BOOKS: HISTORY OF SCIENCE

Dreams of Arctic Tea Plantations

Londa Schiebinger

It is commonplace to celebrate the botanist Carl Linnaeus (1707–1778) as the inventor of binomial nomenclature and the founder of modern biological systematics. In his life, he was the first naturalist knighted with Sweden's Order of the Polar Star, which he regarded as his greatest distinction. A century after his death, he had become a national icon.

Linnaeus
Nature and Nation
by Lisbet Koerner

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Lisbet Koerner's fine biography, however, reveals a very different man. Linnaeus attempted to defraud the Uppsala Science Society by doubling his expenses for field work in Lapland (he even drew a map with lengthy and fictive travel routes). He anonymously wrote glowing reviews of his own books for Stockholm newspapers. He too easily took credit where credit was due others—never, for example, properly acknowledging the French botanist Sébastien Vaillant's contributions to his own theory of plant sexuality. Finally, and poignantly, Koerner portrays Linnaeus as a man who failed at his lifelong goal of making Sweden economically self-sufficient through the science of natural history.

Koerner's important and arresting thesis is that Linnaeus saw his taxonomic innovations as secondary to his economic program. Natural history was to serve the Swedish fatherland. By 1721, Sweden's dreams of amassing a European land empire of Baltic states had been shattered. Unlike Portugal, Spain, England, and France, Sweden had no colonies with which to finance an aggressive program of international trade and global expansion. It had only the cold and largely barren Lapland. Linnaeus saw its national salvation in the exact study of nature. Hypothesizing that plants were globally adaptable, Linnaeus hoped that he could "fool," "tempt," and "train" tropical plants to grow in Arctic lands and thereby create "Lapland cinnamon groves, Baltic tea plantations, and Finnish rice paddies."

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Linnaeus's goal was to staunch the flow of bullion to Asia by growing within Sweden's borders plants used for luxury items and costly medicines, including coffee, mulberry trees for silkworms, cotton, rhubarb, opium, and ginseng. He also hoped to overcome Sweden's devastating famines by finding new indigenous plants—fir bark, seaweed, burdock, bog myrtle, or Iceland moss, for example—that could enhance foodstuffs for peasants. In order to gather useful plants from around the globe, Linnaeus prepared a generation of students to travel as botanists aboard the ships sent out by European East and West Indies companies and scientific academies. Closer to home, he required that all future parsons and missionaries (known to threaten to bleed their charges into conversion) attend his natural history lectures at Uppsala so they too could collect for the Swedish Royal Academy of Science.

Northern traveler. Martin Hoffman's 1737 portrait of Linnaeus "in a Lapp costume."

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Koerner tells the intriguing tale of the many economic schemes of this parson's son. One such scheme—designed to profit him personally—involved cultivating pearls. Employing techniques he had read about in reports from China, Linnaeus learned to bore a hole through a shell, insert a granule of chalk or gypsum that would irritate the bivalve, and repatch the shell. After experimenting with mussels in streams flowing through Uppsala, Linnaeus displayed nine small pearls to government ministers in 1761. The government purchased a manual revealing his secret techniques for 6000 silver thalers and the right to appoint his academic successor at Uppsala University (he would choose his son). A Gothenburg whaler was given Linnaeus's manual and a perpetual monopoly on pearl production (subject to a 50 percent state tax). But in the end, pearls never were cultivated in Sweden. The "father of modern taxonomy" also overestimated the ease of domesticating tropical plants in the environment of the far European north.

Linnaeus: Nature and Nation is vivid and engaging, and, like all biographies, necessarily selective—sometimes awkwardly so. Koerner does not analytically engage Linnaeus's notions concerning plant sexuality, even though Linnaeus's contemporary Julien Offray de la Mettrie found them bizarre enough to warrant a pornographic satire. Despite her efforts to understand Linnaeus as he understood himself, Koerner does not explore his notion that nature divides into male and female principles, which he himself considered his masterpiece and greatest contribution to medicine. Nor does she discuss the gendered dimensions of important innovations in nomenclature, such as his coining the term "mammalia" in 1758.

Nonetheless, this is a useful and timely book. In addition to her many insights and careful reporting, Koerner (a Swede herself) serves as a conduit for much excellent Swedish scholarship on Linnaeus, studies little known to English speakers. Her insight that what we today call economic botany drove Linnaeus's celebrated taxonomy buttresses current efforts to rewrite the history of botany. A longstanding narrative in the history of that discipline has emphasized the rise of modern botany as the rise of taxonomy, nomenclature, and "pure" systems of classification. Whatever validity there is in such a claim today, it does not capture the realities of botany in the 18th century. Botany was big business; it was also important militarily and strategically for positioning emerging nation states in global struggles for land and resources. This book contributes to the important task of reinstating economic botany to its proper place in history.