Cinnamomum Zeylanicum: Continuing Voyages of Discovery

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Abstract: The delicately nuanced, slightly citrusy, spicy, but sweet *Cinnamomum zeylanicum* of Sri Lanka has long been praised as the 'mother of all cinnamons' and continues to be the highest grossing of all *Cinnamomum* species, even though Sri Lanka only produces 10% of the total world production of all cinnamon and cassias. It is endemic to Sri Lanka as its long-familiar botanical name reflects, and is the 'true' cinnamon as its present official redesignation as *Cinnamomum verum* suggests. However, over a long period of time, the identity of the island as its source, was unclear and the reasons for its superiority as a spice and in other areas were only scientifically proven in the latter half of the twentieth century. Even to date some confusion among consumers continues to exist between it and its distant *Cinnamomum* cousins, popularly known as cassia, though now for different reasons. Cinnamon has played an important role in Sri Lanka's long history. Looking back over its long trajectory from ancient to modern times reveals interesting facets of this cosmopolitan and popular spice, and its continuing evolution and relationship with the world at large. This paper will piece together the fragments of information strewn through time and space. Through an examination of a few moments from its long past and exciting present, deeper insights into *Cinnamomum zeylanicum* and its many continuing voyages of discovery will be laid out.

The Mother of All Cinnamon

> [A]s a fruit is better in one country than in another, so the cinnamon of Ceylon is better than all others.
>
> — *Garcia da Orta (1563)*[1]

The delicately nuanced, slightly spicy, citrusy but sweet *Cinnamomum zeylanicum* is endemic to Sri Lanka as its long-familiar botanical name reflects, and the 'true' cinnamon as its present official redesignation as *Cinnamomum verum* suggests.[2] Of the around 250 different species in the *Cinnamomum* genus worldwide, eight are endemic to Sri Lanka.[3] Nonetheless, *C. zeylanicum* is the gold standard of cinnamons worldwide and it is the only cinnamon variety that is cultivated commercially in the island. Its praises have been sung by poets, and many strange tales were devised to obscure its true geographical identity. The

Portuguese historian Barros (1552) referred to it as 'the mother of all cinnamons,' while to the Dutch colonial administrators it was 'the bride around whom everyone danced'.

The few other countries which presently cultivate *C. zeylanicum* on a commercial scale such as Madagascar and the Seychelles (where seedlings were introduced by the French in the late eighteenth century) remain small producers. As of 2019, Sri Lanka accounted for 90% of the world's supply of *C. zeylanicum*. However when taking all cinnamon species into consideration, the island's cinnamon ranks fourth in worldwide production after *C. burmanii, C.cassia*, and *C. loureiroi,* grown respectively in Indonesia, China and Vietnam. These three species are commonly referred to as cassia, and can be two to six times cheaper than Sri Lankan cinnamon. Therefore, in spite of producing only 10% of the worlds production as compared to Indonesia's 40%, in dollar value terms Sri Lanka still holds title as the highest grossing producer of all cinnamon and cassia worldwide.[4] Its steeper price does not seem to deter demand.

An impressive amount of historical references to cinnamon and cassia —both helpful and confounding — exist from the earliest times and through the ages. Particularly in the case of C. zeylanicum, an extensive coterie of explorers, soldiers, administrators, cosmopolitan travellers, and botanists, as well as modern sociologists, agriculturalists and research scientists have enlightened us on almost every aspect of this subject. Without retreading much covered ground, this paper sets out to present selected glimpses into the remarkable story of C. zeylanicum. The narrative will take the reader to various points in its history, gathering and assessing existing clues strewn over time and distance exploring the somewhat misty beginnings of mother cinnamon, when knowledge of its true source was limited to a relatively restricted number of intrepid traders in the ancient world, to its middle period in the sixteenth through the mid-nineteenth centuries, cinnamon's heyday as the island's most valuable export but also a period full of deepening geopolitical intrigue and conflict. Finally the story will continue into cinnamon's latest ongoing post-colonial chapter. Through these snapshots in time, some of the voyages cinnamon has taken over the centuries in the human imagination and examples of its far reach will also demonstrate the bonds that link Sri Lanka's finest cinnamon and by extension the Cinnamon Isle to the world.

The Importance of Terroir

C. zeylanicum, a perennial tropical evergreen, is a highly adaptable and hardy plant that can thrive under a wide range of tropical conditions. Even so, its quality outcome is highly dependent on a range of ecological factors such as climate, rainfall, elevation and soil. The three major zones where Sri Lankan cinnamon grows are all located in the low-country wet zone the southwestern quadrant of the island. Cinnamon was first harvested from trees that grew wild in these areas before and during Portuguese and Dutch rule. Later, in 1770 almost one hundred years after their arrival, the Dutch VOC would discover that cinnamon could

be successfully cultivated. They found the sandy soil of the coastal areas near Negombo and Colombo to produce the finest quality of cinnamon and it was here that they established the island's first cinnamon plantations. However, in present times, fine cinnamon is cultivated further south in the Kalutara and Galle districts, as well as in the Ratnapura district further inland. Sri Lanka's ideal conditions greatly account for the underlying intrinsic properties that result in the distinctive aroma and flavour profile of Sri Lankan cinnamon. These inherent properties are maximized through proper harvesting methods and rely on the peeling skills of the descendants of the cinnamon peelers of Sri Lanka, from the *Salagama* community, who have been engaged in this craft for at least 400 years.

The major components in the bark of *C. zeylanicum* are cinnamic aldehyde (65-80%) and eugenol (5-10%), while Sri Lankan researchers have also detected the presence of no less than 90 compounds and over 50 very minute unidentified ones in cinnamon. Madagascar cinnamon contains only 28-45% cinnamic aldehyde, and 5-10% eugenol.[5] These aromatic flavouring compounds synergistically combine to produce the overall organoleptic qualities associated with Sri Lankan cinnamon. In comparison, cassia bark which shares some of the same chemical compounds (though in different proportions) can contain a higher level of 95% cinnamic aldehyde that accounts for cassia's assertively spicy bite, and a distinctly different chemical profile.[6] Much like a fine cognac, the full bouquet of Sri Lankan cinnamon is best appreciated neat without the addition of other spices. Its soft thin bark broken off straight from the quill has quite a sweet and pleasant taste and is easily masticated, unlike cassia which is too hard and woody to be easily broken off or chewed. In addition, in recent years, scientists have flagged warnings on cassia consumption for its high coumarin content, which is potentially harmful to the liver. In contrast, true cinnamon contains only trace elements.[7]

Because of these scientifically verifiable differences between cinnamon and cassia, as well as the organoleptic variations within each species due to geographic factors, some scientists have presented the argument that the nomenclature used in trade for commercially produced barks should include the country of origin as a prefix followed by the epithet of 'cinnamon' in the case of C. *verum* or *zeylanicum,* and 'cassia' in the case of all other *Cinnamomum* species.[8] This would certainly be a more objective approach that would provide meaningful information to consumers just as the *appellation d'origine contrôlée* (A.O.C.) certification does for French wines. Along similar lines, to legally protect the unique reputation of Sri Lankan cinnamon, the Sri Lankan government has recently succeeded in registering the 'Pure Ceylon Cinnamon' trademark so far in its four largest markets, Mexico, the US, Peru and Colombia.

Cinnamon & Cassia: More Differences

> It is likely enough that in ancient times the cinnamon was falsified. Its great abundance makes it unnecessary to do that now. Speaking the truth with

> you, I could never see more than two kinds or three, ... the canela of Java, of Ceylon and of Malabar ... Is all the cinnamon of Ceylon very fine? No! some is very bad, which has not rolled up well or was very thick from not being of that year, and being old is not good. I speak of Ceylon, for that of Malabar and other countries is all very bad.
>
> —*Garcia da Horta (1563)*[9]

The further differences between cinnamon and any of the cassias can be best appreciated when comparing their quills a side-by-side. The bark forming the outer body of a cinnamon quill is of a uniformly thin layer of a characteristically yellowish to a reddish-brown colour, and has a smooth texture. The two inwardly curved edges of the quill meet to form the seam. A sectional view reveals that the quills are stuffed with several concentric layers consisting of shorter irregular pieces of inner and outer bark. When pressed the quill is soft and somewhat pliable with a cushioned feel. In stark contrast, cassia quills are hollow, consisting of a single thick outer layer of a rough hard bark of a darker reddish-brown colour formed into a hollow pipe with inwardly curling edges.

Sri Lanka classifies its cinnamon into three main grades and sub-grades based on the diameter of the quill, the extent of brownish blemishes (known as foxing), the quill length, and the number of 1050mm length quills per 1 kilogram. The finest grade of Sri Lankan cinnamon quills known as Alba are rolled as thin as a pencil, and in colour are an unblemished yellowish brown.[10]

While cassia is often sold in powdered form or in in broken pieces of bark, ninety five percent of Sri Lankan cinnamon is sold in quill form as its superior quality are best preserved and its visual differences from cassia can be easily ascertained. Adulteration and inauthenticity are easier to camouflage in powdered form and there have been cases where cassia powder is flagrantly mislabelled as Sri Lankan cinnamon powder to obtain a better profit.

Harvesting and Processing Methods

In Sri Lanka cinnamon is harvested every 2-3 years, the selected branches are cut and gathered in the field, then gathered and taken to the peeling shed. There, usually within the next day, the rough outer bark is scraped off before the intricate process of extricating the inner bark from the branches, drying it for several hours, then overlapping several peeled lengths of inner bark, the long edges of which have already begun to scroll inwards, to form the casing for a single long 40" quill. The quill is then stuffed with smaller off-cuts and broken pieces known as featherings and quillings as well as pieces of the outer bark known as chips and then again shaped to form the final finished layered quill.

The harvesting and peeling of cassia is more straightforward. The trees are generally grown much longer before they are first peeled (sometimes for 10-20 years) and for some cassias, the bark is peeled from the main trunk, not only the branches. The bark is often

harvested and peeled in the field before cutting them off the trees and dried. Cinnamon's comparatively more elaborate and specialised peeling processes help one understand why labour costs comprise 60% of the total cost of cinnamon production in Sri Lanka as well as the critical importance of its cinnamon peelers.

The Cinnamon Isle: Geography is Destiny

> Ceyllam ... is a thing of such importance in India...on account of the advantages this island possesses: the first...the fine cinnamon... [It lies] in the track of all the ships of Malaca and Bymgalla [Bengal],none being able to pass without being seen and known of in that part... [Y]our principal residence ought to be there, since it seems that there you are in the centre of everything.
>
> — *Letter from King Manuel to D. Francisco de Almeida (1506)*[11]

> At the scent of this cinnamon, the kingdom loses its people.
>
> —*Anonymous Portuguese poet*[12]

Sri Lanka, the birthplace of *C. zeylanicum*, was positioned at the crossroads of the ancient world, with an importance that belied its size. Strategically situated at a convenient midway point on the maritime silk route, and on the doorstep of the vast emporium of India, this small island nation throughout its history has been simultaneously blessed and cursed by its geography. Its natural riches further added to its allure as an entrepôt and territorial acquisition.

The perimeter of the island ringed by a plethora of excellent and safe harbours is approachable to vessels plying the Indian ocean from the east, west, north and south. In earlier times, it had the particular advantage of two seasonal monsoons, the first in the fall blowing northeasterly, and the second in the summer southwesterly, alternately propelling ships either towards its shores or onwards back, depending on their direction of travel. The first mariners arriving to its shores in their sail-powered vessels were perhaps blown off course mid-journey in storm swept seas. As the island came into sight, they must have experienced relief and disbelief at the unexpected sighting of the lush verdant shores of this tropical paradise, and the spectacular sight of Adam's Peak emerging from the distance as the island came into view. It would have been serendipity, indeed.

Even before Ptolemy literally put Sri Lanka on the map, the island was already attracting traders from neighbouring and more distant kingdoms. Though the source of the world's best cinnamon would become an open secret to Arab, Indian and Chinese traders, it would take several more centuries for it to fully register on traders from the European world that Ceylon was the source of this most fragrant of all cinnamons which fetched exorbitant prices by the time it reached markets back home This realisation eventually culminated in the competitive scramble that began in the early sixteenth century to wrest control of this

highly prized spice and seize possession of this island. Not content to peacefully compete in the island's preexisting trade which by then was dominated by Muslim and Arab traders, each in their turn managed to secure a monopoly over Sri Lanka's cinnamon and a temporary secure foothold separated on the opposite coast from their trade settlements along the Malabar and Coromandel coasts of south India. The period of European colonization (1505-1948) had a great impact in expanding the market and making improvements in the cinnamon enterprise, often at the expense of the local population.

The Cinnamon Puzzle

> The woods are their apothecaries ... the cinnamon tree "grows wild in the Woods as other Trees and by them no more esteemed".
>
> *—Robert Knox (1681)*

> Great store of it [cinnamon] is carried forth of the island which is hard by Malabar.
>
> *—Friar Menentillus (1292)*

Many contemporary observers have debated about when Sri Lankan cinnamon first reached the outside world, and how the island was first identified as the source of true cinnamon. The growing consensus was that it most probably was. Some ask, if it reached the Red Sea ports as far back as biblical times, how could its source have been kept a secret for so long? The copious travellers' accounts of the early period written by the most astute observers of the ancient world extol the pearls, gems, ivory, tropical woods and elephants of Ceylon, but are reticent on the subject of cinnamon up until around the tenth century. Neither is there mention of this cinnamon, so widely valued beyond its shores, in local epigraphical or written sources of this literate island, that bears the distinction of possessing the oldest and longest spanning chronicle in the world, the Mahavamsa. Nor has cinnamon featured as a trope in traditional or court poetry, or in the medieval temple art of the Kandyan highlands where the first wild cinnamon species are believed to have originated, and not even in the artistic motifs or minute representational details of everyday depicted in the seventeenth through nineteenth century temple wall paintings of the low country where cinnamon flourished. Lankage notes, however, the prevalence of the term kurundu (Sinhala for cinnamon) in the names of places, villages and rivers in several regions of the island.[13]

The answers to the first questions may lie in the area of supply and demand, deliberate obfuscation, myriad trade networks and wide spread markets, linguistic confusion — and geography. The clues to the last mysteries are more straightforward. Firstly, the attitude of the rural islanders towards kurundu (as C. zeylanicum is known in Sinhalese) is easily understood in light of the well-stocked tropical paradise that surrounded them. As mentioned earlier, there are several other botanical species of cinnamon growing in the

island, many of which were valued for use in ayurvedic medicine from ancient times. Before nature's supremacy was overturned by the laws of supply and demand, cinnamon grew prolifically like a weed in the lowland jungles of the island (in fact it is listed as an invasive species by the Centre for Agriculture and Bioscience International (CABI).[14] In addition, there were innumerable valuable wild medicinal herbs, trees, fruits and plants available to the islanders, many more important for their daily needs than cinnamon. It is not unusual in these circumstances for inhabitants in these places at a distance from the urban centres of trade to not have regarded kurundu as anything of special value. If they had, they probably could not have imagined its true value in the wider world beyond their shores.

Moving forward in time, the Moroccan Berber traveler Ibn Batuta in 1344 provides some additional clues. Ibn Batuta arrived to the island in the northwest coastal town of Puttalam, which lies further north of Chilaw, the upper boundary of the natural habitat of C. zeylanicum that continues to Dondra, the southernmost point of the island. He also later visited Galle the most important port in the South. In a brief passage he gives a somewhat fantastical account that bears some interesting elements. Battuta relates that 'the whole of [the island's] coasts are covered with cinnamon trees brought down by torrents and heaped up like hills on the shore', and that traders from Malabar and Coromandel would take these away without payment but would later make presents of cloth and other items to the king.

The reference to cinnamon trees being brought down by torrents, has an element of truth. Numerous rivers cross cinnamon country emptying in estuaries at several points along the coast, provided a convenient means of transporting cinnamon by boat to the nearby seashore. He also seems to describe a barter trade arrangement built on trust, and provides a shorthand explanation of the feudal tradition of rajakariya, which lay in an obligation on the part of subjects to carry out specific duties for the benefit of their ruler. Cloth was one of the most valued exports sent from the Indian coast from the earliest times.[15] One wonders whether Batuta actually witnessed the scene he describes, or whether it is based on an account he may have heard that got a bit lost in translation.

A Well-kept Secret

> From Ceylon they bring a great deal of good cinnamon, which costs them very little money, while the sailors without any money collect wild and bad cinnamon in the woods.
>
> —*Garcia De Orta (1563)*

As alluded to above, it seems highly possible that cinnamon would have initially found its way out of the country from one of the numerous smaller harbours of the southwestern quadrant of the island which coincides with the cinnamon territory. Any of these points would have provided easy access for obtaining cinnamon straight from the source and for loading.

Foreign vessels operating out of Sri Lankan ports such as Colombo, Galle, and Weligama were in all probability shipping cinnamon directly to ports in Malabar such as Cochin and Calicut from early times. According to Ravindran (2000) 'the Assyrians and Babylonians were in close contact with the Malabar Coast where they purchased spices including cinnamon, and their route that stretched to China may have included other ports on the way'.[16] Calicut was an important export point for the Muslim and Chinese traders and Ceylon's cinnamon was freely available there. It was here in 1498 after Vasco da Gama would have seen this cinnamon on board Chinese and Arab vessels.

However ships from the east or from the Red sea ports could just as easily bypass the Indian ports after collecting cinnamon in Sri Lanka. After several centuries and shifts in location the main capital of the Sinhalese was relocated to the Kotte. Nearby Colombo would become its main port. When the Portuguese first arrived in 1505, they came upon muslim traders who were loading their boats with cinnamon. The king derived great profits from cinnamon and muslim traders controlled the trade until the Portuguese ousted them and in turn seized control of the trade in cinnamon in 1505. Their main administrative headquarters was located there.

In Hindsight: Garcia da Horta's Observations on Cinnamon

The Portuguese physician and man of science, Garcia de Orta (c.1500-1568), author of one of the most important works on botany and medicine, Colloquies on the Drugs and Simples of India (1563), perhaps more than any other sixteenth writer displays a remarkable understanding of the qualities of Sri Lankan cinnamon and cassias and helps decipher some of the sources of confusion in many markets and networks of trade. From his privileged position as physician to the Portuguese viceroy to India and his vantage point in Goa, he was a first-hand observer of the cassia varieties and the C. zeylanicum that arrived there. He also had high-level access to a wide array of multi-national knowledge bases and sources including traders who travelled within the regional and international trade networks, native physicians and court physicians. The later were usually Persian or Turkish. In addition, he is known to have visited Sri Lanka on at least one occasion.

In his colloquy on cinnamon, he points to the three direct sources of cinnamon and cassia, when he states that he only knows of three kinds, that of Java, Malabar and Ceylon. Further reading between the lines, we see that he understood the indirect relationship between tree age, bark thickness, and quality. When he unravels the confusion in the underlying semantics of terminology used in the markets in several locations, it is possible to infer that some of the confusion between cinnamon and cassia occurs because cinnamon sold in bark form from older tree branches would be harder to distinguish from cassia barks. In one section he places the terms 'canela, cinnamon and cassia lignea' in opposition, and states that Arab physicians use the 'thick canela' and identifies it with cassia lignea (lignea is in Latin means 'woody').

However, he later infers that both cinnamomum and cassia lignea were sold as canela. One can infer therefore that the two were sold in quill form ('canela' in Portuguese means 'pipe') as well as broken pieces of bark. The word for cinnamon in several southern European and Latin countries in the Mediterranean are derivations of canela perhaps signifying that quill forms were sold in European markets. Nowadays, cinnamon and cassia is sold mostly in powdered forms. Though he was not completely correct on all points and his discussion on the topic shows some confusion, his colloquy on cinnamon is an informative and fascinating read, displaying an unbiased objectivity and a fearlessly inquiring mind.

Northern and Eastern Ports

The ancient Buddhist kingdom of Anuradhapura which reigned from the third century BCE until the ninth century CE was located inland in the north central dry zone region of the island. Its main port, the bustling entrepôt of Mantai, lay off its northwestern coast. Mantai and the several other ancient harbours in the north and northeast of the island had ancient connections with other regional port cities along the Malabar and Coromandel coasts.

While demand for cinnamon was so great in countries further to its west, the Sri Lankan prestige products most desired by the South Indian kingdoms from early times were primarily Sri Lanka's elephants, famed for their singular intelligence, and the exquisite pearls fished off its northwestern coast in the Gulf of Mannar. This relative lack of internal demand within India for Sri Lankan cinnamon - that continues to the present day - might be further understood in light of the fact that cinnamon leaves (tejpat) and Indian cassia bark (C. tamala) along with a plethora of other indigenous spices were used as a spice and medicine since ancient times as confirmed in Kautilya's Arthashastra.

In the seventeenth and eighteenth centuries, the remote northeastern harbours of Trincomalee and Batticaloa would serve as a 'back door' into the cinnamon country for many traders.[17] It was here in 1602 that the Dutch sea captain Joris van Spilbergen made contact with the King of Kandy Vimala Dharmasuriya. The captain was on a mission to seek an audience with the king to ask permission to trade in cinnamon. Once the king's suspicions were allayed, he apologised for not having very much cinnamon on hand, confiding that he had laid waste to his supply and had forbidden any peeling of it to spite the Portuguese.[18] The Dutch eventually assisted the Kandyan king in ridding him of his enemy in 1656, but a mere twenty-one years later, events would show he had fallen out with the Dutch as recounted by the Frenchman L'Estra who arrived off the coast of Batticaloa in 1677. He records in his ship's log the strong smoke from burning cinnamon as his vessel approached the shore - this time to hurt the Dutch who had forcibly occupied the island and were making great profits from its sale.[19] Later in 1744, we find the Dutch themselves too, would engage in a similar practice, to keep the supply down to maintain high prices. The German Heydt notes that at times one-half to one-third of the cinnamon peeled was burned.[20] If we take the figures

provided in the secret report sent by Dutch Governor Schreuder to Amsterdam in 1756 as a rough indication, an estimated 321,626 to 482,440 lbs might have been burnt in a single year. After burning the excess, the Dutch managed to obtain a profit on cinnamon sold that year of a stunning 2,278,451 guilders.[21] Heydt describes in vivid detail about the annual spice burnings in Colombo in his time that were 'like a Church-fair' where unwanted spices were piled in a massive heap measuring up to 100 feet long and 24 feet wide and 4 feet high that blazed for two to three days without burning out.[22]

The Cinnamon Peelers

> [Wanted:] Superintendent of the cinnamon peelers... principal qualifications...required: honesty, unselfishness, wisdom, and justice.
>
> *—from the instructions of Rijckloff Van Goens, Sr (1656-65)*

> Eight eggplants, but nine taxes.
>
> *—Sinhalese proverb*[23]

> From the low country we came for cinnamon,
> As the mockery is too great, we can't stay in the highlands,
> Looking at me with puckered snigger
> Weep not, scraper, tomorrow you scrape coconut
>
> *—Traditional popular verse*[24]

While the Europeans would largely dictate the middle chapters in the history of Sri Lankan cinnamon, around this period a community of thirteenth century migrant weavers from south India originally known as the *Chalia* (and in later times *Salagama*), would come to play a central role in the cinnamon enterprise. Sometime it appears during the Kandyan period, the Kandyan king decreed that the group should take on the hereditary duty of peeling cinnamon.[25] From this moment onwards, cinnamon and the *Chalia* would become inextricably linked. The actual work of peeling cinnamon was carried out by only one section of this community as this caste had a four-tiered pyramidal hierarchy. The peelers were on the lowest rung and comprised about one-third of the group. Their work was dangerous and gruelling particularly when the cinnamon was gathered wild from the jungles, parts of which lay in the Sinhalese ruler's territory. Endemic disease, wild elephants, and attacks by the forces of the Kandyan king were some of the common perils that came with their job. The higher-ranking members of the group who served as overseers and soldiers accompanied the peelers on their twice yearly peeling excursions and would beat drums to keep away wild animals and their role was to protect them from Kandyan forces who sometimes attacked the peelers to drive them away. The Dutch and British were almost completely dependent on the labour, knowledge, and skills of the *Chalias* in the harvest and peeling of cinnamon. They did all

they could to ensure their compliance and did the best to keep them on good terms since they were the key cogs in their money-making machine. As part of their efforts to gain the cooperation and allegiance of this group, the Dutch would emulate the local court customs of the Kandyan ruler with the annual ceremonial occasion known as the *paresse* in order to flatter and impress them. This involved the entire contingent of the *Chalias* travelling by foot in grand procession according to rank and village to the Governor's residence in the 'Castle' where they would assemble on the large garden overlooking the sea to report to the him and his council members before the former set off for the season's peeling of cinnamon. Beyond all the pomp though, a grimmer reality prevailed. The cinnamon peelers led a meagre existence and were exploited by higher and lower officials as they were at the bottom of the pecking order. The *Chalia* peelers as a group often rebelled against these conditions and sometimes the entire community would ally themselves with the Kandyans when conditions were warranted.

Later, in the mid nineteenth century, prices began to fall in cinnamon after the British colonial government shortsightedly killed off the industry by imposing high tariffs after they ending the English East India company's monopoly. This gave a leg-up to cassia in western markets who had until then primarily imported cinnamon. The British abandoned cinnamon and focussed their economic attention to the then unspoiled hill country to carve out land for coffee cultivation. This opened the way for the southern Sinhalese elite, including members of the upper echelon of the Salagama to eventually take ownership of this industry.[26]

Soon once again, cinnamon which naturally flourished in the south began to flourish in lands freely again, especially as the old restrictions on its cultivation had finally been entirely removed. Now cinnamon is commonly found even in the home gardens of cinnamon peelers. Notably, 70-80% of the industry is comprised of small holders. Meanwhile many peelers still carry out their traditional seasonally itinerant lifestyle and their peeling methods remain largely unchanged. However their economic position has vastly improved as peelers can command from 33% to 50% of the price at which finished cinnamon is sold to traders, or if working for a daily wage, they receive at least twice the local wage rate. The skills of the peelers are in ever greater demand as their numbers continue to fall. Just as the Salagama peelers are finally gaining the rightful respect for the sacrifices made over generations, the younger generations prefer to pursue other economic opportunities as they prefer white collar jobs.

As part of the Geographic Indicator (GI) initiative, the cinnamon industry in collaboration with the government has set up the Cinnamon Training Academy in an effort to provide technical good practices and training and to attract outsiders to this traditional craft. Due to old prejudices, this remains somewhat of a challenge. Even though there were an estimated 30,000 peelers in the industry in 2013, there is still a shortage of skilled peelers in the industry. Without enough peelers, cinnamon may not be harvested in time or as frequently as it should which could cause a fall in the quality.

With the concerted efforts of government and scientific agencies solutions, work is proceeding on ways to improve harvesting and processing efficiency. The Sri Lankan cinnamon industry has made many gains in establishing a new post-colonial identity after almost 400 years being centre stage in the territorial ambitions and geopolitical struggles of colonial struggles followed by several decades of the growing pains of an independent nation. Cinnamon particularly in the past decade is being taken forward by a new generation who can finally take pride in the fruits of their labour and the sacrifices of their ancestors, seeing cinnamon in a new light. However challenges remain, and unless the industry can attract more peelers to keep up with growing demand for Sri Lankan cinnamon, labour costs will continue to rise, worsening the price differential between cinnamon and cassia further. The skill of the peeler makes the final difference in the quality grade of the cinnamon. Therefore, should these skills falter, the finest grades of cinnamon may become even rarer and a luxury of the past.

Notes

1. This and all following quotations of Garcia da Orta are from his 15th Colloquy on Cinnamon, pp118-137 in: *Colloquies on the Simples & Drugs of India by Garcia De Orta, New Edition (Lisbon, 1895) by the Conde de Ficalho*, trans. by Sir Clements Markham, (London: Henry Southern & Co, 1913).
2. At the International Botanical Congress in 2011, the Code of Botanical Nomenclature (ICN) for *Cinnamomum zeylanicum Blume* was officially designated as *Cinnamomum verum*, based on a narrow technicality, although the former name has been in wide use since 1666. For a detailed discussion refer to Lankage, n.d., https://www.srilankanspices.com/download/lankage.pdf.
3. Kosterman gives the number as 250 species in: M. D. Dassanayaka, and F. R. Fosberg, et al., eds., *A Revised Handbook to the Flora of Ceylon, Volume IX*, (New Delhi:Oxford & IBH Publishing, 1995), p112; however, the CABI puts the total number of species at 350 with 50 'mostly of economic value'. See: https://www.cabi.org/isc/datasheet/13573#tosummaryOfInvasiveness (last modified 22 November 2019)
4. 'Cinnamon Market Growth, Trends, and Forecast 2019-2024 by ResearchAndMarkets.com.
5. George M. Halpern & Peter Weverka, *The Healing Trail: Essential Oils of Madagascar*, (North Bergen, New Jersey: Basic Health Publications, 2002).
6. see U.M. Senanayake and R.O.B. Wijesekera, in P. N. Ravindran, K. Nirmal Babu et. al., *Cinnamon & Cassia: The Genus Cinnamomum*, Boca Raton/London: CRC Press, 2004), p104.
7. for instance, see: Blahová, Jana, and Zdeňka Svobodová. "Assessment of coumarin levels in ground cinnamon available in the Czech retail market." *TheScientificWorldJournal* vol. 2012 (2012): 263851. doi:10.1100/2012/263851
8. Lawrence, 1967 as quoted in: P. N. Ravindran, K. Nirmal Babu et. al., *Cinnamon & Cassia: The Genus Cinnamomum*, (Boca Raton/London: CRC Press, 2004), p2.
9. Garcia Da Orta, *Colloquies on the Simples & Drugs of India* (1563), trans. by Sir Clements Markam,, Henry Southern and Co, London, pp125-27.
10. See: *Classification for Quills ISO 6535:1997* (SLS 81:2000).
11. Donald Ferguson, *Discovery of Ceylon by the Portuguese in 1505*, Appendix 21A, CAS, vol xix, no 59 (Colombo, 1907).
12. Michael Krondell, *The Taste of Conquest: The Rise and Fall of the Three Great Cities of Spice*, (New York: Ballantine Books, 2007), p184.
13. Jayasiri Lankage, *Cinnamon, tree that gave the name to the country and changed the course of history,* http://cinnamonacademy.lk/2016/10/16/cinnamon-tree-that-gave-the-name-to-the-country-and-changed-the-course-of-history/. Viewed on 1 June 2020.

14. Invasive Species Compendium: Cinnamomum verum (cinnamom), https://www.cabi.org/isc/datasheet/13573, accessed 1 June 2020.
15. *Ibn Battuta: Travels in Asia and Africa 1325-1354*, trans. by Gibb, H.A.R., 3rd edition, (London: Routledge & Kegan Paul, 1953), p254.
16. P.N. Ravindran, ed., *Black Pepper: Piper Nigrum*, (Boca Raton: CRC Publishers, 2000) https://books.google.lk/books?id=1pBG99NCLM8C&dq=Ravindran+pepper&source=gbs_navlinks_s, p5.
17. This expression was coined by R.Raven-Hart in his:*Ceylon History in Stone*, (Pannipitiya, Sri Lanka : Stamford Lake, 1964).
18. *François Valentijn's Description of Ceylon*, Arasaratnam, Sinnappah (London: Hakluyt Society, 1978), p290.
19. L'Estra, Francois, *Relation ou Journal d'un Voyage aux Indes Orientales* (Paris: Estienne Michelle, 1677), p125.
20. *Heydt's Ceylon:1744*, trans. by Raven-Hart, R. (Colombo: Govt. Press, 1952), p31.
21. Lodewijk Wagenaar, *Cinnamon & Elephants: Sri Lanka and the Netherlands from 1600*, (Amsterdam: Rijks Museum, 2016), p152.
22. *Heydt's Ceylon:1744*, pp148-9.
23. John M. Senaveratna, *Dictionary of Proverbs of the Sinhalese*, (Colombo:Times of Ceylon, 1936), p14.
24. *Hugh Nevill - Sinhalese Folklore* in: RAS (Ceylon) Vol. XIV (New Series), 1970.
25. '*Chalia* village' or '*Chalia* people' *Sala*' appears to be the Sinhala term term for '*Chalia*', while 'gama' translates to village. In feudal times, specific villages were granted to each community. This has lasted still in rural areas. Their original group name in India where they were weavers was '*Chalia*' and they preferred this name as can be seen in references to the group in the Dutch records for instance.
26. To date, the presence of this community is still strong as seen in the names that can be traced to this community. De Silva, though not restricted to this community is one of the most common surnames, other surnames include Rajapaksa and de Zoysa. The community often uses a 'Z' in lieu of 'S' in the English spelling of their surnames to denote their *Salagama* origin. For example: De Silva instead of De Silva, etc.