[11] as a convenient marketplace for purchasing local medicinal plants, with gardeners from nearby towns like Pasay and Singalon[g] regularly offering them for sale and accommodating specific requests. To address potential confusion arising from common plant names, he underscores the necessity of verifying plant descriptions for accuracy. He recommends obtaining flowering specimens to aid in identification and includes the flowering seasons for

[11] Binondo Plaza is now recognized as Plaza San Lorenzo Ruiz.

each plant in his descriptions. San Mateo and Angono are highlighted as ideal locations for acquiring medicinal plants and learning about their uses from locals and traditional medical healers. However, he cautions that while these healers possess significant knowledge, they may be hesitant to share information, requiring tact and friendliness to gather insights beyond initial encounters.

Here are specific instructions from Pardo de Tavera on maximizing the utilization of local medicinal plants:

1. The stem bark is often rich in the active principle, with the outer portion typically containing a higher concentration. Leaves should be harvested at their full development stage, discarding any old, dried, or worm-eaten ones.
2. For bark collection, the optimal time is approximately one month before the period of inflorescence when it is most abundant in sap. Flowers should be gathered when they are about halfway expanded, while fruits can be collected when immature (green) or ripe, depending on the desired active principle. Seeds, on the other hand, should always be fully mature before harvesting.
3. It is important to note that not all parts of the plant contain the same amount of the active principle. Sometimes, the active principle may be localized in the root or the flower, and different parts of the same plant may contain distinct principles. Therefore, only the specified part should be used for medicinal purposes.
4. In the root, the active substance typically resides in the bark, although it may sometimes be found in the parenchyma surrounding the woody tissue, or even within the woody tissue

itself, as observed in plants such as "rhubarb" and "pareira brava" (*Cissampelos pareira*) or velvet leaf.

5. While certain plants derive their therapeutic importance from their wood, leaves, or flowers, there are no specific indications regarding the localization of the active principle in these parts. However, the fruit may have a pericarp consisting of various components like mucilage, starch, sugar, gum, etc., while seeds may contain fatty matter, fixed or essential oils, or alkaloids, as seen in coffee and cacao. Therefore, it is crucial to utilize the part of each plant indicated as applicable to a specific case or condition.

Some of the scientific names featured in *Plantas medicinales de Filipinas*, such as *kabatiti* or luffa squash, which is now recognized as *Colubrina asiatica* (Linn.) Brongn (Pardo de Tavera, 2000, p. 282), require updating. Similarly, the identification of *gugo* or box bean plant as *Entada scandens* Benth (Pardo de Tavera, 2000, p. 303) has been revised to *Entada phaseoloides* (L.) Merr. These scientific names are based on information provided in *Plants of the World Online* (POWO), a digital database curated by the Royal Botanic Gardens, Kew. POWO, aimed at providing comprehensive information on every seed-bearing plant globally by the year 2020, was conceived in March 2017.

The *kabatiti* and *gugo* are just two among the 214 plants listed in *Plantas medicinales de Filipinas* requiring verification of scientific names. Nevertheless, it is worth highlighting that although Pardo de Tavera's scientific classifications may require validation through modern taxonomy, his identification of plant names remains invaluable. Without such classifications, solely relying on local names might hinder the precise

identification of these medicinal plants today. At the same time, while previous studies on Philippine medicinal plants, notably the works of missionaries such as Alcína, Blanco, Santa Maria, and Mercado, included the local names of the medicinal plants they collected, Pardo de Tavera stood out as the sole trained linguist among this group. Consequently, it can be inferred that while earlier records contained local names, Pardo de Tavera's inclusion of such names reflects his intellectual endeavor to utilize linguistics as a tool for examining the origins and relationships between the various ethnolinguistic groups in the Philippines. In this regard, Pardo de Tavera's *Plantas medicinales de Filipinas* is proof of his commitment to uplifting Filipino culture and foster a sense of pride among Filipinos in their own heritage. In the contemporary period, *Plantas medicinales de Filipinas* bridged the gap between tradition and modernity.

4.5 Quintessential T. H. Pardo de Tavera

In *Plantas medicinales de Filipinas*, Pardo de Tavera's dry and incisive humor is evident. He observes how tobacco (*Nicotiana tabacum* L.) smokers often cite examples of heavy drinkers and smokers who seemingly enjoy robust health but may unexpectedly meet their demise in accidents or succumb to sudden illnesses as evidence of tobacco's harmlessness (Pardo de Tavera, 2000, p. 366; Schneider, 1902, p. 162). This is what he wrote:

> La costumbre de fumar, que se extiende de día en día, encuentra los hombres como en todas las cosas divididos en dos campos: unos en pro, otros en contra del tabaco.

Ambos partidarios exageran razones. el abuso ocasiona perturbaciones en el aparato digestivo, en el corazón y en los nervios, esto es indudable. También aparece fuera de duda que algunas personas particularmente predespustas, ó con algunos órganos afectados de alguna dolencia, se ven my perjudicadas, no ya del abuso, sino sólo del uso moderado del tabaco. Estos sujetos han servido de arma para los contrarios: los fuertes, los robustos, los que fuman, beben se exeden en todo y mueren de un accidente de camino de hierro ó de una enfermedad aguada que los sorprende en medio de la más floreciente salud sirven de sujeto á los defensores para probar la inocuidad de tal costumbre. (Pardo de Tavera, 1892, p. 366)

[The habit of smoking, which pervades daily life, divides men into two opposing camps: some staunchly in favor, others adamantly against tobacco. Both sides tend to exaggerate their arguments. It is undeniable that excessive tobacco use can lead to disturbances in the digestive system, heart, and nerves. Furthermore, it is evident that certain individuals, particularly those predisposed or with preexisting health conditions, are significantly harmed not just by excessive use, but even by moderate consumption of tobacco. These cases have been wielded as evidence by opponents of smoking. Individuals who, seemingly strong and robust, engage in excesses such as smoking and drinking, only to meet untimely deaths from accidents or serious illnesses despite their apparent flourishing health serve as

> arguments for those in favor of tobacco smoking. It falls upon the defenders of smoking to prove the harmlessness of such a habit.]

This suggests Pardo de Tavera's foresight, predating many anti-smoking campaigns of the twenty-first century.

Pardo de Tavera's unwavering dedication to the advancement of the Filipino is evident through his words and actions, making him a towering intellectual figure in Philippine history. As he himself had expressed: "Of all Filipinos, I am the most Filipino. All my writings are for the interest, improvement, and progress of the Filipino people. They are writings which could not be of any interest to the French, Germans, Japanese or any foreigners" (Rodriguez, 1925, pp. 1–2, as cited in Mojares, 2006, p. 219).

5 Conclusion

Much like Blanco's *Flora de Filipinas*, Pardo de Tavera's *Plantas medicinales de Filipinas* warrants thorough scientific evaluation, especially concerning scientific nomenclature, which may need updating to align with modern Linnaean taxonomy. However, the absence of a systematic study of works on Philippine medicinal plants and herbs during the Spanish colonial period and its implications for the works of Alcína, Blanco, and Pardo de Tavera should not diminish their significance. These works serve as invaluable documented records, providing evidence of the medicinal applications of these plants and herbs, albeit primarily based on anecdotal evidence. Despite their

limitations, they remain crucial resources for understanding traditional medicinal practices in the Philippines (Planta, 2017).

Beyond its immediate impact on contemporary knowledge, Pardo de Tavera's work also serves as a valuable window into the precolonial Filipino past. By studying traditional medicinal plants, he provided insights into the sophisticated healthcare systems that had been passed down through generations and predated colonial influence. This glimpse into the local knowledge of precolonial Filipinos offers a holistic understanding of the Philippines' cultural and scientific heritage.

Since the second half of the twentieth century, the increasing popularity and significance of these plant traditions, as documented in the works cited above, have captured the attention of both the medical research community and the biopharmaceutical industry. Beyond the inherent qualities of local plants lies the recognition of their pivotal role in shaping Filipino culture over time. These pivotal moments in Philippine plant research not only underscore the importance of historical studies in modern investigations into phytotherapy but also present an opportunity for interdisciplinary collaboration among researchers. By leveraging local knowledge, this collaboration holds the potential not only to enhance better health and nutrition but also to preserve unique cultural insights, foster national development, and promote individual well-being for all.

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