



History of Convicted Labour in Cinchona Plantations from 1859 to 1884 with Special Reference to the Nilgiri District - A Study

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Abstract

This paper examines the history of the cinchona plantation in India, with a particular focus on the Nilgiri district. Cinchona is a tree native to South America, known to the Inca tribes long before it was brought to Spain in 1532 by the Spanish Vicereine of Peru. It gained various names, including Kina-Kina in Spain and Quin-Quine in France, eventually becoming known as Cinchona everywhere. In 1638, the Countess of Chinchón, the Viceroy's wife, discovered that the tree's bark helped her recover from intermittent fever, leading to its introduction to Europe in 1640. It is mainly cultivated for its bark, which is a source of quinine and other medicinal compounds. Cinchona was cultivated in Indonesia, New Zealand, and India. Cinchona plantations started in the 19th century in India particularly in 1859 on Nilgiris. These plantations primarily focused on cultivating Cinchona trees, which were vital for the production of quinine, a crucial treatment for malaria. It also examines the development of the cinchona plantation and the expenditure involved. The British colonial administration recognised the potential of the Nilgiri hills for Cinchona cultivation due to the favourable climate and terrain. However, they faced challenges in sourcing labour, as the indigenous population was not inclined to work in the plantations. To address this, the colonial government implemented a system of convict labour. It highlights the history of convicted labourers in India and the essential roles that convicts played in various sectors. With the efforts of Chinese convicted labours the quinine medicine produced in Nilgiris was exported to malaria affected countries. It is noteworthy that the quinine medicine exported from the Nilgiris played an important role in the treatment of malaria fever worldwide. It primarily focuses on the arrival of cinchona plantation in Nilgiri District and the role of convicted labours for the development of cinchona plantation from 1859 to 1884, for a period of twenty five years.

Keywords: Cinchona plantations, Quinine, Convicts, Labour, Nilgiris

Introduction

Stating the origin of Cinchona plantation in the world, it has very clearly mentioned the fact that Inca tribes of South America were well acquainted with the plants which were taken to Spain in 1532 by the

Spanish Vicereine of Peru. The plant was introduced with different names such as Kina-Kina in Spain, Quin-Quine in France and finally Cinchona for the entire world. Later in the beginning of the eighteenth century, the plant was grown in Indonesia, New



Zealand, French, Indo-China, Malaya, Australia, East Africa, Central America, Korea, Russia and India. However, Cinchona plantations were introduced and expanded in India and Indonesia, successfully due to the suitable climate and availability of cheap labour force. The British colonial administration recognised the potential of the Nilgiri hills for Cinchona cultivation due to their favourable climate and terrain. However, they faced challenges in sourcing labour, as the indigenous population was not inclined to work in the plantations. To address this, the colonial government implemented a system of convict labour.

Cinchona Plantations in Nilgiri District

The idea of introducing the quinine-yielding trees into India was first proposed in 1832 by Dr. J. Forbes Royle, an adviser to the East India Company on Indian products with an extensive knowledge of Himalayan Botany. Royle felt that next to Chinese tea, no more important plant than cinchona could be introduced into India. But despite his energetic and repeated attempts, his plans failed either due to lack of experience in the collection and transportation of young plants, or were allowed to drop for some unknown reasons. Royle's death in 1857 ended the discussion till 1859 when Lord Stanley entrusted Clement R. Markham, an officer of the Indian office, with a commission to introduce cinchona cultivation into India. The mission included extensive searches for various species of cinchona plants in the forests of Peru, Bolivia, Ecuador and Columbia in South America.

Within the Empire, India is the only country where cinchona is cultivated on a large scale. In India, Government Cinchona Plantations in the Nilgiris in the Madras Presidency, in the Darjeeling District of Bengal and in Burma. There is also a quinine factory in both the Madras and Bengal Provinces.

The object of the Government Cinchona Plantations is the provision of an abundant and cheap supply of the febrifuge for the use of hospitals and troops in India, and the spread of Cinchona cultivation throughout the Hill Districts. In 1859 Her Majesty's Government engaged the services of Mr. Clement R. Markham for the special duty of introducing the Cinchonas into India. He started on an expedition to South America in the early part of 1860 and arrived in India at the end of the same year with the first instalment of Cinchona plants. These plants were in an unhealthy state when they arrived at Ootacamund. In July 1861 the experiment was entrusted to Mr. McIvor and ever since the plantations have made satisfactory progress and proved a decided success. There are three Plantations at Neddiwuttum, the Denison, the Kilgroston, and the Napier two at Pykara, the Wood and the Hooker one at Ootacamund, the Dodabetta and one at Malkoondah, the Stanley Estate.

W.G. Mcivor was a Scottish gardener and superintendent of the Nilgiri Cinchona Plantation in Ootacamund, India, was responsible for the successful introduction of cinchona plants in 1860s. He had contributed major role for cinchona plantation in Naduvattam since from initial stage of planting. Mcivor was by and large a popular superintendent and popular community figure, credited with successfully acclimatizing the cinchona cause, urging upon potential cultivators the advantages which cinchona could provide, the forming friendships and business deals with several private planters. During this tenure of service while raising cinchona plantations he had cooperated with sir clement Robert Markham and all other Government officials all the stage by stage works of cinchona plantation and overall administration at Naduvattam were managed in consultation of W.G.Mcivor.



The following statement shows the progress made in the cultivation of Cinchona in the Government plantations of the Nilgiris in the official years from 1874-75 to 1880-81:

Botanical Names	Number of acres under cultivation on the 31 st March 1881	Number of Plants raised during the years							Total	Plants in permanent plantation on 31 st march 1881
		1874-1875	1875-1876	1876-1877	1877-1878	1878-1879	1879-1880	1880-1881		
C. succirubra		27,776	130,900	14,200	187,350	604,855	300,700	585,950	2,674,731	238,095
C. officinalis		...	...	...	...	1,276	350,000	473,000		426,183
C. calisaya, var ledgeriana		...	...	...	...	...	5,500	2,810	9,586	2,857
Do other varieties		...	...	...	...	...	6,600	1,537	8,137	
C. micrantha		...	...	...	...	...	1,000	...	1000	1,874
C. pubescens		2,500	12,000	6,468	2,806	...	4,100	24,140	49,208	
C. pitayensis	847	1,140	...	...	...	...	5,500	...	9,446	
C. lanceolata		8,400	...	21,540	12,070	8,320	38,000	200	88,530	8,346
Hybrids and others		1,500	...	...	...	...	5,000	...	6,500	
Total	847	41,316	142,900	42,208	202,226	614,451	716,400	1,087,637	2,847,138	677,35

Source: Madras Presidency Administrative report 1880-1881, Chief Secretary of Government, Fort Saint George., Madras, P. 113.

The first yield of the plantations was in 1872, when the trees planted at the commencement of the enterprise were twelve years' old. The outturn was 7,294 ½ pounds of dry bark which realized Rupees 7,294-8-0. The prices varied from 2s.3d. per pound to 2s.10d., or an average price of 2s. 6 ½ d., which must be considered satisfactory. A second consignment of 23,646 pounds of dry bark was made in the spring of 1873, which sold for Rupees 34,900. The average price realized was 3s. 2 ¼ d. per pound. The third consignment went to England in 1875. The

quantity despatched was 28,695 pounds, and sold for Rupees 28,659; the average price per pound was 2s.1d. the next consignment of 63,600 pounds was remitted last January and realized Rupees 96,039-2-8. In addition to the above the plantations furnished the Quinologist with 362,050 pounds of green or 111,481 ½ pounds dry bark, valued at 95,500 Rupees.



Statement showing the receipts and expenditure of the Government Cinchona Plantations, Nilgiris, for the official year 1882-83

Name of Plantation	Receipts		Expenditure						Grand Total of all expenditure	
	Budget Estimates	Total	Conservancy and works			Establishment			Budget Estimate	Total
Budget Estimate			Amount	Total	Budget Estimate	Amount	Total			
	RS	RS. A. P	R.S	RS. A. P	RS. A. P	RS	RS. A. P	RS. A. P	RS.	RS. A. P
Dodabetta	5,00,000	2,08,425 13 11	91,816	17,309 12 0	68,256 1 10	16,684	3,174 15 8	15,094 14 1	1,08,500	83,350 15 11
Naduvatam				32,944 5 8			3,778 8 10			
Pykara				13,230 14 11			1,440 0 0			
Office and General				4,771 1 3			6,701 5 7			

Source: Madras Presidency Administrative report 1882-1883, Chief Secretary of Government, Fort Saint George., Madras, p.103.

The following statement shows the receipts on account of the Government Cinchona Plantations, Nilgiris, for the official year 1883-84:

Particulars	Actuals for 1882-1883	Actuals for 1883- 1884	Sanctioned budget estimate for 1882-1883	Sanctioned budget estimate for 1883-1884	Remarks
	RS.A.P	RS.A.P	RS.A.P	RS.A.P	
Value of bark sent home (306 bales per Dacca).	97,684 6 0	18,142 10 2	5,00,000 0 0	...	1,492-19-9 at 1s. 7 ¼ d. per rupee.
Value of bark sent to Bombay Government.	...	1,740 0 0		...	
Value of bark sold locally.	1,06,396 0 1	55,896 10 5		97,600 0 0	
Sale-proceeds of seed and plant.	4,200 7 10	4,352 6 8		5,000 0 0	
Miscellaneous	145 0 0	208 12 0		...	
Total	2,08,425 13 11	80,340 7 3	5,00,000 0 0	1,02,600 0 0	

Source: Madras Presidency Administrative report 1883-1884, Chief Secretary of Government, Fort Saint George., Madras, p.78.



Convict Labour in India

Convicts constituted a highly mobile workforce that was vital to British imperial ambitions. Prisons were a good source of human resource for labour. The British Administration in India recognized the various benefits of employing prisoners for hard labour. Convicts were sent to work in the construction of roads, digging canals for irrigation and clearing river beds, plantation works. There were two main reasons for the Government using convict labour for public works and projects. The first and foremost was the economic factor it was more feasible to employ prisoners in those hard labour jobs which otherwise had a scarce supply of manpower. However, the legal reasoning for this was that convicts needed to be punished adequately and in accordance with their crimes.

By the 19th century, prison labour industries became highly productive and brought in substantial amounts of revenue. Many prisons became self-sufficient. Prisoners were exploited by the Government and treated as property.

Between 1789 and 1939 the British transported at least 108,000 Indian, Burmese, Malay and Chinese convicts to penal settlements around the Bay of Bengal and Indian Ocean, and to prisons in the south and west of mainland India. The large majority of these convicts were men; and most had been convicted of serious crimes, including murder, gang robbery, rebellion and violent offences against property. The British exploited their labour in land clearance, infrastructural development, mining, agriculture and cultivation. They also used them to establish villages and to settle land. Asian convicts responded to their transportation in remarkable ways. They resisted their forced removal from home, led violent uprisings and refused to work. They struck up social and economic relationships with each other and with people outside the penal settlements

By the middle of the nineteenth century, the British colonial regime had set up a web of overseas penal settlements in Southeast Asia and the Indian Ocean and, in addition to his responsibilities as inspector of mainland jails, Mouat oversaw the transportation of thousands of convict forced

labourers to Bencoolen, Mauritius, the Straits Settlements (Penang, Malacca, Singapore), and Burma.

Most of the prisoners were marched outside the prisons to various extramural sites to undertake clearing of forests, ravines, constructing and maintaining drains, sheds, bridges, clearing vegetation, clearing drainage of buildings, digging, masonry work and earthwork, construction and repair of prisons. Convicts were employed on municipal committees, barracks, artillery lines, and worked on gaol gardens as well. They were also employed in the magistrate's *cutcherry*. until the 1830s, prisons in Bombay Presidency had few places for correction. Most of the indoor labour was about maintaining prisons and providing for the prisoners working outside.

The inquiries of the Committee on Prison Discipline (1836–38) revealed indoor labour mostly comprised pounding *soorkhee*, making baskets, ropes and other things required by convicts on roads and inside. A few were employed in spinning thread, grinding grains, making mats for the use of prisoners, sweeping and washing the prison, clearing weeds and drains, drawing water from the well, attending to sick prisoners, assisting in the gaol hospitals and looking after the prison gardens.

By 1844, as David Arnold has pointed out, more convicts were working on the roads than were kept in the gaols of Madras. The British Raj came to rely on a system of transporting convicts, and others with indentured contracts, along with a system of apprenticeship for former slaves. Labourers were also sent under contracts of indenture to tea plantations in the Brahmaputra valley, and to tea and coffee plantations in Malabar and Madras Presidency.

Convict Labour in the Nilgiris

In the 1850s a group of skilled Chinese convicted prisoners landed in the Nilgiris after the second opium war also called Anglo – Chinese wars, involving British trade in opium in china and china sovereignty. Chinese convicted prisoners were also brought from the straits settlements of Singapore,



Malacca, Dinding and Penang. They were initially sent to the Nilgiris because of overcrowding in the Madras Jails. But later when it was discovered that they were good workers, they were put to work as the newly opened tea and cinchona plantations, as well as new construction which were coming up in the hills. However the Chinese convicted prisoners of wars during the Anglo-chinese war in 1864 was jailed in the prison and their incarceration marked a vital period at the pows were used to cultivate cinchona. Mainly the Chinese convicts labour from the British straits settlements were transported to British colonies as was the common practice. Another lot were Malay Chinese from straits settlement, consisted for either piracy or some other crime in Singapore or Malaya.

The arrival of the convict labors, Government Cinchona plantation works were begins at Nilgiri district. The employment of Convict labor in the Government Cinchona Plantations at Ootacamund. The Zillah Jail at Ootacamund as the place of confinement for the Chinamen among the convicts arrived from the Straits Settlements under sentence of transportation, and the Zillah Jail at Salem for the Malays and Bugis. The Straits convicts at present is the Penitentiary to Ootacamund and Salem. The case of the guard over the convicts employed on the Lovedale works. The Jail at Ootacamund is prepared to receive the Chinese convict. In the 31st March 1876, the cost of convict labor was Rupees 8,25,350.

Statement showing the number of convicts and Police Guards at each of the Hills Jails on the Neilgherries

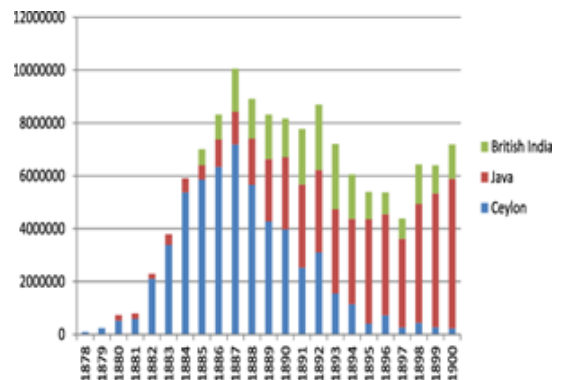
	Convicts	Jail Guard in the Hills of all grades		Jail Guards in Low Country of all grades		Difference
		NO	RS	NO	RS	
Kondall	62	12	1,788	9	980	808
Pykara	50	10	1,400	7	776	624
Doddabetta	81	15	1,866	12	1,400	466
Lovedale	340	70	12,126	50	6,732	5,394
Total	533	107	17,189	78	9,888	7,292
Deduct batta by the Lawrence Asylum work						2,760
Net Rupees						4,532

Source: G.O No 530, Dated 7th April 1866, Judicial Department, TNSA.

Export of Quinine from Nilgiri

With the efforts of Chinese convicted labours the total sales of quinine at the Naduvattam factory in Nilgiri District have risen from 234ib, and it is also being exported to malaria affected countries mainly in Europe and London. Cinchona plantations established in India and Ceylon have the potential to supply London with adequate amounts of bark (hence quinine).

According to the "League of Nations" Malaria Committee report, the world's annual production of cinchona bark is 11,666,000 kg 10,000,000, with the majority coming from the Dutch East Indies and slightly more than half from British India.



Source: Dethloff & Chinin, Studies in history and philosophy of biological and biomedical sciences, University of Utrecht, ISBN-13698486, p.28



Conclusion

This paper focuses the history of Cinchona plantations in India, especially in the Nilgiri district. The main goal is to show how convicts worked in different areas, including forest work, construction, plantation jobs, digging irrigation canals, clearing land, building infrastructure, mining, and farming. It also discuss the costs of using convict labor for Cinchona plantation. The history of convict labour in Cinchona plantations from 1859 to 1884, particularly in the Nilgiri district, provides a unique insight into the cultivation and expenditure on Cinchona plantations. As a result of the efforts of Chinese convict labour, the production of Cinchona bark was exported locally to the Madras Presidency and some parts of India from the Nilgiri district. and the quinine medicine produced in Nilgiris was exported to malaria affected countries. It is noteworthy that the quinine medicine exported from the Nilgiris played an important role in the treatment of malaria fever worldwide.

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