

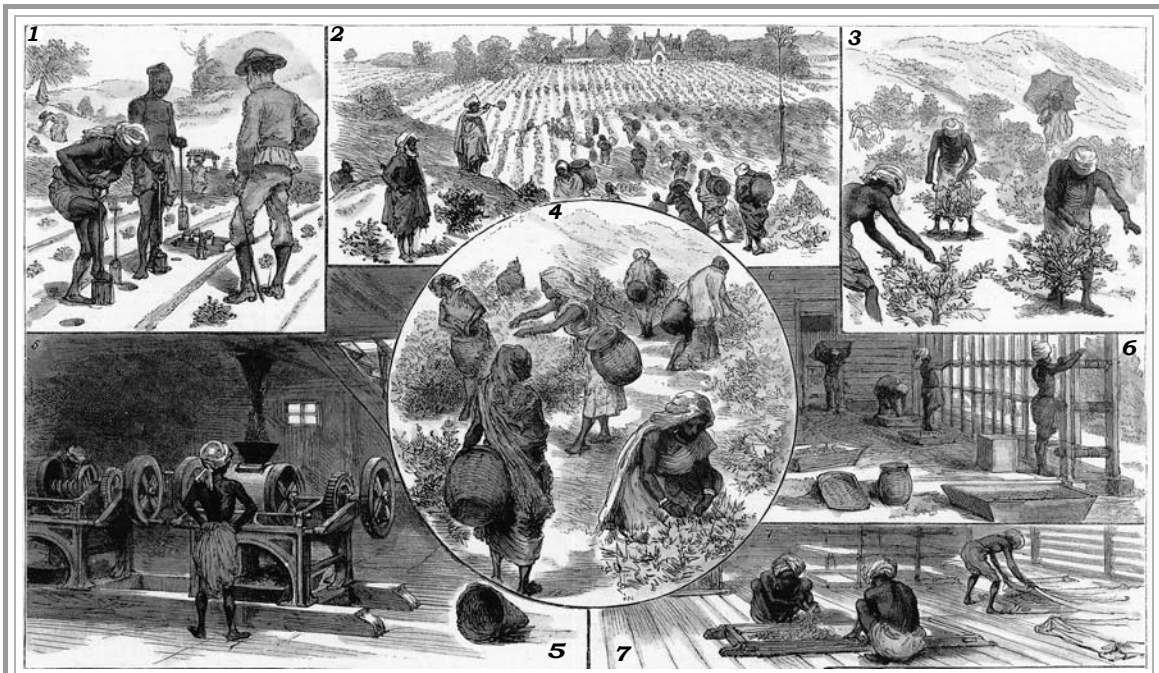
UPTON TEA QUARTERLY

Vol 20 No. 2

Holliston, Massachusetts

Spring, 2011

Reversals of Fortune in the Tea Industry Part XIX: The Early Years of Tea Production in Ceylon



THE TEA INDUSTRY IN CEYLON

No. 1 – Planter and Transplanter No. 2 – Roll Call at Blackburn Estate, Ambegamoia District
No. 3 – Pruning No. 4 – Picking Flush No. 5 – Rolling No. 6 – Withering No. 7 – Fermenting

from *The Graphic – An Illustrated Weekly Newspaper*, London, January 7, 1888

(The complete illustration appears on page 29.)

“Not often is it that men have the heart when their one great industry is withered to rear up in a few years another as rich to take its place, and the tea-fields of Ceylon are as true a monument to courage as is the lion at Waterloo.” Conan Doyle

According to D. M. Forrest, Ceylon once produced the world’s entire supply of cinnamon. Under Dutch occupation (1656 - 1796), the export of cinnamon was tightly controlled to support the high market price. When foreign competition from inferior cassia eroded prices, the Dutch augmented exports by developing coffee plantations. A century later, these plantations were replanted with tea.

Please turn to page 48.

Reversals of Fortune in the Tea Industry, Part XIX

By 1870, the British had proven that they could grow and manufacture tea on a commercial scale in India. Decades of hard work, overspending, and unfulfilled promises had left many doubters, who concluded that efforts to grow tea outside of China were doomed. But success finally came after the stubborn efforts to grow China varietals of *Camellia sinensis* in Assam were abandoned, and focus was redirected toward the indigenous tea plants (a.k.a. Assam *jat*).

It was widely recognized that the China plants had some distinct advantages over Assam plants, especially for the manufacture of green tea. Over the ensuing years, hybrids of Assam-China varietals would be developed in an effort to create high-yielding plants with the desirable characteristics of the China *jat*. In *The Cultivation & Manufacture of Tea* (published in 1878), Edward Money states:

The China plant makes by far the best Green Tea, and I believe the Darjeeling gardens would pay much better than they do if they altered their manufacture from black to green. ... All Himalayan gardens should, in my opinion, make Green Tea (Kumaon has awoken to the fact), for all have China plants, and can therefore make far better Green Tea than can be produced from the Hybrid which is so general in plain gardens.

Over the next century, growers in Darjeeling would develop a tea so unique in flavor and character that it would become known as the *Champagne of tea*. At its best, it is like no other tea in the world, and is prized by many over any other tea. That dedicated following has made the lower yields of China varietals pay off for Darjeeling, but the vast majority of new tea estates throughout India, Ceylon, Java, Indonesia and eventually Africa and the Western Hemisphere, would focus on Assam *jat* and Assam-China hybrids.

Assam tea gave the British a real advantage in building a tea empire. As we noted in *Part XVIII* of our series, the Dutch had some

success with China tea plants in Java over a century before the British succeeded in India. Ironically, just as commercial quantities of British tea were finally being produced, the Dutch government was divesting of tea. What remained of it in the 1860s was turned over to private enterprise at bargain basement prices. In *All About Tea*, Ukers states:

The second phase of tea's conquest of Java – the era of private enterprise – began in the years 1862 to 1865. Rid of its losing tea venture the Government turned with relief to the flourishing coffee industry, which was bringing handsome returns to the State, while the infant tea industry had caused a loss of over six million florins. Competition between the tea and coffee interests continued to be keen, and the men engaged in tea were looked upon askance when they petitioned for land having coffee possibilities. In this way tea was held in check for fear of the bad influence it might have upon the extension of its rival, coffee, and because it called for much more labor than coffee required.

According to Ukers, the number of Java tea plants shrunk from 20,000,000 in 1846 to 6,000,000 in 1870, from which only 800,000 pounds of tea were manufactured. This contrasts with a peak production of 2,000,000 pounds in 1860.

From the table below, we clearly see that British tea production lagged behind early Dutch efforts. But the British had greater motivation to succeed in tea. Discord with China over trade imbalance and opium had threatened Britain's only source for an increasingly popular beverage. The British also had Assam *jat*, which would prove to be their salvation. It would also eventually revitalize the Java tea industry.

British Tea Production in India			
Year	Estates under distinct proprietors	Acres under cultivation	Output of tea in lbs.
1850	1	1,876	216,000
1853	10	2,425	366,700
1859	48	7,599	1,205,689
1869	260	25,174	4,714,769
1871	296	31,303	6,251,143

D.R. Gadgil, *The Industrial Evolution of India in Recent Times*, Cambridge University Press, 1938

About the time that British tea production in India was beginning to eclipse that of the Dutch in Java, another phenomenon was taking place on the island of Ceylon (now Sri Lanka), during British colonial rule (1796 - 1948).

Formerly under Dutch rule, Ceylon had experienced similar European influences as did Java, including a propensity for coffee farming. Coffee was introduced to southern India and Ceylon by Arab traders prior to the arrival of Portuguese explorers in 1505, but no attempt was made to produce coffee on a commercial scale until the Dutch established the first coffee plantation in 1740. By the time the British took control of the island, there were a number of successful plantations in operation.

Under British rule, planting commenced at a frantic rate. So successful was the expansion that supply soon overpowered demand and by 1845 coffee prices collapsed, along with the value of plantation property. As with the "tea mania" that hit India fifteen years later, planters who speculated heavily with borrowed money were ruined, but those who were financially sound and able to weather the storm emerged stronger than ever.

According to Ukers, coffee became "king" in Ceylon "about 1864, and huge tracts of jungle in the Dimbula, Dikoya, and Maskeliya districts were being transformed into cultivated forests of young coffee trees." By 1875 production exceeded 100,000,000 pounds per year, and, for several years, Ceylon was the world's top producer of coffee. But even as production was expanding, a troublesome

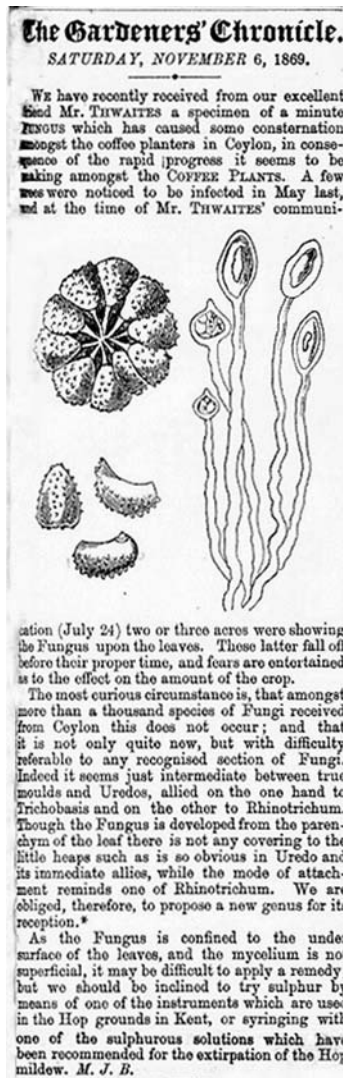
blight was affecting an increasing number of coffee plants.

Rusty spots started appearing on the underside of coffee plant leaves. The rusty spots spread from leaf to leaf and from plant to plant. Plants that appeared to be healthy one day would drop all of their spotted leaves a few weeks later and die.

Realizing that something dreadful was happening, growers called upon George H. K. Thwaites, director of the Botanical Gardens in Peradeniya (near Kandy) for assistance. Thwaites was no lightweight. He may not have been able to identify the disease that was killing the coffee plants, but he knew that it was extremely threatening.

Specimens of the spotted leaves were promptly sent to England for evaluation by the eminent mycologist, Rev. Miles J. Berkeley, who had correctly determined the cause of the infamous potato blight of the mid-1840s. It was not long before Rev. Berkeley realized that the rusty spots were caused by a fungus, but it was also identified as a fungus foreign to Ceylon and, for that matter, was unlike any known fungus.

In the November 6, 1869 issue of *The Gardeners' Chronicle and Agricultural Gazette* (see inset), Rev. Berkeley reported on his initial findings. As stated in his brief note, "The most curious circumstance is, that amongst more than a thousand species of Fungi received from Ceylon this does not occur; and that it is not only quite new, but with difficulty referable to any recognized section of Fungi." Berkeley and fellow mycologist C. E. Broome named this new fungus *Hemileia vastatrix*, which trans-



lates to Half-smooth (for its appearance) devastator (for its lethal effect). The enemy had been identified, but nobody knew how to fight it.

Hemileia vastatrix is believed to have originated in Africa, where *coffee rust* was first identified in 1861. It was likely transported by wind, or perhaps aboard trading ships. Within a few years this new fungus would be found in India, Sumatra, and Java, where its devastation continued unchecked. Outbreaks of *Hemileia vastatrix* hit Brazil in 1970. According to Nicholas P. Money (*The Triumph of the Fungi -- A Rotten History*), *Hemileia vastatrix* "has now caused disease in every coffee-growing region except the Hawaiian Islands."

Ceylon coffee growers fought *Hemileia vastatrix* in every conceivable way. Infected plants were burned. New sulfur-based fungicides were applied, but invariably infestations returned. In *A Hundred Years of Ceylon Tea*, D. M. Forrest states:

From the moment of its initial appearance the spread seems to have been rapid. Within five years every coffee-growing district in Ceylon had become affected and within ten the average yield per acre had declined from 4.5 cwt. to 2 cwt. In 1880 it was made the subject of 'one of the earliest scientific investigations of a plant disease...'

But in spite of the scientific focus on the problem, no solution was found for the epidemic. At the same time, the inevitable shortage of coffee brought better prices in the market, and many growers decided to simply expand planting to new fields, hoping that the blight would pass. It did not. Plantation owners who stayed in coffee were eventually ruined. In 1892, the Oriental Bank, which was heavily invested in coffee, collapsed.

Hemileia vastatrix brought devastation wherever coffee was planted, but tea plants seemed to naturally resist the fungus. Some benighted growers, refusing to give up on coffee, even thought that planting tea next to coffee plants might actually ward off the fungus. The smarter planters threw in the towel and turned exclusively to tea.

D. M. Forrest, who refers to *Hemileia vastatrix* as the "patron saint" of Ceylon tea, implies that without the devastation of *Hemileia vastatrix*, there would be no Ceylon tea. Although this seems rather bold, it is clear that the explosive growth of the tea industry in Ceylon during the late 1800s was facilitated by the plight of the coffee growers.

According to Ukers, "it was in 1875 that the first thousand acres of old coffee land was planted in tea." The total area devoted to tea on the entire island in 1875 was only 1,080 acres, so it is readily apparent that from the onset, the majority of tea production was on devastated coffee lands. One might say that *Hemileia vastatrix* "cleared the land" for the new tea estates.

The last quarter century of the 1800s would be an explosive period for British tea. The most capable botanists, engineers, industrialists, and marketers all took advantage of the opportunity at hand. New hybrids were developed for expanding plantations, to be processed on faster and better machines that would turn out larger quantities of tea that could be marketed at very low prices.

The chart below illustrates the rapid growth in British-produced tea between 1883 and 1889. The year 1887 is highlighted to emphasize when British imports of British tea first exceeded imports of China tea.

U.K. Imports of Tea (pounds)			
Year	China	India	Ceylon
1883	111,780,000	58,000,000	1,000,000
1884	110,843,000	62,217,000	2,000,000
1885	113,514,000	65,678,000	3,217,000
1886	104,226,000	68,420,000	6,245,000
1887	90,508,000	83,112,000	9,941,000
1888	80,653,000	86,210,000	18,553,000
1889	61,100,000	96,000,000	28,500,000

John Weatherstone, *The Pioneers*, Quiller Press Ltd, 1986

Our series on *Reversals of Fortune in the Tea Industry* will continue in the next issue of the *Upton Tea Quarterly*.