Walter Klyshevich

Hist 498C

Professor Blakley

16 December 2021

*Hortus Malabaricus*

During the 17th century, the medical knowledge of Renaissance Europe was not all encompassing, as new discoveries were being made by explorers all around the world. Many countries had their own local medicinal practices that remained undocumented and practiced among themselves until discovered by outside forces, and then added to the greater global information archive for medicine. India was one such place with a rich, undocumented collection of plants that contained great potential medical value, and Dutch Malabar would provide the point of exploration for the *Vereenigde Oost Indische Compagnie*, or Dutch East India Company (hereafter referred to as VOC), to begin compiling a list of these plants, the resulting documentation being the *Hortus Indicus Malabaricus,* more commonly shortened to just *Hortus Malabaricus.* The *Hortus Malabaricus*, meaning “Garden of Malabar”,is a medical treatise written in the mid 17th century and published between 1678 and 1693, which provides an account of the flora found along the Malabar Coast in southwestern India. Upon its completion, Europe had the first and most extensive account on foreign medicinal plants that greatly furthered the field of botanical science, going on to influence figures like Carl Linnaeus to make their own contribution to the sciences. Curiously, the one area that seemed to be excluded from the benefits of this writing was Malabar itself, unable to preserve their own medical knowledge and not receiving a translated version of the treatise until the 21st century. Despite the benefits South Asian medical knowledge provided Europe, the rise of global commerce as well as the structure of Indian society created a disparity between how information was shared between the two worlds.

The *Hortus Malabaricus* was written by a Dutch officer named Hendrick van Rheede, who also served as the governor of Dutch Malabar during this time, and had no training in the field of science. Instead, he had a strong interest in natural science, and the assistance of several native informants whose roles in the compiling of plant life cannot be overstated. The *Hortus Malabaricus* contains over 700 examples of plants with useful medicinal properties, of which had only been known to the local population of Malabar and had yet to be discovered by the European medical community. In this way, Van Rheede’s treatise provided incredibly valuable reference to plants that could make new and effective medicines throughout Europe, and would be referenced in the far future from medical researchers around the world.

Hendrik Adriaan van Rheede tot Drakenstein was born in Amsterdam on April 13, 1636 to a noble family with strong political involvement within the province of Utrecht. He would end up losing both his parents at a young age, his mother in 1637 and father in 1640, and enlist as a soldier for the VOC at the age of twenty. Throughout his travels as a soldier, Rheede became increasingly interested in natural history after being exposed to the exotic plants of South Africa, the Dutch East Indies, and Ceylon.[[1]](#footnote-0) He would move on to quickly rise through the ranks and become Commander of Malabar, establishing cordial relationships with the local Raja of the port town of Cochin, Vira Kerala Varma.[[2]](#footnote-1) One of the striking traits of someone in Rheede’s position was his genuine interest in the natural environment of Malabar, as one would have to have in order to put as much work into writing his treatise as he did, which he expands upon in the following excerpt:

“...on the way I observed large, lofty and dense forests...it was often very pleasant to behold one tree, leaves, flowers and fruits of ten or twelve different kinds displayed. And yet they did not harm this tree in any way so that the trunks of such trees were very close to each other and very thick, or at all events they lifted their heads in air to an elegant height of as much as eighty feet...and thus these forests resembled a house of a very elegant structure rather than virgin forests…Since I perceived all this repeatedly, this had led me believe that I judged not without reason that this part of India was truly and rightly the most fertile part of the whole world…”[[3]](#footnote-2)

This would seem like an appropriate response for someone who had not been exposed to the types of flora found on the coast of Malabar, but Rheede would take it a step beyond passive interest, attempting to learn more about its native inhabitants as well. Of the Konkani people, who were located around Southwestern India, Rheede took a specific interest in, referring to them as the happiest of men and not weary of travelers while never straying too far from their native land.[[4]](#footnote-3) As the governor of Malabar, Rheede’s main duty was to defend the area against competing European companies and powers, as a few years earlier he played an active role in repelling Portuguese attacks and securing Malabar for the VOC. Taking advantage of the power of this position, Rheede began compiling information on the plants of Malabar alongside his administrative duties, and soon would be inspired to create a formal treatise on his findings. The inspiration for the *Hortus Malabaricus* would come from two sources, one from a missionary named Matthew of St. Joseph, and the other from German naturalist Paul Hermann. In the case of Matthew, he compiled his own illustrated manuscript of medicinal plants called the *Viridarium Orientale*, which Rheede used as the first draft of the *Hortus Malabaricus*.[[5]](#footnote-4) Hermann contributed as well to the future drafts of Rheede’s treatise, having done similar research of medicinal plants in Ceylon, or British Sri Lanka, and eventually opening a botanical garden in the Netherlands. Van Rheede would employ over 200 knowledgeable local collectors to supply him with all sorts of vegetation such as leaves, twigs, and flowers to be examined and later illustrated. Of the compiling and organizing process of the Malabar flora:

“Van Rheede hired draughtsmen to sketch precise images of the seeds, flowers, fruits, leaves, stems and roots of the plants and trees. Men in Malabar who spoke Portuguese and Malayalam, Konkani and Dutch, and those with knowledge of Latin and Arabic, were gathered, and through a complex system of translation and transliteration, all possible information on the name, characteristics, growing seasons and medicinal values of the plants and trees was written down. All plants were described and illustrated with their local Malayalam names, written in Roman, Malayalam and Arabic scripts. In most cases, their Konkani, Portuguese and Dutch names are also given.”[[6]](#footnote-5)

After a little over two decades spent living in Malabar and other regions in Asia, Van Rheede returned to the Netherlands to begin organizing and publishing his findings, the first two volumes becoming widely available in 1678 and 1679. After renewing his publishing contract in 1681, a third volume was released, speaking more on his feelings toward Malabar and the people who assisted him in his research[[7]](#footnote-6), and would eventually return to the East in 1684 at the command of the VOC. He would continue collecting and researching botanical objects and information until his death upon a vessel off the coast of Bombay, most likely due to illness of some sort, in 1691. Due to the scope of his research, including “the plants and seeds Van Rheede had sent to Amsterdam along with his original extensive notes and drawings he had collected”[[8]](#footnote-7), nine more volumes of the *Hortus Malabaricus* were published in 1693, completing the twelve volume set. At the time of its release, the *Hortus Malabaricus* was unmatched in its scope and contents compared to contemporary writings, and was a substantial contribution to the field of botanical science in Europe.

Malabar itself was made up of several states, including the major port city of Cochin, Cannanur, and Travancore, and is home to an incredibly diverse group of people who cover a wide spectrum of languages and creeds. Their first serious trading relationship with Europe began with the arrival of Portuguese explorer Vasco da Gama in 1498, and would later change hands due to their defeat at the hands of the Dutch. The interaction between the natives of Malabar and Dutch officials was essential to the compiling of plant species for research, and Van Rheede spent time developing a cordial relationship with local doctors and herbalists to pursue this goal. Van Rheede’s main informant in Malabar was a *vaidya*, or traditional doctor, named Itty Achuden, along with three other priest physicians known as Vinayaka Pandit, Ranga Bhatt, and Appu Bhatt.[[9]](#footnote-8) Achuden came from a high caste and family who were practitioners of medicine and well regarded within their community, keeping an archive of useful plants and herbs with medicinal value. The people of Malabar passed down and exchanged information orally, but Achuden had inherited and amassed an archive of manuscripts written on palm leaves, “in which were recorded names of medicinal plants, methods of preparation and application of drugs and the illnesses for which they were used.”[[10]](#footnote-9) While Achuden provided the bulk of the information to be used by Van Rheede, it was put through a process of rigorous peer review and verification from the three aforementioned physicians, until a version for the final draft was agreed upon.[[11]](#footnote-10) Aside from his contributions to Van Rheede’s research, little is known about the life of Achuden after the treatise was published, and unfortunately his palm leaf manuscripts did not survive the test of time. With the loss of the original archives, as well as the oral tradition being the main mode of communication among the physicians, the only source of information on the medicinal plants of Malabar was the *Hortus Malabaricus.*

Although the *Hortus Malabaricus* was made up of South Asian plants and information, its organization and style were distinctly European. Van Rheede does credit Achudan and other informants for much of the information gathered, but due to the oral tradition and lack of an adequate classification system, the only thing tying the contents of the treatise to Malabar were their names. This remarkably leads to Malabar being excluded from the benefits that Van Rheede’s life’s work would provide for Europe, which is the result of a multitude of reasons that go beyond imperial negligence or malice.

At its core, the structure of Malabar and Indian society was fundamentally different from Europe, especially when concerning the transfer of knowledge and information. The caste system within India was by and large the largest separating factor from its western counterparts, as well as a roadblock for the accessibility of information. Itty Achudan, the biggest contributor to the *Hortus Malabaricus,* was in possession of as much information as he had due to the good fortune of his family, stated by K.S. Manilal: “He belonged to the Ezhava caste, who were then treated as untouchables by the Malabar Hindu community.”[[12]](#footnote-11) The research and development of medical knowledge was entirely centered around this class system, as detailed by the following excerpt:

“Malabar’s upper castes, Brahmins and Nayars, lived in extended family homes spread out over the cultivated countryside, from which wealth, and therefore power, was derived. Despite political conflicts among the fragmentary states Cannanur, Cranganur, Cochin and Travancore, which led to political and economic instability in the region, there remained a landed aristocracy of upper-caste families, with wealth, time and human resources to devote to the patronage and pursuit of learning.” [[13]](#footnote-12)

Not only was the pursuit of knowledge and academics a luxury afforded only to those of high caste, but there was little incentive to spread that knowledge to those outside of the immediate family. With knowledge being transferred orally it had potential to spread quickly to unwanted individuals or groups, as “knowledge was unevenly distributed within society; families and communities among the religious elites attempted to guard knowledge and reserve it for their descendents. Many influential groups recorded information in scripts and dialects which only a few people could understand”[[14]](#footnote-13). These measures taken to withhold as much information as possible eventually led to its loss, as over time the oral tradition failed to preserve what is now only found within the *Hortus Malabaricus.* Although Ayurvedic literature spans over a thousand years and includes information on countless medicinal plants, the social climate of Malabar and the rest of Europe did not succeed in preserving the original names and classification of plants according to Ayurvedic tradition.

Language also served as a major barrier that made the *Hortus Malabaricus* largely inaccessible to those in Malabar. Upon its completion it was written in Portuguese, translated to Dutch, then finally rendered in Latin to make it accessible to scholars all across Europe. Latin, however, was not the common language of scholars in most South Asian countries, and no translation was made for Malabar until 2003. This version was written in english and written by Kattungal Subramaniam Manilal, a taxonomist and botanist from Cochin, who devoted over 35 years of his life translating Van Rheede’s work. Manilal’s translation was extremely extensive, containing a verbatim translation with strict adherence to the writing style of the time, opting not to modernize it for the sake of preserving and analyzing a historical piece of writing.[[15]](#footnote-14) Manilal also went the extra mile to find the specific names of plants illustrated within the treatise, as just relying on pictures was inadequate in finding out the specific nomenclature. As a result, Manilal and his team physically collected all specimens cited within the *Hortus Malabaricus,* as was done by Van Rheede’s men a few centuries prior, and painstakingly examined all findings to determine their correct names.[[16]](#footnote-15)Manilal’s research and writing has not only done much for the preservation of an important historical document, as stated by Ram:

“Information on the medical uses of plants described in this book is of immense importance and current relevance, in the context of the growing global demand for natural drugs as well as the Intellectual Property Rights regime and Biological Patent Laws. By translating and interpreting this valuable document in English, Manilal has contributed significantly toward the safeguarding of our natural plant wealth and indigenous knowledge from being exploited by foreign commercial interests.”[[17]](#footnote-16)

It is strange to think that it took over three hundred years for a relevant translation to make its way to the site where it was sourced, and that along the way the original versions from the palm leaf manuscripts or the minds of the physicians have been lost to time, leaving us with an excellent but distinctly European interpretation of Malabar’s flora. The large gap in time has not only to do with the previously mentioned strict oral tradition, but more so with the relationship between the transfer of knowledge and its potential profit.

The disparity of wealth and power that existed between Europe and the rest of the world has sparked debate of the “Great Divergence”, or why Europe saw an exponential growth in economic power compared to places like South Asia. Oftentimes it has been used as an argument for European exceptionalism and the “unique trait of European intellectual curiosity”, disregarding the fact that this sort of knowledge was present among non European countries and civilizations for a thousand years prior.[[18]](#footnote-17) There have been many arguments against this notion of European exceptionalism, as historian Kapil Raj writes:

“The making of scientific knowledge [was a] co-constructivist process of negotiation between different skilled communities and individuals from both regions, resulting as much in the emergence of new knowledge forms as in a reconfiguration of existing knowledge and specialized practices on both sides of the encounter.”[[19]](#footnote-18)

With this information in mind, there is one cause that helps to explain the disparity between east and west in terms of the development of science, which is the rise of global commerce as a lucrative business. Van Rheede was without a doubt genuinely interested in natural science and the people of Malabar, but with that drive came an equal amount of ability to pursue it in a way only one with his position in the government could afford. His high social standing provided him with the means to carry out his research, but was simultaneously a costly endeavor due to the amount of manpower needed, meaning that the final product had to generate a profit. Book publishing was an incredibly profitable business in Europe, as information that was accumulated over the centuries was still accessible because of book printing[[20]](#footnote-19), and the sharing of knowledge gathered from around the world helped many scholars find new information and inspired them to present their own findings. Conversely, there was no book publishing business to speak of in Malabar, even something as simple as paper was not widely available until the second half of the 18th century, and even then would only be accessible to people who were able to afford it.[[21]](#footnote-20) The literacy rate was also a mere fraction of that in Europe, again owing to the caste system, the incentives of putting your knowledge down on paper or even learning to read was not incentivised at all due to the lack of any social mobility within your society. Essentially, Europe built its economy, as well as its empires, on the compiling and transfer of knowledge from around the world, while the South Asian world had not structured their societies on the same model, and remained separated from each other at the expense of their own accumulated knowledge.

The *Hortus Malabaricus* was an incredible feat for its time, and truly shaped the understanding and provided an excellent source for many future botanists and taxonomists to come. The efforts of one determined Dutchman, as well as the expertise of Konkani physicians and priests, resulted in the definitive archive of the medicinal plants of Southwestern India. What the *Hortus Malabaricus* also reveals, inadvertently, is that it was not a perfect way to preserve the exact knowledge that would have been traditionally held within Malabar. The realities of 17th century Europe and its effect on the world saw the botanical knowledge gained from Malabar quickly spread throughout Europe, while never making its way back to the people of Malabar. Rather than seeing it as a malicious attempt of the Dutch to strip away the medical knowledge of Konkani physicians for their own use, it reads more like an unfortunate result of two vastly different societies working toward a specific goal, but not quite following through in the sense of true preservation of ancient knowledge. It is difficult to say whether Van Rheede would have handled the distribution of Malabar’s plant knowledge more generously, as his untimely demise just 3 volumes into his work makes it impossible to know, or if the rigid caste system plaguing India’s society would simply not allow for the treatise to gain any traction. These days, due to the incredible efforts of K.S. Manilal and his team, The *Hortus Malabaricus* is available to Indian scholars in a way that not only benefits them and their studies, but the rest of the English speaking world as well. While not being an exact version of the contents of Itty Achudan’s ancient palm leaf manuscripts, the *Hortus Malabaricus* provides a snapshot for medicinal plants used by past civilizations for millennia, and continues to be useful to this day.

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