The Mysore Kingdom at AD 1800: Archaeological Applications of the Mysore Survey of Colin Mackenzie

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Major early nineteenth century spatial patterns of the Mysore kingdom are reconstructed from archaeological field surveys and archival research. Central to the reconstruction is the Mysore Survey geographical information system (GIS) and database, which is now being developed at the University of Illinois. The Mysore GIS is based on the unpublished topographical maps constructed by Colin Mackenzie between 1799-1808 as part of the Mysore Survey. Drawn at a scale of 2 miles to the inch and covering some 30,000 mi² (78,000 km²), these extraordinary maps encode details about thousands of cultural features that are otherwise unavailable to archaeologists and historians working in South India. These features are of considerable analytical interest as spatial representations of local political and economic relationships that existed in the early days of British hegemony in the region.

My objective is to describe the preliminary results of a spatial analysis of the Mysore kingdom, the predecessor of the modern state of Karnataka, India, as it existed at the end of the Nayaka period1 in AD 1800. The study is based on archaeological field surveys and archival research on eighteenth and early nineteenth century East India Company (EIC) and Indian records. The key resource of this research is the Mysore Survey2 of Colin Mackenzie, a 200-year old EIC mapping project that enables researchers to construct a virtual archaeological site file of contemporaneous Nayaka period sites, including towns, villages, roads, tanks, and place names.

The first part of the article briefly describes the geography and recent history of the study region and basic details of the Mysore Survey. Next, the major administrative divisions of the Mysore kingdom and their archaeological implications are outlined and illustrated by examples drawn from the results of recent field surveys in the region. Finally, we discuss the interpretive value of early colonial manuscript maps as primary sources of settlement location information, the analysis of which can further the understanding of aspects of India’s recent past for which there are few contemporary written documents and available archaeological data.

Mysore and Mackenzie’s Mysore Survey

At the end of the eighteenth century, the Mysore kingdom of Tipu Sultan included parts of the modern states of Karnataka, Andhra Pradesh, and Tamil Nadu (Fig. 1). It stretched from the mountainous malnad of the Western Ghats eastward to the lowlands of the Tamil country. The northern boundary was the Tungabhadra River and to the South it ended in the Nilgiri Hills. The maidan plains of the southern Deccan were its heartland.

Mysore in the late 1700s was, by every account, a war torn landscape (Buchanan 1807; Hayavadana Rao 1930; Wilks 1989). Under the Vijayanagara rulers, it had been divided into several administrative regions and governed by men who often represented locally powerful lineages. After the fall of Vijayanagara in 1565 and the relocation of the capital to Penukonda, many of these governors, lesser administrators, and the petty chiefs whom the British collectively called the poligars, sought to make the most of the political instability of the times, often redefin-
ing themselves as independent rulers of small polities (Chitnis 1974; Deloche 1994, 1995; Dua 1996; Ota 1999; Rajayyan 1974; Stein 1985). Although parts of the region remained under the nominal control of Penukonda, it was subject to incursions by the Marathas (Muddachari 1969, 1970) and the Nizam, all of which was played out against the backdrop of chronic feuding between local chiefdoms. Haidar Ali and his son Tipu Sultan brought most of the region under their control in the late 1700s (Hayavadana Rao 1930; Puttanna 1924; Ramachandra Rao 1943; Stein 1985). The kingdom passed into British hands with Tipu Sultan’s defeat and death at Shrirangapattana in May of 1799 (Brittlebank 1997; Wilks 1989). British control of the region also proved unfavorable to the ambitions of local chiefs and the many petitioners who came forward after Shrirangapattana with claims of hereditary rights and lands. Throughout much of the nineteenth century and the twentieth century up to Independence, Mysore was governed by the Wodeyars, whom the British returned to the throne after Shrirangapattana.

Between roughly 1800-1810, the British amassed considerable information about Mysore under orders from Lord Wellesley, who, by 1800, governed lands that were many times the size of England. He commissioned three surveys to collect topographical (under the direction of Colin MacKenzie), natural (Benjamin Heyne [1864]), and agricultural (Francis Buchanan [1807]) data about the newly conquered territories (Cohn 1996: 80-81). One of these projects, Colin MacKenzie’s “Mysore Survey”, which was active between 1799-1808, yielded considerable geographical information about the country in the form of large scale topographical maps and manuscript reports, most of which have never been published (Dirks 1994; Edney 1997: 175-179; Phillimore 1950: 91-121; Robb 1998).

The six maps that were the primary cartographic product of the Mysore Survey are the particular focus of this article. They cover the Kanara coast and most of Mysore, except for Coorg and the Kolar Gold Fields. Drawn in pen and ink and watercolor at a scale of two miles to the inch (1: 126,720), these maps are extraordinary examples of early nineteenth century cartography. They depict the locations of forts, towns, villages (sometimes identifying inhabited and abandoned villages by different symbols), administrative divisions, roads, irrigated lands, temples, streams, tanks, hills and other topographical features. While small settlements are marked on these maps by symbols, the plans of the largest forts and fortified towns tend to be drawn as accurately as the scale permitted.

Viewed as potential archaeological data, the Mysore Survey maps offer what is, in effect, a graphical site location file of the Mysore kingdom as it existed 200 years ago at a watershed moment of South Indian history. Given the general lack of extensive site survey coverage and the high level of site destruction in the region, this is an important data source, the potential significance of which is enhanced greatly by the maps’ implicit demonstration of site contemporaneity. These maps also provide locations and spatial context for many sites that are known only as place names in the primary documents of the period. In sum, the Mysore Survey maps provide a basis for archaeological investigations of the cultural landscape that even modern remote sensing data could not provide, were such data readily available to researchers in South India.

Data Validity and Reliability

As with any historical document, the Mysore Survey maps are subject to several potential biases that may affect their interpretation. They cannot be used uncritically or without field verification as primary sources of information about the early nineteenth century Mysore landscape. The main concerns of those who would use them for archaeological field research are the limits of the maps’ accuracy and the extent to which they reflect Indian or British representations of the landscape. A recent preliminary field assessment of the accuracy of cultural features depicted on the Mysore Survey map for Chitradurga district, formerly the northern boundary of the Mysore kingdom, demonstrated repeatedly that it is a reasonably accurate map of the locations of cultural features that, in some instances, had been so thoroughly obliterated that they survive only as the odd standing wall in a back alley or in the collective memory of a village. The maps, therefore, are sufficiently accurate to have practical applications in archaeological site survey.

On the question of whose representation of Mysore – Indian or British – do the maps reflect, there was some concern initially that the major administrative boundaries, especially the parganas (lesser provinces), might
reflect British-influenced political divisions of the landscape. Contemporary primary documents, however, confirm that the parganas are administrative divisions that existed prior to the beginning of British control of the region (e.g. the Partition Treaty of Mysore, the instrument by which the Fourth Mysore War was formally concluded in 1799, mentions all but a few of the parganas by name [Wellesley 1836: 26–34]).

Using high resolution digital copies, the Mysore Survey maps were trimmed of borders and extraneous details, georeferenced, and assembled as a base layer upon which to build a geographical information system (GIS) of the Mysore kingdom at 1800. This article describes preliminary results based on the analysis of aggregate data for the entire kingdom and the limited examination of one province.

Major Administrative Units

At the death of Tipu Sultan, Mysore was divided into several major provinces or faujdāris (military governorships). Provinces were, in turn, divided into parganas, which were roughly of the size of a modern taluk, but of somewhat greater administrative importance. Administrative units comparable to the faujdāri and pargana antedate both the Islamic and the British presence in South Asia (Baden-Powell 1892: 254–255) and similar units can be traced in Mysore to Vijayanagara and its predecessors (Mahalingam 1967; Saletore 1934).

Town kaifīyāts, the family histories that were recorded under Mackenzie’s direction, and surviving administrative and revenue records suggest that the Mysore parganas were significant local territorial divisions. Like their counterparts in northern and western India (e.g. Fox 1971; Gordon 1994), they were often lineage-based and a fundamental unit of regional identity. As the building block of provinces, the pargana defined spatial centers of gravity for taxation, social services, lines of communication, ritual and ceremonies, defense, marketing, raw materials, and non-kin based social interaction. Unlike the province, it also was small enough that it tended to endure across fundamental changes of government, at least until modern times. It was, in sum, the world as experienced by many generations of villagers. Therefore, it is of considerable analytical interest for what it can tell us about the organization of social and economic relationships at the regional level. The next section explores the spatial expression of some of these relationships in an example.

Chitradurga Province and Anajee Pargana

The Mysore Survey maps encode little detailed information about the faujdāris but offer considerable data on the kingdom’s parganas. Chitradurga province provides an example (Fig. 1). In 1800, it comprised 12 parganas, each of which had a centrally located major town. The general settlement pattern was minimally a 4-tiered hierarchy, the apex of which was the provincial capital of Chitradurga. The other 11 major towns, all of which were well-fortified and built to withstand sustained sieges, were the political, economic, social, and religious centers

![Fig. 1 – Map of Chitradurga province.](image-url)
of their respective **parganas**. The Mysore Survey maps record 65 minor towns and 722 villages in Chitradurga province, all of which appear to have been nucleated settlements, a typical _maidan_ village pattern that persisted into the twentieth century (Buchanan 1807: 32; Hayavadana Rao 1930: 367). Prior to 1779, when the province was an independent kingdom, some _parganas_ were governed by administrators appointed by the Chitradurga _nayaka_; in a few cases, however, lesser _nayakas_ of local lineages were appointed to this post. Under Haidar Ali and Tipu Sultan, all of the major towns were under the control of commanders appointed from Shrirangapattna.

Anajee (Anaji) **pargana** (Fig. 2) in Chitradurga province provides a representative example. The legend on map OIOC X/2108/3 declares that Anajee _pargana_ covered 244 mi², or roughly 635 km². It contained 125 villages, of which 22 were in ruins in 1801, and 2,014 families, most of whom were farmers. Together with Mayaconda (Mayacondâ) and Holakaira (Holalkere) _parganas_, which were its neighbors to the southwest, it had been taken from the rajas of Târikere by the Chitradurga _nayakas_ in 1602 and passed into the hands of Haider Ali and Tipu Sultan in the late 1700s (OIOC R/2/1/Box 5).

Regrettably, with the notable exception of an early Kadamba inscription found in the fields near the headquarters town (Rice 1903: DG 161), Anajee scarcely warrants so much as a footnote in the local histories of the region; little is known about the poligar families who dominated it and built the Nayaka period _mandapa_ that is one of two surviving structures at the site (Srisathyan 1967: 388).

Anajee _pargana_ was shaped roughly like a club, the head of which lay to the southeast (Fig. 2). Much of this region is flat scrub jungle; the best farm land is in the North around the large tank at Anajee town. This fortified settlement is strategically placed on the only intersection of major roads to cross the _pargana_. These roads connected Anajee to Cancoopa (Kanakuppa) to the east, Harihâr on the Tungabhadra River to the west, and Chitradurga to the southeast.

The headquarters town crowned a low hill that also anchored the tank bund. According to Mackenzie (1803: 27–28),

In the center of the place is a small square stone fort, enclosing two ruinous mounds (perhaps the ruins of Cavaliers) which might be still rendered useful as batteries; without this is a second Square Stone fortification of about 300 yards each

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**Fig. 2 – Map of Anajee pargana, Chitradurga province.**
side with small Turrets not capable of much defence. This Fort is inclosed on three sides of the square by a third ram- part or mound, now in ruins, of a regular shape, except on the South East Angle, where it runs out to enclose a rising com- manding imminence; this last wall has a dry ditch in front. From this slight description of Anajee it will be seen its pres- ent state is not very formidable as a military post, neither its walls, batteries, nor its ditch in its ruinous condition being capable of much defence.

When Mackenzie visited Anajee in October of 1800, he found that the town had been devastated during the late wars. He wrote, “The Population at present is not considerable, many of the houses have been deserted in the late troubles & are ruinous; most of these at present inhabited are in the second Inclosure – the roofs are terraced, covered with mud and supported by wooden pillars; no considerable houses or buildings appear in the place – there are two Pagodas”. Anajee town never recovered from the miserable state in which Mackenzie found it. What was once the headquarters town for the pargana and the poligars who administered it, is now scarcely recognizable as anything other than just another low hill. The fort walls have provided generations of villagers with materials with which to build a new town about a kilometer to the West and much of the southern quarter of the site has been destroyed by road construction.

Anajee pargana was unusual among the northern Mysore parganas in that it contained only four forts, of which Anajee town was the largest. The other three forts are within 5-11 miles (8-18 km) of Anajee town, one in the narrow base of the club, the other two about half-way up its length to the southeast (Fig. 2). Each of these locations lies 0.5-1 miles, or roughly 1-2 kilometers, off the main road. Forts and fortified villages like these were often subsidiary administrative and market towns controlled by kinsmen of the local raja, and, later, by administrative and revenue officials, some or all of whom may have resided at Anajee town.

Near the head of the club, two small fortified outposts, Sidavoonydroog (Siddavvanadurga) and Allagutta, sit astride roads that cross the edges of the pargana (Fig. 2). Given their locations, layout, and surface remains, these sites may have been posts for the collection of sair or customs duties. Regrettably, no eighteenth century revenue records are currently available by which to test this possibility.

Mackenzie recorded 59 villages in Anajee pargana, all of which were of the nucleated maidan type. These settle- ments proved to be more ephemeral than the fortified sites and towns; fewer than half of them can be correlated with modern village locations in the same region.

When one looks beyond sites to general features, it is immediately evident that the Anajee pargana boundaries are more irregular than necessary given the local terrain. Abrupt angles in pargana boundary lines are, in fact, relatively common across the Mysore kingdom. In most cases the lines were drawn to exclude or include specific villages and their adjacent fields, sometimes even crossing rivers to do so. The pattern demonstrates that pargana boundaries were not simply laid down according to bureaucratic requirements, limitations imposed by the terrain, or the convenience offered by prominent natural features. The cultural landscape was an equally, if not sometimes more, compelling factor in the negotiation of pargana boundaries.

In sum, Anajee is fairly typical of the spatial layout of Mysore parganas. Regardless whether we call it a pargana, a taluk, or a pre-modern district, this supra-village level unit tended to share several cultural features beyond the obvious ones of villages and tanks. These features included:

- A central (or at least strategically placed) headquar- ters town;
- A road network for which the headquarters town was the primary node;
- Several smaller forts in the farther reaches of the pargana;
- Fortified outposts on lines of communication;
- Negotiated boundaries defined, at least in part, by the cultural landscape.

With the addition of pargana boundaries and major town locations to our store of geographical knowledge about the Mysore kingdom, we can identify and interpret, albeit tentatively, the patterned layout or geometry of parganas. In the Anajee case, for example, the addition of the pargana boundary provides important contextual information that may enable the accurate interpretation of the role of such small posts as those at Allagutta and Siddavvanadurga (Fig. 2). In the absence of these data, it would be reasonable to interpret Siddavvanadurga as an outpost of the Chitradurga poligars. However, when viewed within the context of the boundaries of Anajee
pargana, Siddavvanadurga clearly owes its existence to decisions made in the opposite direction, at Anajee town. The main road that connects Anajee town and Chitradurga also takes on new light when seen in context. While it clearly followed a reasonably direct route between these places, it also tended to go right up the middle of the pargana, a pattern that is repeated in the Myaconda and Holalkirai parganas to the west. The most important archaeological implication of these patterns is that one cannot fully understand the pargana by just looking at major settlements. One must also examine the transportation network that tied the settlements together, something that often tends to be brushed aside in archaeological investigations of regional spatial patterns, usually because these data are unavailable.

**Parganas in Comparative Perspective**

Anajee was one of more than 100 parganas in the territories conquered by the British in 1799. This section examines several major spatial patterns concerning villages and forts across these parganas. These examinations are necessarily general ones because much of the digitizing that will permit detailed analyses is in progress.

**Villages**

While historical demographers may think nothing of studying 200-year old village distribution data for an area roughly the size of Sri Lanka, archaeologists are rarely afforded the opportunity to do so. This is inevitably true of regions like Karnataka for which there are few recorded site locations. Viewed in this light, the Mysore Survey maps offer an exceptional opportunity to study regional village patterns.

According to the Mysore Survey map legends, there were 23,001 documented villages, of which 3,769 were in ruins at the time of survey, in the 24,800 square miles (65,000 square kilometers) covered by the maps. This yields a village density estimate of 0.76 villages per square mile, which is considerably higher than the 0.57 density reported a century later in the 1911 census (Thyagaraja Aiyar 1912: 2). The difference may reflect several factors, among them being increased urbanization of Karnataka during the nineteenth century (i.e. there were more people but fewer villages by 1911), and different minimal criteria for “villages” used by Mackenzie and the 1911 Mysore census.

The highest village densities were in the mountainous Western Ghats, in the Upper Cauvery Valley, and on the Mysore Plateau in what is today the main oil seed-growing region of Karnataka. A clear gradient of decreasing village density can be traced to the northeast of the Shimoga Hills and the Baba Budans and across what is now Chitradurga district and northern Tumkur district. The pattern appears to reflect cultural differences in village organization more than population density per se. Villages were more aggregated or “clumped” in the plateau or maidan regions of Mysore than in the hill country or malnad. In the maidan districts, “the houses are collected in a prominent or central portion of the village, waste and cultivated lands surrounding them on all sides... In the malnad districts, villages are often such only in name, being composed of scattered homesteads at various distances apart” (Hayavadana Rao 1927: 367). Mackenzie, who viewed a village as primarily a residential unit, found as many villages in the malnad as there were villages and hamlets of separate names. This inference is supported by the 1911 census, which shows that Chitradurga and the districts in the Western Ghats (i.e. Shimoga and Kadur) had low village density relative to the southern part of Mysore (Thyagaraja Aiyar 1912: 2). The village density pattern, in short, is an artifact of how Mackenzie identified villages.

Of greater significance is the density of abandoned villages across the Mysore kingdom (Fig. 3), which suggests that the Mysore Survey maps may enable researchers to document some of the major effects of the Fourth Mysore War on the inhabitants of the kingdom. The two clusters of parganas that show the highest densities of ruined villages lie along routes that saw considerable fighting during this conflict. The southern cluster is along the Bangalore-Mysore road; the northern one lies across the Sera-Kolar road. Yet another line of ruined villages can be traced pargana by pargana between Shrirangapattana to the vicinity of Bednore.

In sum, the pargana-level demographic data reported by the Mysore Survey provide a comparative basis for examining early nineteenth century village distributions and densities across the kingdom. Some of these patterns, such as the differences between the malnad and maidan, appear to reflect well-known, archaeologically delineable
settlement patterns in the region. Others, such as the spatial patterning of abandoned villages, may reflect secondary effects of the late war. Although none of these patterns can be tested with aggregate data, the estimated 10,000-12,000 inhabited and abandoned, named village site locations that are now being digitized from the Mysore Survey maps will provide point-specific data for these tests.

**Towns**

Major and minor towns, many of which were fortified, were distinctive features of the Mysore parganas and were also of considerable interest to Lord Wellesley, who viewed the Mysore Survey maps as basic military intelligence gathering. The maps identify more than 100 major towns in the 88 parganas of the kingdom. They also show the locations of hundreds of minor towns.

Unlike Mysore villages, the distribution of which differed between the malnad and maidan regions, the spatial

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Fig. 3 – Map of abandoned villages density in the Mysore kingdom.
patterning of parganas appears to have been relatively consistent throughout the kingdom. Each pargana had at least one, or at most two, major headquarters towns. In this regard also, ambitious individuals and families of the Mysore kingdom responded to the same general constraints that appear to have applied cross-culturally to the builders of British hill forts, medieval German castles, and late prehistoric towns in the southeastern United States. If one is to concentrate and hold power and compete successfully for land, people, water, and status with other individuals or lineages that are similarly equipped, the solution almost inevitably involves fortified central places.

All of the major towns lay along main transportation routes and most were fortified. Provincial headquarters towns tend to be the only major settlements that show remains of Nayaka period palaces, royal display areas, and extra-regional architectural influences. Major towns also tend to be architecturally more similar to each other across a large expanse of Mysore than to the minor towns of their own pargana.

Conclusions

This paper makes two main points, one is methodological, the other substantive. First, one highly productive way to enable the analysis of early modern South Indian site distributions is to integrate the spatial data encoded in the earliest georeferenced maps of the region into archaeological site surveys. Although the overhead costs of preparing the data for analysis are considerable, the result is a flood of fresh information that would otherwise be inaccessible. The Mysore Survey maps are examples of late eighteenth and early nineteenth century maps that exist for many parts of the subcontinent (e.g. Edney 1997; Phillimore 1945-58), but their information potential has been largely unappreciated by archaeologists. The Mysore Survey maps, even as viewed from this preliminary analysis, provide a unique historical perspective on the cultural context of a major region during an important watershed era in South Indian history, with the beginning of British hegemony in the Deccan. Significantly, they also provide a virtual site file of location data for tens of thousands of contemporaneous archaeological sites in a region where such data are otherwise unknown.

The analysis of these maps, and the ongoing archaeological site reconnaissance survey that is necessary to verify their accuracy and collect additional site information, are yielding a significant corpus of fresh data within which to interpret the development of poligar chieftdoms and little kingdoms in this part of South India.

Second, initial analysis of the pargana-level data digitized from the Mysore Survey maps, such as that for Anajee pargana, demonstrates that such administrative units offer an important framework within which to examine the development of the late medieval and early modern cultural landscape of Mysore. The boundaries of these localities, which often appear to have been of considerable time depth, delineated culturally meaningful service areas and constrained its internal spatial patterning. The potential interpretive potential of these administrative units is easily overlooked when the region is viewed primarily from an archaeological site-based perspective.

The analysis of aggregate spatial data for all of Mysore is of a more preliminary nature than that for Anajee pargana, largely because thousands of cultural features from the Mysore Survey maps have yet to be digitized. Some of the spatial patterns, such as that which maps the parganas with the highest densities of abandoned villages onto roads that figured prominently in the Fourth Mysore War, may yet prove to be more apparent than real. Other patterns such as that which shows the distribution of inhabited villages per unit area in the early 1800s, are more readily interpreted in light of modern demographic data. Nevertheless, it is the integration of the detailed analysis of point data from the digitized maps and the results of archaeological site surveys, that will provide the empirical basis for testing these patterns and, ultimately, enable researchers to recreate and study the cultural landscape of the Mysore kingdom.

All illustrations by author.
NOTES

1 The Nayaka period in South Indian history spans the centuries between the collapse of the Vijayanagara Empire in the late sixteenth century and the consolidation of British power in the South at the beginning of the nineteenth century. As used here, "nayaka" in lower case can mean a local military governor appointed by a higher king or a "little king" who traces the legitimacy of his rule to an ancestor who held such an office in the same headquarters town or general region. In the study region, nayaka is sometimes used as a synonym for poligar.

2 The five manuscript maps that were one of the main cartographic products of this survey are in the Oriental and India Office Collection (OIOC) of the British Library, London. The OIOC shelfmarks are X/2108/1-6.

3 For example, the family history of the Hatti poligars trace their beginnings in Chitradurga district to Kotte Malla Nayak, who arrived in this region with his herds and flocks. He obtained permission from Vijayanagara to colonize the Hatti region and received the title of polgar. His descendants founded several local towns and forts and controlled the region until the 1700s, when it was taken by Hire Madakere Nayaka of Chitradurga (OIOC MacGen/21/45).

4 The modern spelling of a "pargana" or town name, if different, is given in parentheses following the first mention of the name as used on the Mysore Survey maps.

5 The range in the number of forts per pargana is considerable. Heerioor (Hiriyur) pargana in southeastern Chitradurga district, for example, is reported to have had 130 forts (map legend on OIOC X/2108/3).

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