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Onshore and Near Shore Explorations along the Southern Tamilnadu Coast: with a View to Locating Ancient Ports and Submerged Sites

DR. A.S. GAUR AND DR. SUNDARESH

Abstract

Tamilnadu coast is dotted with several ancient ports. An onshore exploration was carried out along the southern Tamilnadu coast and located several medieval ports near Nagarcoil and in Rameswaram island which include Puttan Thurai, Mana Kudi and Ariyagundur. The survey was carried out at well-known ports at Korkoi, Alagankulam, Tranquebar and Poompuhar. Presently, Korkai and Alagankulam are located far hinterland while remaining ports are situated right on the coasts and partly submerged under the sea. The paper discusses the present state of art of the ancient port and possible causes of shoreline changes at various places on the Tamilnadu coast.

Introduction

The significant amount of work has been carried on ancient maritime activities of Tamilnadu, which is bordered by the Bay of Bengal sea from the east and India Ocean from the south. Entire Tamilnadu coast is dotted with several ancient ports (Fig. 1). One of the richest ancient literature, commonly known as Sangam literature preserved in Tamilnadu, gives an ample historical accounts on maritime trade and commerce prior to the Christian era. The Sangam literature mentions about colonies of foreign traders at Poompuhar which was one of the important ancient Chola capital port town. **Greek merchants in Tamil India were known as *Yavanas*** (Pillay, 1968:114). The references of Tamil literature are very well supported by archaeological excavations at number of coastal sites where a large number of Roman coins (Sewell, 1904) and other artifacts of Mediterranean origin have been discovered.

Around early medieval period when Buddhism was on spate, Tamilnadu played a significant role in maritime relations with Southeast Asian countries. Presently, the ancient port towns are located either very far in hinterland or submerged in the sea. To have a proper location of these sites in respect to the distance from the sea and to asses the amount of destruction of an archaeological site by the sea, a coastal exploration was carried out in southern Tamilnadu coast. Present paper describes the state and the findings from the ancient seaports and possible causes of their decline.

A number of archaeological sites belonging to **Sangam Period (3rd cent. BC to 3rd cent. AD)** are located along the coast of Tamilnadu and they had maritime relations with Roman World. In order to seek the possibility of extension of marine archaeological explorations of Tamilnadu coast the following sites were visited and first hand information were collected.

Poompuhar

Poompuhar one of the most notable ancient Chola port played a vital role in maritime history of Tamilnadu specially, during Sangam period. Poompuhar or Kaveripoompattinam is located at the point where the river Kaveri joins the Bay of Bengal. Sangam period texts such as Silappatikaram, Pattinapalai and later ones including Manimekhalai, Ahananaru vividly describes Poompuhar as the capital port city of the Early Cholas. The Manimekhalai mentions that the Chola king had lost his son and in his great grief he forgot to celebrate the annual Indra festival. This enraged the goddess Manimekhalai who caused the city to be swallowed by the sea. Though the reference is only to a supernatural incident, it may be taken as an echo of some actual sea erosion of high tidal wave that lashed the city.

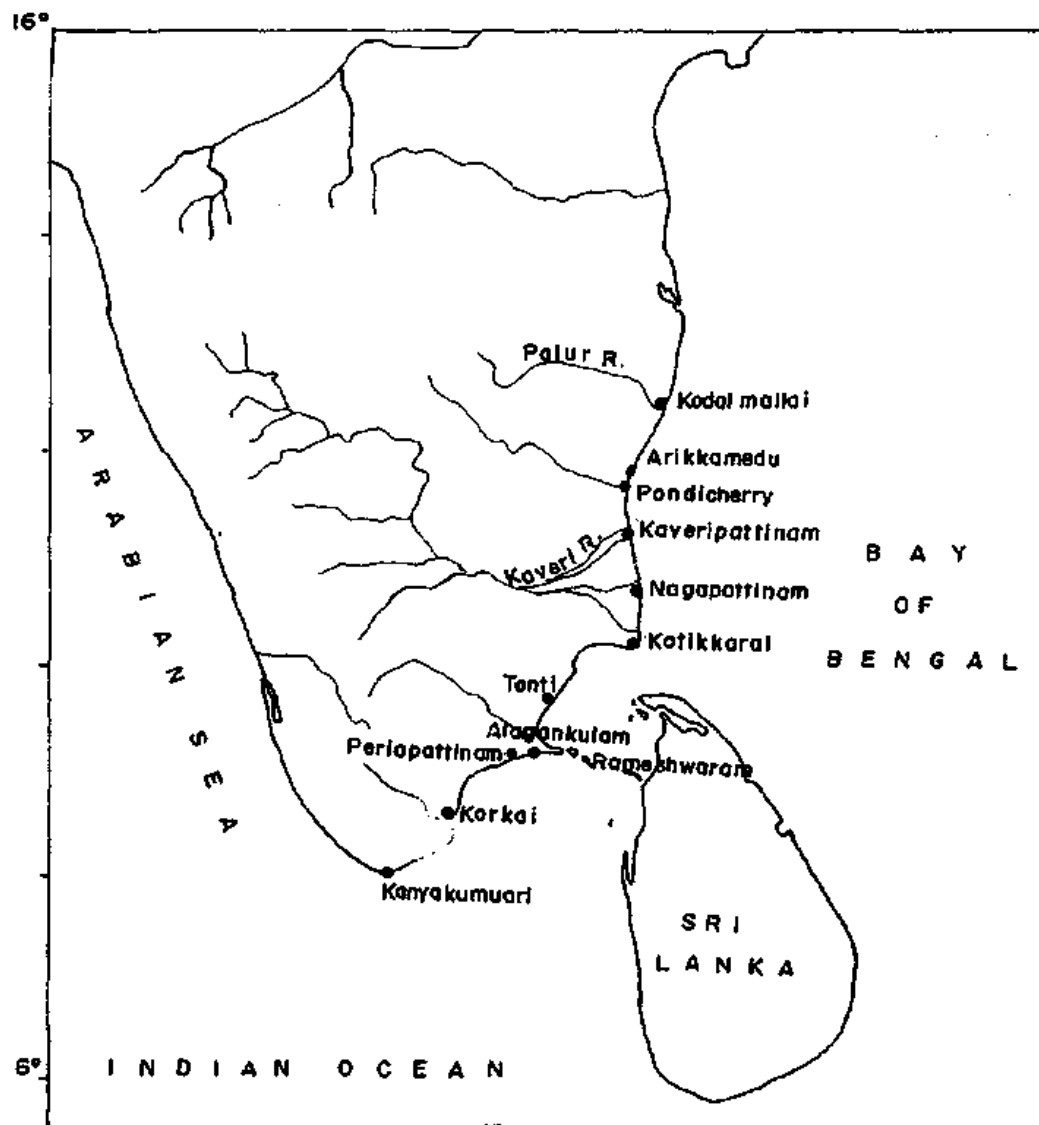


Fig. 1 Ancient ports of the Tamil Nadu coast

Land excavations at Poompuhar brought to light two structures which have been described as Warves (Rao, 1987, Athiyaman, 1991) possible on ancient channel of river Kaveri. However, the findings from offshore exploration suggest that a part of habitation has been submerged in the sea at least at 8 m water depth. If it is so then ancient shoreline may be located about far offshore (Sundaresh *et. al.* 1997) and these structure will be about 8 -10 m above msl during Sangam period and therefore, appears to be used as an inlet for storing water in a mud bank reservoir rather than the wharf. Marine archaeological explorations have been carried out around Poompuhar region and the observations made on the coastal monuments and other findings are described below.

A brick structure of 1.2 m height, 1.2 m width and 4 m length exposed in intertidal zone of Poompuhar and in all 11 courses of bricks were recorded. Based on the brick size (36 x 18 x 6 cm) this structure dates to approximately early century of the Christian era. The present location (intertidal zone) clearly indicates a human habitation followed by a land ward migration of the shoreline (Vora, 1993). Four brick structures with a width of 3.4 m are visible in low tide zone off Kaveri mouth located at 60m seaward and at 1m water depth (PL 1). These structures stand in north south direction in a line with a total length of 25 m. The brick size is 22 x 13 x 6 cm suggesting Danish period (17th century AD). The ring-wells at Poompuhar and at Vanagiri were noticed during low tide. These ring-wells were generally used for fresh water (PL 2).

The Masalamani temple at Vanagiri dated approximately to 11th century, is presently under threat of destruction. About 50% of the structure has already been destroyed and submerged in the sea. The temple is constructed with brick walls, stone lintels and pillars. This is a clear evidence to show the advance of the shoreline in the last 900 years.

Tranquebar

The earliest habitation in Tranquebar goes back to later Chola period (9th century AD) and continued till today. Local people collect the coins of Chola, Dutch and Danish period during low tides and sell them. Probably these coins are being extracted by the wave action on the coastal section.

A Siva temple of Chola period is presently the potential target of Tranquebar sea. The sea has already destroyed more than 50% and likely to engulf the entire temple in near future. This temple is also built with bricks and stones. Even during low tide about 25% of the temple remain in the sea and this is yet another instance of an advancing shoreline. The remains of Dutch fort have been submerged in the sea. They are located 100 m away from the present day shoreline. This is partly exposed during low tide. Two brick wells of Danish period can be seen at the zone. In addition several other structures can be seen during low tide. There are also evidences in Tranquebar about the destruction of modern houses due to what encroachment of the sea in the recent past.

A mid 17th century map of Tranquebar has been displayed in the Dansborg Museum at Tranquebar. It shows a complete plan of the town along with the then shoreline. A careful study of the map suggest that, (i) the Tranquebar town was well protected by a seaward fort wall, and (ii) the Siva temple was sufficiently land ward within the fort wall. It is estimated that during the 17th century AD shoreline was at least 50 m away from the fort wall and temple located around 250 -300 m from the shoreline (Fig. 2). This observation unequivocally suggests that the shoreline has transgressed about 300 m in the last 300 years infringing at an average rate of one meter per year.

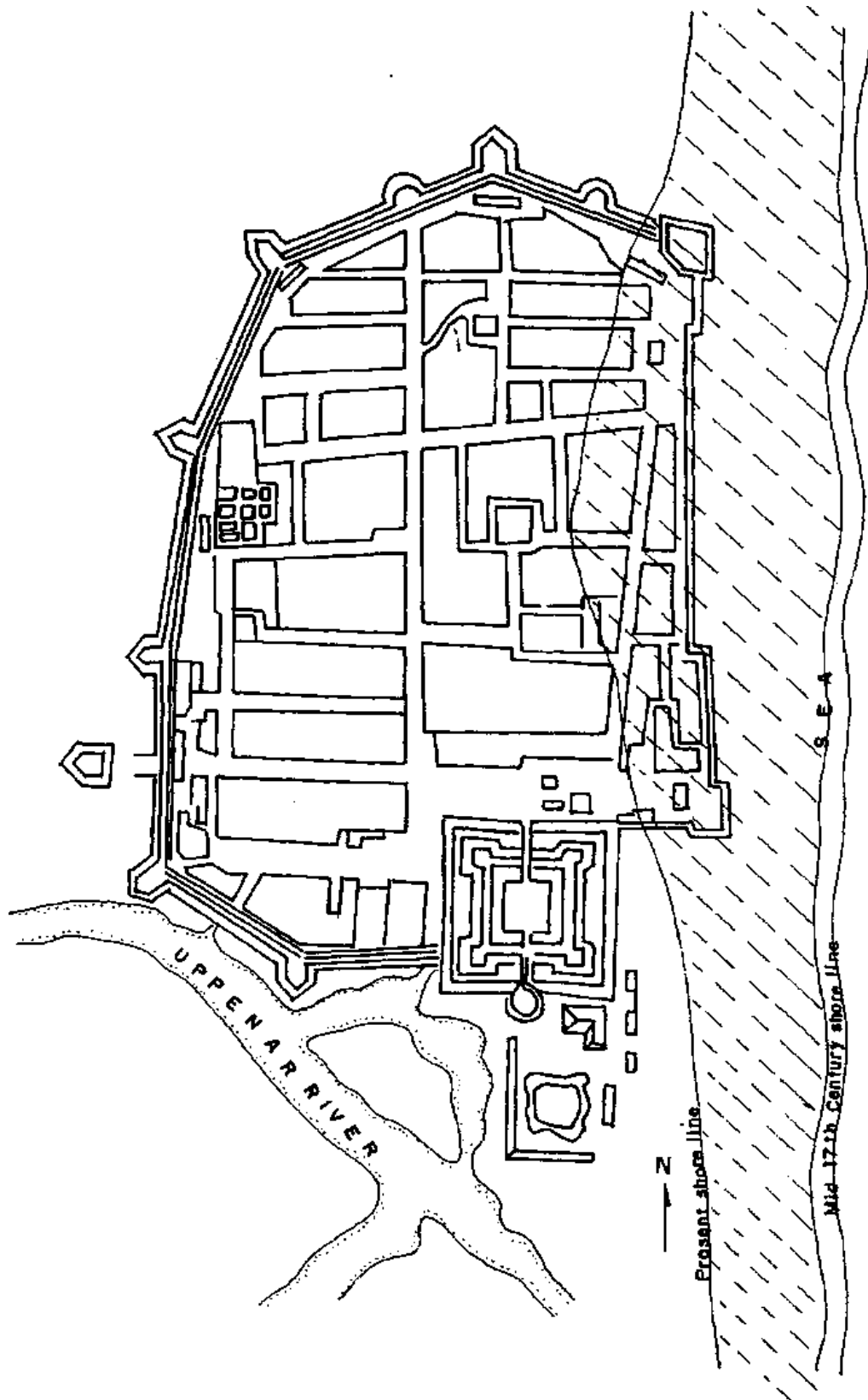


Fig. 2 Dansburg or Trankenbar

Alagankulam

A famous ancient port town at Alagankulam is situated about 3 kms from the shoreline on the bank of river Vaigai. Presently, a channel which is about two km from ancient site is joining with sea which could have been near to the site in bygone age must have been used for plying the boats. No literary references have been noticed about this town either in Sangam literature or in foreign notices (Kasinathan, 1992). There is a word *Argeirou* (McCrinkle, 1885) mentioned in *Geography of Ptolemy*, which could be identify with this place. It is said that this town is located around *Orgalic Gulf*, which is suggested to be of Rameswaram area (McCrinkle, 1885). The word *Argalou* of *Periplus of Erythrean Sea* (McCrinkle, 1887) also suggest the very location of Alagankulam. It is said that it is lying inland and celebrated for a manufacture of muslin adorned with small pearls.

It was very active port during the late Roman period (around 3rd-4th century AD) and Roman ships laden with their wine in Amphorae jars and other goods had come here (Raman, 1988). Apart from Pandyan and punch marked coins a few Roman coins datable between AD 383-408 were also found here (Kasinathan, 1992). Another important discovery of a few fine sherds of NBP suggests its contact with Gangetic India in early centuries of Christian era (Kasinathan, 1992). Archaeological excavations at Alagankulam yielded a rouletted sherd bearing the figure of the ship on the shoulder portion (Kasinathan, 1997). The figure is very similar to that found at Ostia a Roman period port. It therefore, suggests that Alagankulam had active trade contacts with Roman world and foreign writers must have noticed it. There are also evidences on the exploitation of marine resources.

A mooring stone of sandstone was noticed near the shore. It was exposed up to 75 cm and two square holes were noticed. Near to shore a British period warehouse was noticed. The distance between ancient site and present shoreline clearly suggest a very little shifting of shoreline. Fishermen towards the south of Alagankulam waters also reported a shipwreck. As per the present location of the site, it is suggested that the boats at this place were coming by a river channel, which is existed about 2 km south of this site. So far the coastline is concerned there is not significant change of shoreline in last 2000 years.

Periyapattinam

The village Periyapattinam is situated about 20 km southeast of Ramanathapuram in Tamilnadu. The early inscription of 10th century called this as Parakirmapattinam and later as Pauthiramanikkapattinam till AD 1199 (Rajan, 1988). The Ceylon chronicle states that Sri Lankan general Jagathvijayan invaded and caught the fort of Parakirmapattinam which had three fortified walls (Aiyangar, 1921).

A large quantity of porcelain collected during excavation, which is datable to 13th-14th century AD. The coins of Chola, Pandya and Madurai were also unearthed from this site. The antiquity of place suggests that Periyapattinam was once a flourishing port particularly in the 12th-14th century AD. Recently a stone anchor near the Kappalaru was noticed near this place (Jaykumar & Athiyaman, 1999) which is situated between present village and sea. The name and topographical feature suggest that this river must have been once connected with the sea by a channel through which ships must have been navigated to this port. The literary evidence and archaeological excavations prove that this port served as an important trading station of Arabs and Chinese during the medieval period.

The present location of site and reservoir suggest that a lot of sedimentation has taken place in this area, because now there is no connection with sea and it is about 3-4 km interior. Small dunes can be noticed all along the coast in this area.

Korkai

Ancient site is located at the mouth of the Tambraparani. The site is referred in the early Tamil Sangam literature and also mentioned in the notices of the classical geographers as an important port for pearl fishery. Korkai was an important for pearl fishery is confirmed by the find of innumerable pearl oysters in the various levels of the site (*IAR1968-69:33*).

Kolkhoi, an emporium described by Ptolemy (McCrindle, 1885 :57) and an emporium of the pearl trade, mentioned by the author of the *Periplus of Erythreanean Sea* (McCrindle, 1879), as situated on the seacoast. The site has been identified with present Korkai which is situated 7 kms inland. McCrindle says (1879) that "originally Korkai was situated on the sea coast and later the sea regressed and it was not suitable for carrying out trade".

Presently, Korkai is located about 25 km south of Tuticorin and about 7 km from the shoreline. This was the ancient capital of Pandya king. The excavation at the site revealed the evidence on the trade between India and Mediterranean countries in 3rd century BC to 3rd century AD . At present, there is no trace of any channel nearby, which connects the site with sea. In this case shoreline has been retreated and primary reason for the same may be the sediment deposition.

Puttan Thurai

The village is located about 25 km southwest of Nagarcoil town. A church that was constructed in 1901 was made at a place where an ancient temple was existed. In front of the church four stones forming a square and having one hole deeply buried were noticed. These could be either mooring stone or anchor. Local people informed that when they excavated for some construction a large number of potsherds were found. A local resident of this village collected a Dutch coin.

Mana Kudi

This is located about 30 km southeast of the Nagarcoil town. Similar to those at Puttan Thurai a Church which was constructed over an ancient habitation. Here a river is joining at the sea, which could have used for plying the boats. Nothing significant was observed here.

Rameswaram Island

Northeast shore of the island was surveyed where the Department of Archaeology, Government of Tamil Nadu, recently located an archaeological site. They have also recovered 10th century copper Buddha figures and one stone statue perhaps of little early date. The archaeological site is spread over 2 km along the coast and very badly is being destroyed by the sea. The sea waves are hammering the section. One can collect a large number of potsherds from the site. A few potsherds consolidated with beach rocks were also observed. A huge deposit suggest that site was occupied for a long period. The location of the site suggest that site must have served as safer harbour. The discovery of Chinese pottery suggests trade relations with east. Here a clear indication of advancement of shoreline.

Ariyagundur (in Ramaswaram island)

Ancient site is located about 5 km of northeast of Rameswaram temple. The Department of

Archaeology, Government of Tamilnadu had collected a stone Buddha figure and one Bronze Buddha head recently.

The site is extending along the shore more than one km and 2 to 3 m. deposit of human settlement was noticed. It is difficult to suggest the earliest date of the habitation but the discovery of Chinese pottery from surface suggests the latest habitation of 10th-11th century AD. The location of the site suggests that it could have served a very safe harbour. The lowest habitation may be far from the shore in early period but presently it is touching with sea during high tide, which suggest that shoreline moving landward.

Discussion

Location of above sites in connection with sea is very significant in respect to study the regional geological set up. There is clear evidence of landward movement of shoreline between Poompuhar and Tranquebar area as a lot of structures of 17th century AD could be noticed off Tranquebar while a number of terracotta ring wells and brick structures were discovered in inter-tidal zone of Poompuhar. Several causes for the movement of shorelines have been suggested (Sundaresh et.al. 1997) such as the construction of several dams along with river Kaveri which resulted sharp fall in sediment discharge in the sea which causes for the encroachment of the land. The area also falls under highly sensitive zone for short-lived storm.

Geological studies near Nagapattinam, about 30 km south of Tranquebar have indicated the emergence of land which is an indication of the tectonic activity in the past over this area (Bhaskaran and Rajmanickyam, 1997). It is often observed when some portion of the land is emerging due to tectonic activity and adjoining areas often subsidized, therefore, it may be quite possible that area between Poompuhar and Tranquebar is sinking. Further south of Nagapattinam Alagankulam a Chola port and Korkoi a Pandyan port of Sangam period is located far from the shore. The antiquities and literary references suggest that both these ports were very active during Christian era and they had overseas trade relations with Mediterranean countries. Geological studies of this place suggest that between 5440+60 and 2630+65 years BP sea level stand higher by about 1m (Loveson, 1997). If these factors taken into consideration then the shoreline during Sangam may be very near to Alagankulam and Korkoi. This area is also prone to sedimentation as Palk Strait is identified as a zone of active littoral drift connecting Gulf of Mannar and Bay of Bengal (Gandhi and Rajmanickam, 1997).

On Rameswaram island an archaeological site on north eastern coast is being destroyed by the sea continuously but a huge deposition of sand dune near this also suggest that both process are going on simultaneously i.e. erosion and sedimentation.

Conclusion

Onshore exploration has suggested a vast potential for the underwater exploration all along the coast of Tamilnadu. There are lot possibility to find archaeological sites submerged in the sea between Poompuhar and Tranquebar and may be ancient shipwrecks other places. There is a clear indication about the advancement of shoreline between Poompuhar and Tranquebar while southward the shoreline has regressed significantly, which led to the disuse of ancient ports. Further detailed work at these places will be highly potential for marine archaeology.

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