



Gardens of the Coromandel Coast: Landscape Considerations of Commercial Agriculture in Tamil Nadu, South India

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Accepted: 20 January 2021 / Published online: 7 April 2021

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Abstract

The plantation as a fusion of rural industry and commercial agriculture has become a shorthand for the the intensification of land-use, circulation of commodities, and the organization of labor concomitant with the modern world. While not the only place where plantations existed, the Atlantic is the context in which most archaeological research has taken place leaving untested certain assumptions about the development of the plantation. and the regions which informed its varied materializations in the modern world. By extending the the methods and approaches employed by archaeologists studying plantations to South India, we decenter plantation narratives and show how Indian Ocean commercial agriculture and rural industry also enabled the modern world. This article reports on results from the first phase of the Colonial Tharangambadi Archaeological Survey (CTAS). The goal of CTAS was to document changing settlement patterns, settlement organization, and material assemblage through a systematic landscape survey in the former Danish colonial enclave, Tranquebar (Tharangambadi). Specifically, we documented one South Indian settlement formation devoted to commercial agriculture called “gardens,” which has origins in the sixth century CE, or earlier, and how they were used outside the town’s walls in the eighteenth and nineteenth centuries. We argue that from historically distinctive agrarian facilities geared to commercial production, these plantation-like rural industries developed quite broadly using vulnerable labor to produce plant commodities in high volume for international markets. The particularities of

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plantation studies are enriched by considerations of parallel developments under similar conditions, as illustrated by India's lesser-known Danish colony.

Keywords Colonialism · Commercial Agriculture · South Asia · Plantations · Archaeological Survey · India

Introduction

In this article we make the argument that Atlantic World plantations did not develop in isolation, and understanding their particularities is enriched by consideration of parallel developments under similar conditions in South India. We make this argument based on results from the first phase of the Colonial Tharangambadi Archaeological Survey (CTAS). Encompassing approximately 29 km² and consisting of the port town, Tharangambadi, and 23 associated villages and hamlets, the enclave is located in the lower Kaveri valley, in the modern state, Tamil Nadu. As a reasonably compact yet economically diverse landscape Tharangambadi (Tranquebar), a port town that became a Danish colonial enclave in 1620, is an important site to document changes in land use, social roles, and economic arrangements in South India between the twelfth and nineteenth centuries CE (Hauser 2019). Through a systematic pedestrian survey, we mapped changes in landscape assemblages (for discussion of assemblages see Hauser, 2021) associated with commercial agriculture and rural industry on the Coromandel Coast. Specifically, we documented one settlement type devoted to commercial agriculture, called gardens, which has origins in South Asia, and how they became used between the seventeenth and nineteenth centuries.

Here we use the term “garden” to refer to a commercialized agricultural endowment that was a combination of fields, infrastructure and people. Garden, (also *Jardin* (fr.) and *Have* (dn.)) is a contemporary and colonial translation of the Tamil term, *Thōttam*, which was used as early as the sixth century to describe one of many different agricultural settings south India. As a setting they were an assemblage of biota, land types, buildings, and landscape features. As such, their material record is reflected through archaeological features, including surface deposits of artifacts, architectural remains, water features, and landscape modifications. Gardens were also an assemblage of people with conditions of labor premised on asymmetrical relations of power. Accordingly, there is differential preservation of the material remains associated with people who lived and labored on them. Highly visible foundations of elite residences overshadow less visible ground scatters where humbler homes, made of less-durable materials, were located. Importantly, gardens serve as an interface between larger contours of political economy and the scenes at which everyday life played out. From the sixth century CE onwards epigraphical records on garden lands disclose practical, material, and social consequences of political impositions from local, regional, and imperial governments, in South Asia and Europe, highlighting how individuals, households, and local cultural institutions succeeded or failed to these impositions.

The focus on commercial agriculture, its potential for multiscale analysis, and its assemblage-like landscape provide a seemingly comparable frame of analysis to plantations more widely studied in the Atlantic world. The similarities between gardens and plantations are not just on the surface. From historically distinctive agrarian facilities

geared to commercial production, plantation-like rural industries developed quite broadly using vulnerable labor to produce plant commodities in high volume for international markets. Elaborating on existing land practices, labor regimes, and landscape categories was key to success in eighth-century commercial agriculture and rural industry.

Decentering Atlantic World in Commercial Agriculture

The *plantationocene* has been defined as a period characterized by the “transformation of diverse kinds of human-tended farms, pastures, and forests into extractive and enclosed plantations, relying on slave labor and other forms of exploited, alienated, and usually spatially transported labor” (Haraway 2015, f5). During this *plantationocene*, agricultural facilities and their workers constitute plantations devoted to commercial agriculture, as an assemblage of plants, people, technologies, and animals became increasingly valued for their global relations, rather than more intimate ones with devastating effects. Importantly how workers are made vulnerable through their labor is an important consideration in plantations as productive systems. Recent discussions criticize agricultural investment in palm and rubber plantations resulting in the degradation of productive soils, loss of access to land on the part of people who traditionally made a living on it, and a dramatic change in livelihoods of workers (Li 2018; Obidzinski et al. 2012).

With its focus on landscape palimpsests and long-term shifts in the material record, archaeology can contribute to a heterogenous understanding of how such formations emerge pushing back against dominant narratives. With a few important exceptions, most archaeological discussions of Caribbean plantations have focused on Anglophone colonial settlements after the mid-eighteenth century (Kelly 2009). Many of these discussions rely on a long-established narrative that Atlantic-world plantations developed along distinctive routes beginning in the Mediterranean, Madeira, Brazil, and then the Caribbean (Mintz 1985; Tomich 1994). Subsequently, they became important around the Indian Ocean (Manjapra 2016; Reddock 1985; Vaughan 2005). But to paraphrase Braudel’s (1995) argument in *The Mediterranean and the Mediterranean World*, there are many Atlantics, and none could be understood independently from what is exterior to these worlds. Rigid adherence to boundaries falsifies the social relations which emerge in and around it.

Rather, we adapt Sanjay Subrahmanyam’s (1997:735) argument that the modern world with the central place of plantations was formed through connected histories, in which “different sources and roots” brought about “many different forms of meaning it attends.” Importantly, such an approach decouples the modern world from a particular European trajectory (Subrahmanyam 2002). Indeed, archaeologists working in sites connected by Pacific, Indian, and Saharan trade systems have challenged the premise upon which much modern-world archaeology has been practiced in the Atlantic. Archaeologists working in East Africa and California have troubled periods upon which such narratives of the modern are structured (Lane 2016; Lightfoot 2005; Schmidt 2016). Others have looked to agrarian landscapes and how everyday ecologies shaped over centuries shaped political engagements with Spanish colonialism in the Pacific and South America (Acabado 2017; VanValkenburg 2017). Still, others have emphasized the customary paths through which trade goods become part of the

archaeological record (Stahl 2002) and the role of local actors in shaping that record (Silliman 2014; Voss 2008). While many of these insights have been considered in the Americas (see Cobb 2019; Hauser and Armstrong 2012), few have been applied to the study of the plantation itself.

Such challenges are not new to archaeology or the study of the Indian Ocean. The problematic privileging of European predominance in the colonial period has parallels in the Early Historic (300 BCE–300 CE) discussions of “Roman trade” in India. Historians and archaeologists concerned with the framing of South Asia have been careful to chart connected histories which challenge epochal framings such as “historical,” “medieval,” and “early modern” that can simultaneously introduce confusions and dismiss the complexity, nuance, and agency of actors in the Indian Ocean. Many scholars have argued that an Indian Ocean-focused perspective is equally, if not more, productive. Here Indo-Roman interaction between the 1st centuries CE and BCE is elaborated between the ninth and sixteenth centuries to include the Pacific, Asia, and Africa. By the time South Asian textiles, Chinese Porcelain and South East Asian spices are circulated in the Atlantic world, the Indian ocean trade circuits reach their apogee through European intermediaries. Such scholars have argued for expansive definitions of modernity that move beyond the narrow framings grounded in European hegemony. In this article, we place these two impulses in conversation, along with their modes of inquiry, in the investigation of a South Asian landscape of commercial agriculture and rural industry.

As an underexplored region in the archaeology of the modern world, South India acts as a counterpoint to what Michelle-Rolph Trouillot (2002) called North Atlantic universals, or stories that Europeans tell themselves about the progress of humanity. Scholarship on the eighteenth–twentieth-century Coromandel coast also raises concerns about the centrality of Europe in the emergence of the constellation of traits that mark plantation capitalism, including the degree to which rural industry and agricultural commerce were controlled through markets (Subrahmanyam 1990). Narratives that concentrate on the emergence of modern trade systems and nineteenth-century imperial regimes trace the flow of capital and commodities yet fail to adequately explain the substantive and material contributions of local merchants who took on extraordinarily large roles in shaping interregional commerce in foodstuffs, textiles, and bullion (Stephen 2014). Europeans seem anachronistic avatars, rather than actors also vulnerable to viscidities of political alliances and changes in the economic winds. Conversely, archaeologists have stressed a history where diverse communities, subject to polities exercising power on regional scales, were commercially interconnected to distant shores (Gurukkal 2016; Rajan 2019) and were preternaturally cosmopolitan (Selvakumar 2015, 2017), rather than expand upon the substantive and material transformations of economic arrangements between the late eighteenth and twentieth centuries. Rural industry and commercial agriculture of crops such as rice and cotton provide an accessible and material means through which to document the political and economic transformations.

Commerce, Danes, and Gardens on the Coromandel Coast.

While most histories of Tranquebar begin in 1620, when the Nayaka of Thanjavur, permitted the Danes to establish a fort near a Masilamaninathar temple north of the major port city of Nagapattinam (Fihl 2009), a focus on commercial agriculture and rural

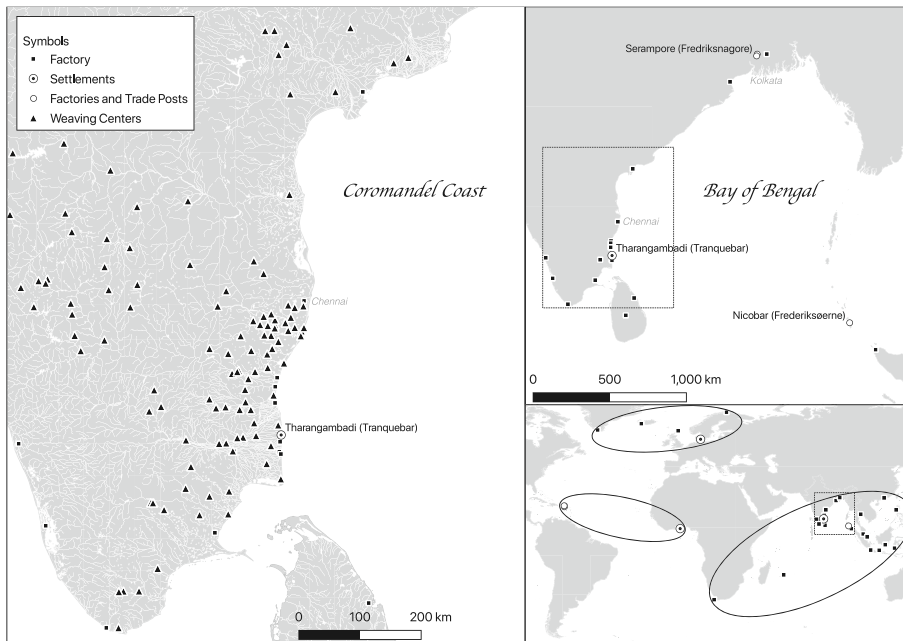


Fig. 1 Locations on the Coromandel Coast described in text; Locations of Danish settlements and factories in the Indian Ocean; Location of Company Headquarters and outposts in the Danish Early Modern world

industry shows a deeper history. The name of the region in which it is located is Coromandel Coast. This is a term used on early modern maps to denote a region extending from the Lower Kaveri delta to the Krishna River where existing commercial agriculture and rural industry became important to European colonial efforts (Fig. 1). To be clear, Europeans did not develop these trade routes; rather, they tapped into existing networks of commerce and industry.

South India was a node in long-standing and robust trade networks, a site of intensified agriculture, and the location of polities exerting influence on a regional scale. Ports in the lower Kaveri valley, including Kaveripumpattinam (Poompuhar) and Nagapattinam, were important links between peninsular India and Southeast Asia, China, Sri Lanka, and West Asia. Epigraphic and archaeological evidence indicates that communities settled in the region were engaged in widespread patterns of commercial agriculture and rural industry beginning in the late historic and continuing through to the early modern periods (Arasaratnam 1986). Cotton and silk textiles were among the chief industries that fed this trade (Ramaswamy 2006). This southern portion of the Coromandel coast became a dense location of European commercial enclaves between the seventeenth and eighteenth centuries. Many of these commercial settlements were strategically located to take advantage of changes in the early modern period and engage with a range of Indian Ocean political and economic actors (Subrahmanyam 1989).

The enclave that would become the Danish enclave is an important place to document changes in land use, social roles, and economic arrangements (Fig. 2). It is on the southern end of the Coromandel Coast and straddles the Porayār estuary that is referred to locally as the Uppanuru River. Classic Tamil poetry locates a port town in the enclave in the early historical period (ca. 300 BCE – 300 CE) (Subramanian and

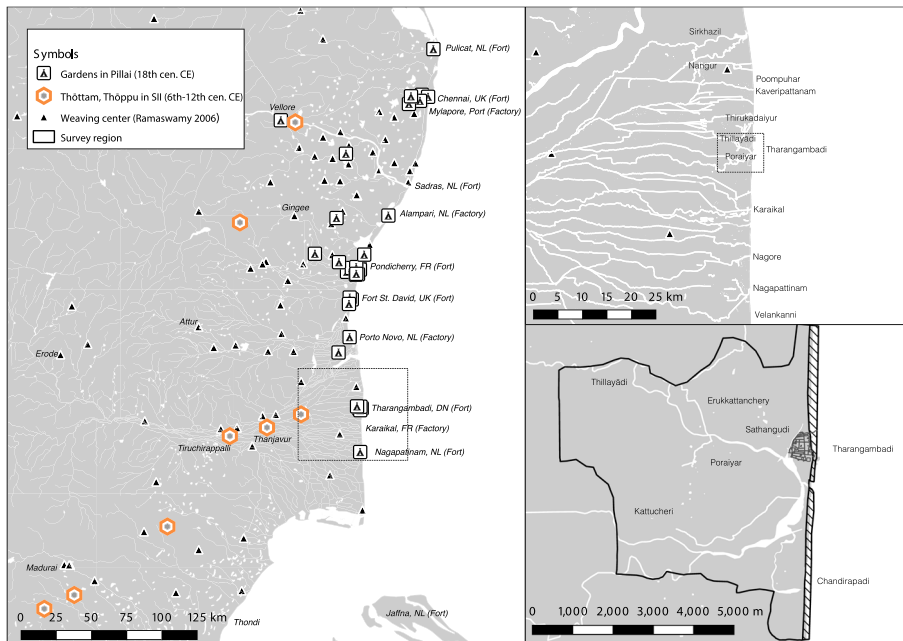


Fig. 2 Locations in the vicinity of Tharangambadi; Survey Area including survey blocks described in text

Kannan 2003). Two key Chola-period temples in Thillayādi and Thirukadaiyur (Nilavendan 2016; 22) and Masilamaninathar temple built in 1306 (Saranathan et al. 2011) document the commercial and political significance of the enclave between the eighth and fifteenth centuries CE. Bronze images found in Tharangambadi and now housed in the Danish National Museum speak to the presence of political and commercial elites who mortgaged regional and interregional networks and patronized arts (Randsborg 2001). Settlements from its hinterland, including the weaving village at Nangur, have been reliably dated to the second century BCE and functioned through their long histories as commercial centers and weaving villages up through the commercial period (Selvakumar et al. 2021).

Danes in the Indian Ocean

Denmark would be one of several European nations that vied for South Indian trade between the seventeenth and nineteenth centuries through its colonial enclave in Tharangambadi (see Fig. 1). Similarly, Tharangambadi would be among the first of many of Denmark's colonial outposts outside the North Atlantic that would eventually include holdings in the Virgin Islands in the Caribbean, the Gold Coast in West Africa, and the Northern Atlantic (Feldbæk 1986). While these regions have been traditionally dealt with as distinct constellations, they were interrelated through the flow of commodities, people, and biota and can be used in programs of research whose goal is to decenter the Atlantic (Hauser 2019; Nordin 2020). Tharangambadi served as the Danish East India Company's headquarters for their interests on the Coromandel Coast and the broader Indian Ocean including factories in present-day Kerala, Sri Lanka, Indonesia, the Philippines and Malaysia (Diller 1999). By the eighteenth century,

colonial possessions grew to include Serampore, in present-day West Bengal and the Nicobar Islands. These colonial endeavors were not unimportant to the Danes, as Serampore College founded in 1818 would be Denmark's second oldest institution of higher education after University of Copenhagen. The Nicobar Islands continued to be a location of many planned attempts at settlement. These enclaves remained under company rule until 1775 when all of the company's holdings became a Crown Colony. By 1850, it had sold its Indian possessions to the United Kingdom, save the Nicobar Islands which were relinquished to Great Britain in 1868.

While not the dominant mercantile power, the Danes played an important role in the development of Indo-European relations in the region. Tharangambadi was a resource for humans, textiles, and grains, and a potential market for goods made in other parts of the Danish and Dutch East India companies (Arasaratnam 1986; Raychaudhuri 2013; Struwe 1952). Goods circulated through the Danish East India Company included salt, rice, and cotton textiles for the Atlantic as well as metals including lead and silver for Indian Ocean markets (Feldbæk 1986; Glamann 1960). Commodities and people would be traded for cloves, sandalwood, pepper, and ginger from Malabar, Sumatra, Java, and the Celebes, and cowrie shells in the Isle de France (Göbel 1991: 51; Heimann 1980; Subrahmanyam 1989). Importantly cloth and rice were either acquired from dependent villages, including Thillayādi and Porayār, or through country trade from markets on the Coromandel Coast and Serampore in Bengal (Feldbæk 1991: 101). As such, the enclave was important to the Thanjavur ruler (Fig. 3). They bolstered his own political interests, provided new markets for grain, infused his coffers with silver, offsetting an imbalance of trade and power that had developed between local merchants (Arasaratnam 1986). However, to identify this as a convivial relationship



Fig. 3 Picture of the north façade of the Brihadeeswara Temple in Thanjavur with a closeup on a relief depicting a European merchant, most likely Danish (Nanda et al. 1997). Photograph by Author

that benefited all would be to elide many of the ruptures and conflicts that did emerge between Thanjavur and the Danes.

To be clear, Danish commercial networks were not necessarily “Danish.” Historians have noted that Asian merchants continued to play an outsized role in trade between weaving centers, company stores, and ports in and beyond the Indian Ocean (Subrahmanyam 1990: 81). Complex patterns of investment and debt, as well as the presence of interregional patterns of trade in surplus foodstuffs such as rice, did not emerge as the result of European engagement but were largely controlled by local merchants throughout the colonial period (Subrahmanyam 1990). One member of the Komati merchant community, Sunkar Rama, was a textile trader providing “guinea cloth” and salempouris. He gave cash to bleachers and washers to purchase rice for making conjee (rice starch). His ship also traded annually with Manilla in the Philippines, exporting textiles and importing silver (Stephen 2014: 149). When the Danish attempted to enter the lucrative Manilla trade they did so with a ship that was formerly registered to a Muslim merchant with cargo provided by a Chettiyar Hindu (Mukherjee 2020).

That being said Europeans, the Danes included, did innovate some kinds of commercial traffic. One of the commodities circulated in the Indian ocean and beyond from Tharangambadi were Indian slaves from Coromandel Coast to fill a variety of roles in the broader Indian Ocean, including domestic service, craft industries, and agricultural labor (Arasaratnam 1995; Carter 2006). Slaves would also be acquired to work as servants in aristocratic homes of Denmark where they would be identified as moors and confer prestige to their putative owners and legitimacy to their trade (Diaz 2019). Commerce in humans was largely managed as private trade among the company’s officers. It also could be highly irregular as climatic conditions and harvest dictated the supply that fed the trade. For example, between 1630 and 1631 the monsoon failed to occur (Arasaratnam 1995: 105). The resulting famine meant that the cotton goods exchanged for spices in Macassar were limited. The famine also meant that many farmers sold their children for “a measure of rice to the value of a small coin worth five fanum, and the merchants found these could be sold with a large profit in the Sunda Islands” (Bredsdorff 2009: 109). By 1647, 2,000 slaves were being exported from Tharangambadi (Gøbel 2016, 59). In 1732, the Company attempted to control and regulate the slave trade by banning private sales among its employees. The initiative was not popular among the Company’s officers, who had a secondary income through the slave trade. In 1744, the crown decided that the export of slaves from Tharangambadi should be stopped. Nevertheless, the purchase of slaves for personal use in the home was still allowed.

Gardens on the Coromandel Coast

When Danes established their foothold, they entered into an elaborate political and commercial landscape. David Ludden has pointed out, in the centuries before 1300, urbanism in South India was “spread out, dispersed, and embedded in agriculture” (Ludden 1999: 46). Urban centers were constellations of settlements and temples, supported by land grants. This land was not undifferentiated; classic Tamil literary sources makes the distinction between five *tinai* (landscapes) including *kuriñci* (high mountains), *mullai* (deciduous forest with pastures), *pālai* (dry seasonal scrub forest), *neytal* (seashore), and *marutham* (cropoland) (Selby 2008: 35). The final two are particularly relevant in the Tharangambadi enclave. *Neytal*, refers to the seashore

where surface water found on lagoons, ponds, or seaside estuaries are often brackish and salty. *Marutham*, came to be synonymous with agricultural villages and irrigated lowlands of Tamil county's river deltas. In agricultural villages, distinctions were made between wet agricultural land used for rice cultivation (*nansay*) and dry agricultural land where coconut, areca nut, banana, turmeric, and other vegetable crops were grown (*punsey*).

This diversity of landscape is important because it shaped political and economic developments surrounding gardens in South India. Temple inscriptions, from which most of our documentation of contemporary land practices are developed, employ the terms *thōttam*, *thōppu*, and *kollai* to describe garden lands that were irrigated through wells dug into the fields (see Table 1). In South India between the sixth and thirteenth centuries, gardens were most closely associated with institutions, such as temples, mosques (very rare), or wealthy people, including political elites and merchants (Mohamad 1997). Evidence of the word *thōttam*, the largest type of garden land, occurs as early as 500 CE (Gandhi and Mani 1991: 68). While some of these lands were used for the cultivation of millets, some of the gardens were used for the cultivation of coconut, areca nut, turmeric, betel leaves, and other crops. In some cases, the term *thōppu* was also used. Some of these were flower gardens, called *nandavanams*, were associated with the temples (SII vi 448). A few gardens were established to cultivate the *longifolia* tree (*M. longifolia*) that supplied oil for lighting lamps in the temple. *Thōttam* and *thōppu* were crucial tools for political consolidation as local rulers fought to absorb wasteland and peoples into their polities, creating

Table 1 Tamil garden Land and use as documented in medieval inscriptions. SII is SII- South Indian Inscriptions. Archaeological Survey of India, New Delhi

Tamil Term	Location	Description	Date	Reference
Thottam	Pulangurichi	Garden which was mostly irrigated by wells	500 CE	(Gandhi and Mani 1991: 68)
Nandavanakkudigal	Sendalai	Temple Flower Garden	800 CE	SII VI, 448
Kodikkal	--	Sugar Cane Garden	831 CE	SII XIV 43
Verrilai	Tirumeygnanam	Betel leaf (implies cultivation)	873 CE	SII III, 90
Tengu Nandavanam	Tiruvavaduturai	Coconut garden	909 CE	SII XIX 25
Thottavariyam	Tirupparkadal	A committee for gardens in village	914 CE	SII XIX 180
Tenganthottam 915 CE	Koyil SII XIX 207	Devarayanpettai		Coconut garden
Kodikkal	Peraiyur	Betel Garden	1290 CE	IPS 403
Thoppu of Brahmadesam	Tiruvannamalai	Planting of 150 coconuts in Brahmadesam Garden	1202 CE	SII VIII 151
Kodikkalkaran	Coromandel Coast	Title of Muslims	-	(Mohamad 1997: 55)

“striking discontinuities” between sixteenth- and eighteenth-century settlement patterns and ecologies.

By the seventeenth century, gardens were adopted by European landholders who had established colonial enclaves along South Indian coastlines. *Thōttam* was translated into the terms “Garden”, “*Jardin*,” and “*Have*,” by English, French, and Danish colonists. According to Ananda Ranga Pillai (1904 [1736-1761]), whose diary documented life on the Coromandel Coast between 1736 and 1761, gardens were a ubiquitous feature of the South Indian landscape. As a translator in the employ of the French East India Company, his diary provides glimpses not only into European activities but Tamil commentary about those actions. In his account he referenced gardens in French-controlled Pondicherry and Karaikal, British-controlled Madras, Dutch-controlled Nagapattinam, and Danish-controlled Tharangambadi, as well as Indian polities which surrounded these enclaves including Thanjavur and South Arcot, some of which he owned or visited. Gardens, as a kind of settlement, reflect more than the presence of botanical commodities or the economic ambition for the land they occupied.

In some cases, gardens took on a function more familiar to how the term is used in Europe. Pillai shows that gardens were a status symbol for a wider range of owners including Tamil elites, merchants, and other well-off notables, such as European officials. His own office, from which he wrote his diary, was located in the flower garden of the Company’s Pondicherry headquarters. While Europeans who owned gardens seem to do so only in enclaves for which they were subject, Tamil’s who owned gardens did so in a number of different territories. Those with large landholdings often commissioned elaborate garden houses, where the owner would stay while visiting the land- akin to visiting a country house (Pillai 1904 [1736-1761], II: 2). For example, by 1729 the East India Company had purchased Konig’s Have, a 5.3 ha garden in Thillayādi, known for being the coolest spot in the whole colony. Known for the verdant vegetation and lugubrious setting, Konig’s Have was similar to a garden house one might find in Europe acting as a country retreat for company officials. Indeed, by 1777 the garden had acquired the name “*Sorgenfrei*” (Free of Sorrows).

According to Pillai, Gardens were also a critical component of commerce. He describes temple gardens, suggesting that temples continued to rely on revenue or substances from plants grown on their grounds. His diary also suggests that by the eighteenth century, there was also a specialization in botanical commodities grown in gardens. For example, on the central part of the coast, in South Arcot, garden workers cultivated rice in wetlands, and coconut, areca nut, grapes, banana, turmeric, sugar cane, and other vegetable crops were grown in drylands (Pillai 1904 [1736-1761]). To the south, along the lower Kaveri river, workers specialized in cultivating rice in engineered wetland landscapes. The fact that their harvest was the subject of regulation and taxation within colonial enclaves indicates the degree to which both local “country” trade and interregional colonial trade relied on their produce. Local foremen, working on behalf of owners, organized crops and labor. While some workers were from the area, later periods saw an increase in the number of migrant workers in the region.

For example, one garden was established in 1759 by a community of Moravians with the expressed purpose of funding missionary expedition to Nicobar Islands through rural industry and commercial agriculture (Krieger 2008). In 1761, five unmarried men and four couples joined the fledgling community. They grew rice

and grapes, the latter was especially popular with other European nationals on the Coromandel Coast. They also became known for crafts, especially carpentry. Importantly rice became a major focus of its agricultural endeavors. Europeans would visit from across the coast to witness the industry and ways of life of the secluded community. Between 1760 and 1795, 73 Moravian “brothers” and “sisters” were sent to Tranquebar and worked as merchants, carpenters, watchmakers, tanners, boat builders, framers, and doctors (Krieger 2008). In addition to the German speaking peoples, contemporary plats indicate that Indian workers lived on the property (Anonymous 1763).

The brief review of the literature above highlights that Danish controlled Tharangambadi was principally a trading port and headquarters for Denmark’s Indian ocean commercial interests. When Danes and other European notables begin to purchase or commission their own gardens within Tharangambadi’s enclave they appear to be doing so for the status that such a possession can confer, rather than the potential for commerce. While there does not appear to be an official policy to encourage the development of commercial agriculture through European investment in gardens, the colony did rely on local agriculture for at least some of its income (Jensen 2015: 538). By the late eighteenth century, there seems to be increased scrutiny of land use and colony officials initiated several projects on irrigation of “unused” land especially.

Landscape Assemblages

This study addressing shifting landscape assemblages through connected histories was the result new agendas outlined by Tamil archaeologists and collaborations between scholars working in distinct regions (Morrison and Hauser 2015; Wilson and Hauser 2016). In 2018, the State Department of Archaeology in Tamil Nadu convened a coordination meeting identifying future directions for research in the region and conceived several long-term collaborative projects with the dual goals of identifying colonial sites of archaeological interest along the densely settled lower Kaveri valley and providing training to undergraduate and postgraduate students in archaeological field methods. The colonial enclave of Tharangambadi, documented through existing bodies of archaeological, historical, and heritage scholarship (Fihl and Venkatachalapathy 2009; Jørgensen 2009; Liebau 2017; K. Pedersen 1987; P. Pedersen 1987), seemed particularly promising to the team. Test excavations (Sridhar et al. 2010) and maritime survey (Gaur et al. 1997; Rao 1991) had yielded material culture and numerous ceramic types broadly dating to the Danish period, or 1500s to 1800s CE, although no settlements outside the town walls were surveyed or documented. Our team decided to conduct a pedestrian survey of the enclave at the onset of our work in 2019.

Our research revealed that, in many respects, landscape assemblages of gardens along the lower Kaveri, on the Coromandel Coast, share many spatial and material similarities to landscape assemblages of plantations. Gardens, like any archaeological settlement, have spatial distributions and organization affected by historical, political, and ecological factors, including the location of previous agricultural settlements (gardens whose continued occupation foreclose the possibility of new gardens),

ownership of particular gardens within hierarchies of power (caste or religious identity), and the proximity of resources of crop cultivation. Although gardens have deep roots within South India, settlement patterns of gardens changed during the eighteenth century. While encompassing different histories and arrangements with regional and global economies, the multi-scalar analysis that characterizes plantation studies seems appropriate for the analysis of garden settlements in South India.

This study of shifting settlement patterns, organization, and material assemblage on the Coromandel coast was a landscape archaeology. Building on methodological innovations in landscape archaeology as practiced in South India (Bauer 2015; Sinopoli and Morrison 1991; Sinopoli et al. 2009), the Andes (Kosiba and Hunter 2017; VanValkenburgh 2017) and the Caribbean (Armstrong 2003; Hauser 2020; Ryzewski 2018), reconnaissance followed a multistaged process, increasing in intensity from purposive pedestrian survey to systematic pedestrian survey, surface collection, and site mapping. As we moved from one stage to the next, we relied on a combination of remotely sensed, documentary, and archaeological evidence to select loci to investigate with greater intensity. While a spectrum of archaeological remains was considered, special focus was placed on the recording and analysis of garden sites and associated surface deposits. We defined the survey region through the historical boundaries of the Danish enclave (approx. 29 km²), in which 525 ha were surveyed (see Fig. 2).

Documentary Evidence of Garden Assemblages

Crucial to such studies of the early modern period are strategies which coordinate this data with textual, epigraphic, and cartographic data to understand how assemblages and their flow are both conceptualized in space and play out in everyday places (Hauser and Armstrong 2012; Morrison and Lycett 1997; Richard 2015). Such documentary evidence was crucial for identifying the range of variation in archaeological, landscape, and water features that were subsequently identified through the pedestrian survey. Five maps from our region provide similar opportunities for study. They document the settlement patterns and their changes between the seventeenth and nineteenth centuries (Ankar 1798; Anonymous 1650, 1761; Heinsohn 1725a, b; Mossin 1810; Seutter 1730). These maps depict rice fields, salt works, military outposts, markets, gardens, villages, and traveler rest houses (choultries). Villages and the rest houses were linked to fields and roads. Rice fields were given priority for economic reasons and were located on low-lying, flat strips of fertile soil. Some of the villages are described based on the profession of their inhabitants, such as fishing villages. Others appear to be larger, incorporating the diverse population of the enclave. Land devoted to agriculture includes fields for rice cultivation, different tree species, including coconut palms and palms for oil. Finally, banyan trees are denoted as landscape elements of significance.

According to the Seutter's map, there were 12 such hamlets situated in the extensive agricultural land surrounding Tharangambadi, Porayār and Thillayādi (Fig. 4). Those living in Tharangambadi and its environs were socially and linguistically diverse, and the Danish presence contributed to changing social dynamics. Tamil-speaking people shaped both commerce and social life (Brimnes 1999). Tharangambadi was an area dominated by the agricultural community of the Vellalas (also Velalars, Vellalars,



Fig. 4 Accurater Geographischer Entwurf der Königlich Dänischen Auf der Küste Choromandel in Ost-Indien belegenen Stadt und Vestung Trankebar oder Tarangenbadi, by Matthias Seutter, 1730. National Library of Denmark

Vellalas). The Vellalas were a farming community, some of whom were landlords, and were a part of the elite caste who patronized the arts under the Chola kings (848–1279 CE) (Brimnes 1999: 93). In the town, over one-third of the households were headed by a Vellala, and in the villages they comprised one-third of the population. Other communities included a significant Muslim population, Kavarais, “Portuguese,” and the Paraiyas. The Kavarais (Balija Chetties) were a Telegu-speaking population comprised of traders from the north (present-day Andhra Pradesh and Telagan) who were Tamilized (Brimnes 1999: 106). According to Heinke Liebau (2017, 153–154, see fn 133), a large portion of the 306 “Portuguese” that lived in Tharangambadi in 1748 were slaves who came from the western coast of India, Bengal, Achim, Pegu, and Mozambique. Agricultural laborers in Tharangambadi’s enclave typically belonged to the lower caste Paraiyar community, which was later anglicized to pariah. Paraiyars had their own settlements in the villages typically denoted by the suffix *cheri*. Known as *paraicheri*’s, such hamlets encompassed their quarters small gardens, economic trees, water sources and livestock (Karashima 1997). According to Brimnes, their stock rose under company rule (Brimnes 1999: 202–203). By joining the army or working for Europeans or missionaries, members of this community could advance their social position and material wealth (Liebau 2017, 215).

The map by the late eighteenth-century governor, Peder Anker, based on surveys conducted by the company engineer, is also useful (Fig. 5). It maps waterworks,

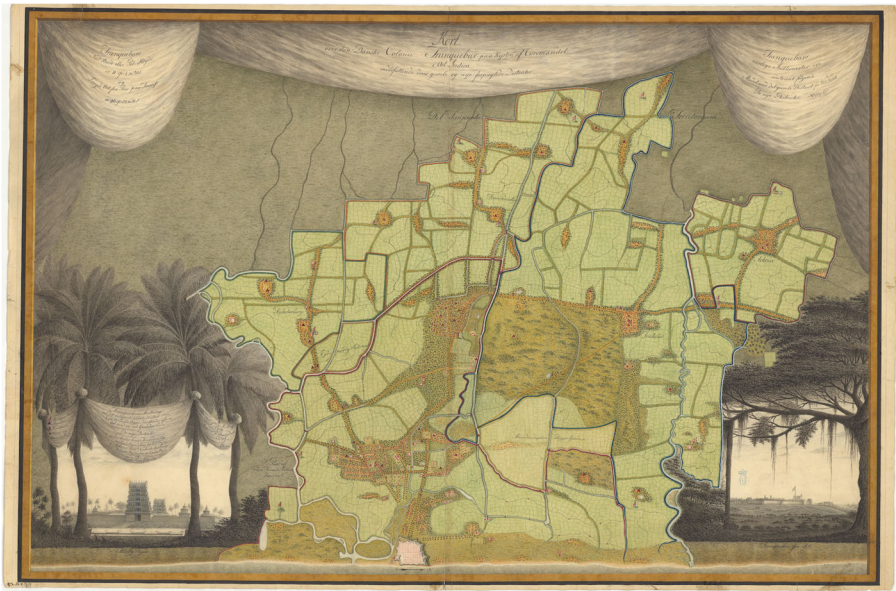


Fig. 5 “Kort over den Danske Colonie Tranquebar paa Kysten af Coromandel i Ost-Indien indbefattende dens gamle og nye forpagtede Districter”, by Peter Anker, 1798. Courtesy of HM The Queen’s Reference Library, The Royal Danish Collection

including dams, reservoirs (tanks and ponds), canals, channels, and earthen-bound rice fields. Sluices, gates, and weirs helped residents manage the flow of water from rivers into canals and channels, lined or unlined cuts in the soil that would then be used to irrigate rice fields (Morrison 2015: 14). Gates and weirs also prevented the flow of brackish water into those same fields. Such a complex engineered landscape did not ensure water security. Other features like ponds and tanks that dotted the landscape are also depicted in Anker’s map. Nearby residents would store water by diverting nearby canals or harvest rainwater upon which they and their animals could rely, especially during the dry months of May and June. While tanks are filled by hand or dedicated channels for domestic water use, bathing, ritual, and, on occasion, grazing in elite areas or temples, ponds rely on runoff and precipitation to harvest water in non-elite areas. In the enclave, the differences between the two could be further identified through size, elaboration, and the presence or absence of sluices. While not documented on the Anker, eighteenth-century maps of the port town document stone-lined wells that tapped into the underlying water table (Heinsohn 1725a, b).

According to contemporary documents, housing varied significantly in size and construction, if not in layout. In 1730, in connection with the Crown’s temporary takeover of Tranquebar from the East India Company, administrators enumerated the town’s population. The historian, Karl Pederson, summarized this census using categories such as Indian, Danish, and “Indo-Portuguese” (K. Pedersen 1987: 19–25). As described above, the term Portuguese came to have “ethno-racial connotations,” since it could describe people with backgrounds from Africa, Western India, Europe, and Southeast Asia (Liebau 2017:153). As a census, there are many missing elements to this enumeration. For example, details on many Indian households were missing, and

“Portuguese” households were difficult to locate geographically. What makes this enumeration interesting is the brief building descriptions. They described brick, stone, straw (Stråhybler), and mud (Jordhybler) houses or huts, thus adding a further dimension to housing, corresponding to racialized categories used to document the population by Danish Administrators. Of the 674 households documented, 66 were Danish, 38 were Portuguese, and 570 were Indian (K. Pedersen 1987: 19). The vast majority of Danish households were associated with brick architecture. Most Indian households were associated with stone architecture (68%) or straw huts (25%). The “Portuguese” community represented the most diverse range of housing: brick housing—16%; stone housing—29%; mud housing—5%; and straw housing—50%.

In gardens outside of the town walls, less is known, but generalities about class and construction can be extended. What is known comes from sketches and water paintings made by Anker. Garden houses made with brick foundations contain separate rooms or buildings while the housing of agricultural workers, made of bamboo and plaster, can be delineated spaces within the house or the yard (see Fig. 6). In both cases, kitchens were located in the southwest corner of the living space. While modest rural housing had few rooms, both the family shrine and possessions were kept in the most interior of spaces. For elite housing, the same is true. Sara Dickey (2008) notes Tamil housing varies along two spatial dimensions: intimacy and elaboration. Religious ideas of purity or privacy, regulated the placement of areas and the persons who have access to them. In Hindu homes, for example, the higher the caste, the greater the anxiety for maintaining these spatial relations of purity. Purest spaces, including those devoted to cooking, food storage, and worship, are placed furthest away from a source of

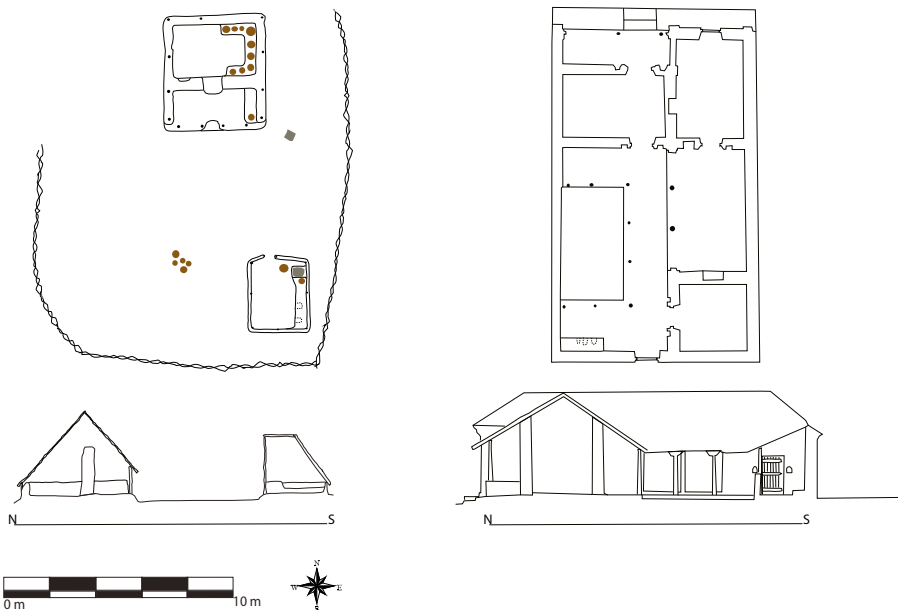


Fig. 6 Tamil Vernacular Housing. (1) A Tamil modest house. Tamil wattle and daub housing can vary in size. (2) A Tamil Town House. Made of brick or stone plastered with clay (after Dansborg 1987: 207, 209)

pollution, the entrance. At the same time, the higher the class, the greater number of rooms and the amount of space devoted to enforce those distinctions.

The only difference is where people slept. The bedroom in the elite house is located facing the street, and in order to enter it, you have to first cross the threshold, then pass through the foyer, the veranda, the *kūdam*, and only from there could you enter the bedroom. For more humble housing, families slept on the verandah in front of the house's lockable door. House plots (*manai*), were containers of class values that intersected with religious identities and gender (Mines 2008). Artifact scatters of utilitarian goods became essential to identifying the location of less visible worker housing.

The first phase of the surface survey included two elements and reflected different samplings strategies: judgmental and systematic. Because, as Sinopoli and Morrison (1991: 57) pointed out, a probabilistic survey would require more time to conduct than what was feasible and the study was to identify early modern century settlements associated with commercial agriculture, we targeted areas identified on historic maps described above for survey. Utilizing roads and cultural landmarks, 50% of rest houses and gardens were targeted for surface reconnaissance utilizing small areas (approx. 500 x 500 m²). Cultural features, including surface deposits of artifacts, inscribed stones, roads, ruins associated with plantation complexes, house platforms, field boundary markers, large houses, aqueduct systems, fortification complexes, and trees with contemporary and historical social significance, were recorded and locations mapped. In order to document the limits of the purposive survey strategy, we conducted a systematic survey of approximately 5% of the area surrounding the port town associated with (see Fig. 2). The region was divided into 500 x 100-m transects that were then clustered into groups of ten, creating “transect blocks” that were 1000 m x 500 m in size.

The second more intensive phase of the pedestrian survey focused on identified sites from phase one. Teams walk transects spaced 5 m apart and observed landscape features, including house platforms, foundations, roads, and causeways, and hydrological features, including canals, ditches, dykes, weirs, tanks, ponds and wells, and artifact scatters that were identified by their density (>10/m² vs. <10/m²). The survey team mapped all features using a combination of photogrammetry, handheld GPS and tapes, and compass. This enabled the analysis of settlement patterns and settlement organization and their potential changes over the course of the seventeenth and eighteenth centuries. While the nature of the permission granted to the team prevented subsurface testing, the team took advantage of road cuts and soil erosion to document stratigraphic profiles of exposed cultural deposits.

To ensure comparability and maximum collection of chronologically sensitive materials, team members collected diagnostic artifacts including all household and tableware ceramic sherds, bottle and lighting glass, decorated and rim specimens of local coarse earthenware, and small finds (buttons, pipes, bangles, and beads). All data in the survey region was entered into a unified GIS site file to create a 1:10,000 map of the survey area.

The team identified 20 loci of interest. These included areas identified as fishing villages, gardens, cemeteries, house yards, or other past structures. Of these 20 loci, 16 contained or were proximate to ground scatter. Eight were areas identified within gardens on an 1810 Danish map. Seven loci were identified through a probabilistic

survey. These included five fishing villages, remains of a nineteenth-century train station, two house yards within a village (see Fig. 7), and an unidentified scatter. In addition to the surface survey, excavated collections from the government museum were cataloged in 2008. A Danish-Indian expedition excavated a large trench directly outside the fort walls to understand the evolution of the fort and its moat.

A vast majority (67%) of the artifacts were ceramic sherds (Table 2). These included many fragments of imported ceramics with high chronological sensitivity, allowing preliminary assessments of changes or continuity in settlement patterns. Some settlements, including Thillayādi and Tharangamabadi, have clear evidence of continued settlement as early as the sixth century. While the names of fishing villages would indicate settlement antedating Danish occupation, no material culture was recovered to verify this observation. Gardens were largely contemporaneous, containing a suite of datable trade wares including early modern and nineteenth-century Chinese porcelain along with later industrially produced ceramics from Britain. These assemblages produced mean ceramic dates that are deceptively early, especially if you compare them to the terminus post quem (TPQ) of ceramics. By in large, it appears as if gardens identified through the survey were a largely eighteenth and nineteenth-century phenomenon.

Examining both contemporary maps and changes in settlement patterns over the course of the seventeenth and eighteenth century allows for two observations. First, most of the land depicted on contemporary maps was devoted to the cultivation of rice. Of all the settlement types documented during the course of the archaeological survey (see Table 3), the most common eighteenth-century settlement encountered were gardens established by Europeans or Tamil merchants in which rice was a principal

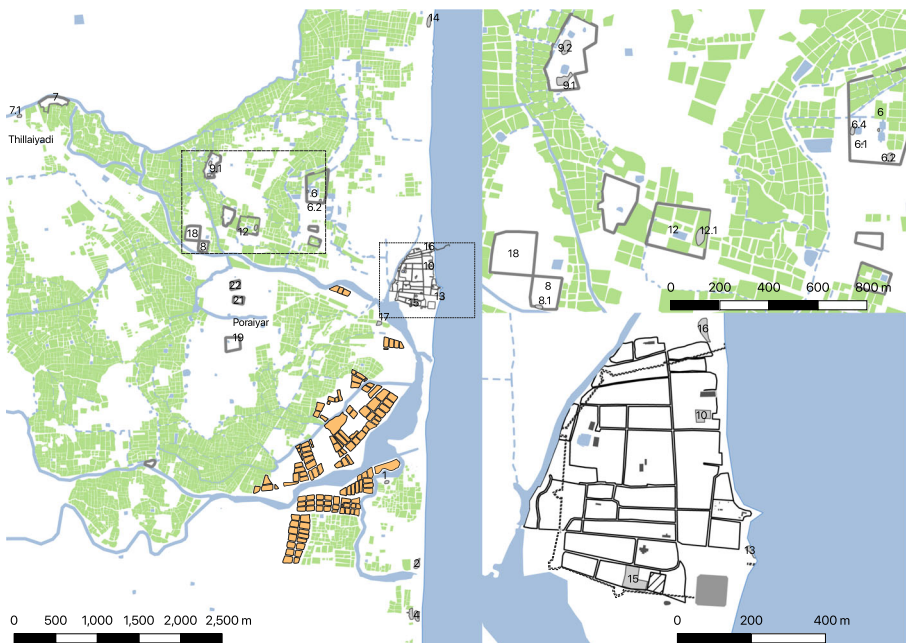


Fig. 7 Location of Archaeological Scatters, Land use and Features documented through surface survey

Table 2 Locus and artifact counts recovered from each

Locus	Tobacco Pipe	Porcelain	Tin Enameled	Refined Earthen	Coarse Earthen	Bottle Glass	Glassware
02	0	5	0	2	4	0	0
04	3	4	0	8	52	0	0
05	1	1	0	2	5	1	0
06	33	82	0	10	0	8	0
06.A	10	24	0	13	1	7	1
06.B	26	11	0	12	9	1	0
07	0	3	0	0	27	0	0
08	3	9	1	6	8	4	0
09	8	7	0	1	20	2	0
10	4	12	0	7	0	0	0
11	0	3	1	0	0	0	1
12	40	109	0	79	21	7	3
13	2	6	0	0	3	3	0
14	0	1	0	1	0	0	0
15	1	5	1	8	1	1	0
16	4	8	0	10	26	0	0
17	0	0	0	3	0	0	0
18							
20	19	434	5	20	104	196	6

crop (Hauser 2019). In Tharangambadi, it is impossible to determine the produce grown on such gardens from the archaeological record alone, but the use of contemporary maps indicate that half of the gardens documented archaeologically had rice fields associated with them.

The second observation is that the amount of land devoted to the cultivation of rice increased substantially over the course of the eighteenth century as irrigated paddy fields were built closer and closer to the seashore. Archaeologically, we see gardens closer to the sea with much more recent materials and far fewer early materials than those further west in the environ of Porayār and Thillayādi. While small sample sizes imply a considerable potential error, these trends can be quantified through mean ceramic dates (MCDs) based on European material culture (see Table 3). All of these gardens had field boundaries and water features associated with cultivating rice fields (Punsey) attached to them (Table 4).

Rice was part of regional commercial agriculture that became increasingly important as increased settlement occurred in port towns on the Coromandel coast. Areas of surplus production, such as the area north of the Godavari River delta, became bread baskets for urban areas that experienced a deficit in rice cultivation. For example, in 1719, Chennai required 4,000 garce (approx. 16,000 tonnes) per annum to feed its population (Arasaratnam 1986: 201). Ports located in the Lower Kaveri exported rice both within the region, to Madurai, and beyond, including to Malacca, Aceh, Sri Lanka, and Malabar. Sanjay Subramanyam (1990: 79) has argued that historians have tended

Table 3 Site Number and Site Name in Survey Area

Locus	Site	MCD	Site
01	Hamlet		Chandairapadi Pattinacheri
02	Camp	1785	Chandirapadi
03	Hamlet		Akkannumenpodteri
04	Hamlet	1823.7	Beach Front - Akkannumenpodteri
05	Camp	1806.5	Chinnurpet
06	Garden	1761.4	Brüder Garden
06.A	Garden	1770.4	Brother's Garden, Vineyard
06.B	Garden	1826.7	Brother's Garden, Malabar House
07	Garden	1786.0	Thillayādi Garden, (Songen frei)
08	Garden	1765.8	Schmidt's garden
09	Garden	1767.7	Koefed's Garden
10	House Lot	1725.8	Angalman Temple
11	Hamlet	1774.3	Erukatanchery
12	Garden	1753.75	McLoyd's Garden
13	Fort	1792.5	Town Wall
14	Hamlet	1766.96	Pattinacheri
15	House lot	1791.23	Prins Jorgen's Bastion
16	Camp	1873.33	Tranquebar Fishing Village
17	Station		Railway Station
18	Garden	1738.98	Rehling's Garden

Table 4 Architectural and Water Features

	River	Canal	Ditch	Sluice	Tank	Pond	Well	Drain	Foundation/Structure
Garden									
Company	No	No	No	2	1	No	1	Yes	Yes
Songefrei	Yes	No	No	No	No	No	No	No	Yes
Schmidt's	Yes	Yes	Yes	No	No	No	No	No	Yes
McCloyds	No	Yes	Yes	2	3	No	No	No	Yes
Rehling's	Yes	Yes	Yes	1	1	No	No	Yes	No
Koefed's	No	Yes	Yes	1	1	1	No	No	No
Ramaneiken's	No	Yes	Yes	1	1	1	No	No	No
Brüder's	No	Yes	Yes	6	6	1	No	Yes	Yes
Town House									
Nadar Por.	No	No	No	1	1	No	1	Yes	Yes
Bastion No	No	No	No	No	No	1	No	Yes	
Angalman	No	No	No	No	No	No	1	No	No

to underestimate the degree to which Asian merchants were responsible for trade between weaving centers, such as Thillayāḍi, company stores, including Danish Tharangambadi, and distant Indian Ocean ports. Complex patterns of investment and debt, as well as the presence of interregional patterns of trade in surplus foodstuffs such as rice, did not emerge as the result of European engagement but were largely controlled by local merchants throughout the colonial period.

Rice was not just a food commodity for regional markets. It was important to the textile industry. It fed the many different specialist communities involved in the rural industry, including weavers, washers, bleachers, and dyers. It was also an important precursor to make conjee (rice gruel) in order to starch textiles (Pillai 1904 [1736–1761], I: 217). So important, it took on characteristics of a currency. The terms of the agreement between the Vijayanagara ruler Venkatapathi Devaraya II and the Dutch, which allowed the VOC to establish a port at Pulicat, imposed a 2% duty on all goods save gold and rice (Stephen 2014: 191). In some instances, weavers demanded from company agents “cotton yarn and rice to support their families, money, or both” (Chaudhuri 1974, 158). By the eighteenth century, the French East India company paid cloth bleachers and washers in the Pondicherry textile industry with rice (Stephen 2014: 94). Payment in kind, such as the transactions described above, could be the result of the monetary value of textiles and rice. It also reflected the larger system of caste, labor, and debt upon which the economy was based.

It is no surprise then that a “typical” garden in Tharangambadi was primarily devoted to the cultivation of rice. It provided a stable commodity upon which they could make money on local and regional markets through the assistance of local merchants. Much of the landscape contained in lands identified as gardens included a complex network of canals, ditches, and tanks that were used to irrigate fields, provide water for cooking and bathing, and offer a degree of water security in drier months (see Table 3).

Landscapes that Rhyme

Despite reactions and contingencies to local developments, plantations and gardens were landscapes that rhymed. Close examination of documentary evidence and archaeological remains of one such garden, Brüdergarten (Brother’s Garden), just outside of Tharangambadi, shows the historical and political-economic convergence of commercial agriculture in the eighteenth-century Indian Ocean. The land the Moravians had purchased initially comprised a 450 x 800-m lot (Fig. 8). For the most part, the eastern part of the property is comprised of rice fields. The western part of the property, the core of the estate, was devoted to vegetable gardens, a vineyard, and a complex of buildings (Anonymous 1763). The main structure was a cross-shaped building called the “Gemein haus und Saal” (common house and room. Two near-symmetrical structures flanked either side of the common hall: a single brother’s house and a family house for married couples (Karth 1763). In each of these flanking structures, there were either workshops, storerooms, or kitchens. In combination, these three buildings, for which there are detailed plans, would comprise the garden house for the property (Noul 1760). In addition to these three garden houses, for which there are plans, the Moravians constructed stables, a well room, a tannery, and a butchery (Anonymous 1765). A structure constructed some distance from this complex of buildings, labeled

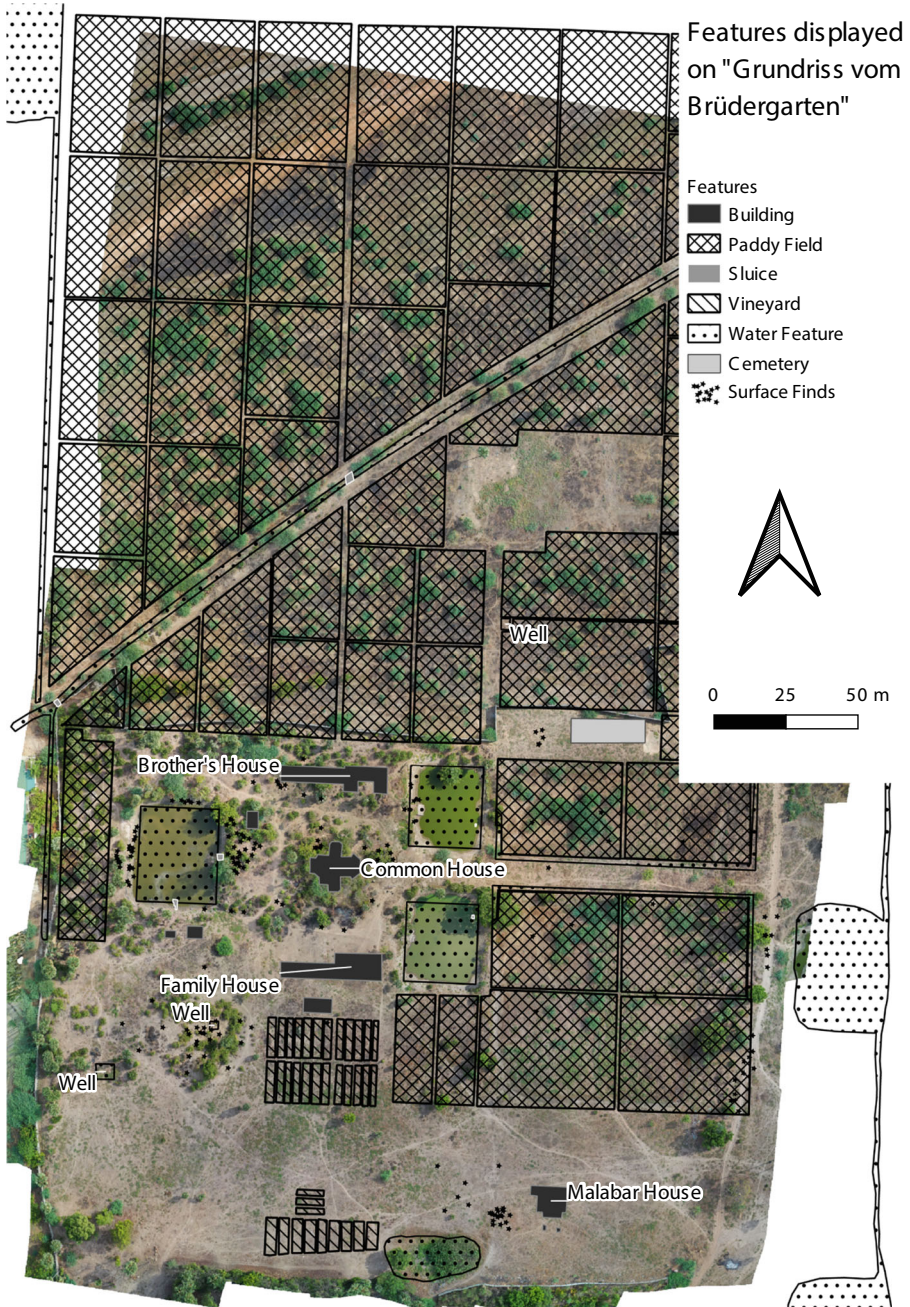


Fig. 8 A Comparison of Aerial Photographs and Features displayed on the 1763 Ground Plan, “Grundriss vom Brüdergarten bey Tranquebar in Ostindien,” Mp.318.4, Das Unitätsarchiv, Hermhut. Stars represent the gps location of surface finds document and/or documented during the 2019 survey

“Malabar House,” housed “native” employees (Anonymous 1763). The label “Malabar” is an interesting one. It could signify the western coast of India, where

many of the neighboring “Portuguese” community derived. It could also signify the status of those that lived there- though this is also ambiguous. In 1706, Pietist Missionaries described most South Indians as Malabari, and the first Tamil Bible was described as a Malabar Bible. Those same missionaries commented that the term “Malabari” was used to signify Vellalars or others of comparable status (Hudson 2000: 16). By the eighteenth century the term, Malabari, had come to signify enslaved and/or free laborers from the region and those most especially deriving from the French ports at Karaikal and Pondicherry (Carter 2006: 808). Indeed, those listed in Pondicherry slave registers in the 1760s are referred to as Malabaris regardless of origin or caste.

A systematic pedestrian survey of the property identified surface and water features provide compelling evidence about the nature of the Brother Garden's spatial organization (Fig. 9). Surface features, including house platforms, sunken fields, pillar bases, evidence of a gate, conform to drawings depicting the polite architecture of the garden, including the “Brother's House,” the “Family House,” and the “Common House.” The survey team was unable to identify any evidence of the built landscape associated with dependency buildings, the cemetery, or the Malabar House depicted on the ground plan. Similarly, the survey identified six tanks, one enlarged pond, and two ditches identified on the same map. Importantly three of the tanks surrounding the central complex contained sluice gates depicted on those ground plans.



Fig. 9 Landscape features identified during intensive survey. Clockwise: Tank located northeast of the “Common House” with a drain in the foreground and a sluiceway in the background; Pillars and Foundation of East Face of “Common House”; Artifact scatter and pond associated with “Malabar House”; Stairs leading into the tank due west of the “Common House”

Many elements present on the ground plan were not visible during the pedestrian survey. These include landscape features such as banyan trees and a human-built island in the center of one tank, the brothers called “Nicobar,” and a raised mound. Surface features that might suggest Malabar house, the cemetery, or dependency buildings, such as the forge carpentry, or abattoir also evaded the survey team's scrutiny. This is far from surprising since such buildings were most likely constructed using less-durable materials, including wood and wattle and daub.

Finally, the pedestrian survey identified surface features that were not illustrated on the map. Lack of illustration could be in part from secondary use of the landscape after the Moravians left the property, such as one shrine and one temple located on or proximate to the property. Others include the adjoining village, Sattangudi, which was contemporary to the property and housed some if not most of the wage laborers working the garden's rice fields. Others include architectural details significant to the functioning of the central buildings but not enough of a priority to make it onto the illustrated plans. The clearest example of this was a network of stone-lined drains leading from the central building to the neighboring tanks.

The most suggestive finding was three discrete artifact scatters. Two of the three concentrated artifact scatters correspond with areas that might have been used to deposit refuse of buildings drawn in the central complex (FS 6 and 6.A). Their location suggests a great deal of traffic and activity in the area behind rather than the front of the buildings. The third scatter was located in the general vicinity of a small pond depicted on the 1763 ground plan, which was proximate to the “Malabar House.” Importantly these scatters are more or less contemporary, containing materials made between the mid-eighteenth and mid-nineteenth centuries. Despite the chronological similarity of these collections, there are some significant functional differences. Ceramics documented near the central complex (6 and 6A) contained imported wares from a far less diverse set of types. Ceramics recovered from the Malabar house included larger platters, some smaller hollowares, and a large portion of locally made cooking pots. While the nature of the assemblage and its method of collection do not allow considerable generalization of use in context, these finds are suggestive of distinct ways that the same materials were being used.

While the evidence described above is preliminary, at best, it does require us to reflect on three relevant considerations. First, when they commissioned or embarked on commercial agriculture in colonial contexts, Europeans did not rely solely on plantations as an economic model. Archaeological reconstructions of landscape, commerce, and power in which the documentary record is a crucial component have a long history in South Asian archaeology (For a review of this scholarship, see Sinopoli et al. 2009; Wilson and Hauser 2016). This research has highlighted long-term commercial connections between different regions, intensification of land-use, and complex social orders. These long-term relations would have shaped the Indian Ocean trade circuits and landscapes employed by northern Europeans in southern India. Gardens, which made both Europeans and Tamil speaking elites money by cultivating cash crops such as rice, tobacco, and grapes and selling those within and outside of South Asia, were not novel settlement types introduced by Europeans. This commercial agricultural activity had independent roots in South India as early as the sixth century CE.

Second, while plantations, like those studied in the Caribbean, and South Indian gardens have distinct histories, they share some important features, reflecting some

common concerns. Plantations typically encompass three definitions. Some scholars focus on monoculture or the near monoculture of a botanical commodity, such as sugar or rice. Indeed, most gardens were engaged in some commercial agriculture in which the garden was identified by the particular commodity it specialized in mangos, rice, flowers, beetle nut. Other scholars have emphasized aspects of labor and social roles, including the employing of wage or enslaved labor on the part of a community that is defined through narrow boundaries of belonging, such as race. While there is a significant distinction, the vulnerability of laboring peoples on plantations does comprise a similar predicament for those who worked them. In Tharangambadi, the distinction between subaltern and elite communities was maintained through material and symbolic means. In the case of Sattangudi and Brother's Garden, this was not only the space they inhabited but the water upon which they relied. Workers and Moravians relied on different tanks to wash, feed, and bathe. Tanks associated with the residents of the Brother's Garden were connected to a canal that was fed by an upstream sluice along the Uppanar River. Those in Sattangudi relied on three tanks connected to a canal down-stream on the Uppanar River. For water from one tank to reach the next, it would need to travel 5.7 km.

Third, these landscapes are connected in substantive ways. Several of the brothers who had lived in the Moravian garden near Sattanguddi had worked previously in Caribbean colonies (Krieger 2008). In these colonies, they would have become familiar with the unwritten practice of resolving underlying theological aspirations with the indeterminacies in everyday life, and accommodating local spatial forms into the existing architectural liturgy. They would have also been familiar with the supposed contradictions of slavery. Studies of Moravian landscapes in Saint Thomas, Pennsylvania, and North Carolina have shown that while all people, according to Moravian theology, had equal access to the afterlife, not all had equal access to earthly rewards. Indeed, such became the case in Tharangambadi. More so, they would have been aware of how their commercial efforts in the Americas underwrote their spiritual efforts in Nicobar, via the small garden at Tharangambadi. In short, while distinct, gardens and plantations are both comparable agricultural forms and connected landscapes through power relations invested in the circuits of land, labor, and things.

Conclusion

Historical Archaeology, as practiced in the Americas, has painted itself in a bit of an epistemic corner by employing a scale of analysis largely defined by the Atlantic Ocean (Orser 2018). By making Atlantic World accounts the norm against which all other cases are compared, historical archaeology has obscured global flows from other regions that are in fact critical to understanding the modern world, and especially the workings of colonialism and capitalism in the last five hundred years (Lane 2016; Schmidt 2016). The study of the plantation is no exception. While the discussions of “plantation futures” in the Atlantic are too numerous to count (see McKittrick 2013), recentring the Indian Ocean in such accounts is certainly important. By looking at the development of gardens on the Coromandel coast, we see that pre-existing conditions guided plantation strategies in many ways, including patterns of land use, farming practice, methods of ownership, the control of labor, and the like.

Investigation of landscapes during the period of Danish engagement in the Indian Ocean, documents evidence for shared and distinct practices by Natives and newcomers in relationship to land use, social organization, and commercial engagement (Hauser 2019; Nordin 2020). These emergent landscapes were not set aside when the Danish shifted their focus to other parts of the world. Instead, by juxtaposing gardens on the Coromandel Coast against plantation landscapes, we see the multiple roots through which commercial agriculture and rural industry developed in different regions enabled potentially coalesced in the modern world. In this paper we have mapped some of the elements related to parallel agricultural developments through “gardens.” Capital organized by Europeans does not so much transform landscapes, but rather appropriates landscapes and calls them their own.

That being said, our analysis of gardens is preliminary and there are other questions to consider. Examinations of landscape from the early modern through to the twentieth century in South India can provide a new appreciation of the agency of ordinary people in periods of crisis and economic reformulation. For example, when did restricting access to land or limiting the ability to move across it begin? Certainly, epigraphic accounts discuss restrictions by the first millenia, but it does not account for methods of enclosure (fencing, walls, etc.) and the degree to which such efforts were followed. Answering such questions will reveal how subaltern communities might have solved predicaments brought about by changes in the land during political and economic transition.

Acknowledgments This research was made possible by a senior fellowship from American Institute of Indian Studies, a Northwestern University, Faculty Research Grant, and Tamil University Thanjavur. We would also like to acknowledge the assistance of the Archaeological Survey of India and the Tamil Nadu Department of Archaeology. Assistance was given Professors Esther Fihl, Maria Lazar, Julius Vijaykumar, K. Rajan. We are also grateful to the helpful comments of two anonymous peer reviewers who highlighted important areas of improvement. Errors that remain are our own.

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