CHAPTER VII

CONCLUSION

The art of construction of fort and fortification that came into being under the patronage of a number of rulers of India in general and coastal fortresses of Kerala St. Angelo and Bekal in particular and their comprehensive and scientific survey have led us to highlight some of the distinguishing features and also the techniques adopted for raising such structures through the ages. The fieldwork and scientific survey of above mentioned St. Angelo and Bekal fortresses and their comparative study revealed that the geographical situation of the region had its significant role in raising the fortresses for defense purpose. Both the fortresses are built on the major part of the area that is covered by laterite outcrop and sea, with the topography of the region, which facilitated the construction of these fortresses. Obviously the unique physiological feature covering Arabian Sea helped the builders for defense purposes.

It has been observed that these fortresses were raised on the surface of rock. The rock was sedimentary in nature horizontally bearded and passes the natural phenomenon to support the heavy load. Besides, these huge torso or blocks of laterite plateaus also facilitated the builders for raising fortresses. Both the Indian rulers and the Portuguese traders of late medieval period realised the importance of fort and fortification. Almost all battles of the Portuguese were fought with the coastal forts in the background. Forts provided shelter when they had to retreat as a defensive measure. All along the coast a number of creeks with deep
waters served as anchorages and the mouth of these creeks, guarded by the forts, formed excellent naval bases.

The above study brings to the conclusion that these fortresses played significant role in trade and defense purpose clearly revealed in the excavated findings and the presence of architectural features. The architectural creations within the fortresses at Bekal and St. Angelo leave one amazed and confused. Both the fortresses are having the most complicated secret passages, hideouts, protective defense in terms of voluminous fortification wall with bastions, battlements, watch towers, and a wide moat, dark passage, subterranean passages that are through the citadel perplexing and bewildering the enemy. Besides the rampart walls, there are other distinctive buildings within the fortresses which could be classified as palaces, durbar hall, chapel, housing complexes, long streets and lanes by-lanes, drainage systems, magazine room, wells and stepped tanks, etc.,

The walls of Bekal fortifications are tall, broad, drum shaped bastions with large number of loop holes. Walk walls are provided all along the inner side fortification for easy and smooth patrolling. Flights of steps are provided from inner side walk wall to reach the raised platform of the bastions. The Bekal fortress walls are very thickly built with dressed laterite stone along the core. Whereas at St. Angelo, the Portuguese constructed double wall system and the core portion of the rampart walls are filled with straw and earth materials. The St. Angelo fortress walls can withstand the cannon firing impact, which is not possible at Bekal fortress. Because the entire wall portions are built with laterite stone in vertical manner of lying of stones. Hence with any direction of pressure it will collapse immediately, and it can not withstand the cannon firing impact. In St. Angelo, the Portuguese applied head and stretcher technique in laying out laterite blocks along the walls and bastions. The citadel, watchtowers, cells, magazine rooms, captain’s house, chapel, stables, and steps leading to the

top of the bastions were all on European style of architecture. But the arches and laterite structure were of local style.

In Bekal the mud mortar has been predominantly used, whereas at St. Angelo the Portuguese preferred shell lime mortar as binding and plastering materials. It is also noticed in Bekal that the fortification walls and bastions are in semicircular and tapering whereas at St. Angelo the walls are slanting and bastions are square or rectangular and triangular shapes. There is no semi circular bastions reported and almost 80° angle, the walls and bastions are built at St. Angelo fortress.

Due to the double wall system at St. Angelo fortress the top of the wall portions are broad and having long and wide terrace paved with laterite and lime plaster. So the patrolling can be done all along the top of the terrace on the rampart walls, as well as on the bastions steps are provided wherever necessary. This kind of rampart walls of the ancient fortification can be seen in India at Dholavira, the famous Harappan fortification built in mud bricks in Gujarat Ran of Kutch. This can not be washed away easily even by heavy flood, for under ground passage, drainage systems and for security point of view it is the best way of construction which the Portuguese followed, which is already prevalent in ancient India. This kind of construction involves large number of stones, labour, and is time consuming requiring meticulous planning. This is the major difference noticed in these two fortresses on architectural and technical aspects. In Bekal a series of loopholes are provided all along the rampart walls and bastions whereas at St. Angelo the Portuguese defence is exclusively dependent on the big cannons mounted on the bastions and on rampart walls. Slop passage along the inner side of the rampart can be seen for lifting up the mounted big cannons on the wheel cart. Portuguese war weapons consisted of sword, gun, spear, lance etc. Cannons of the Portuguese type were not in use in Malabar and hence the Calicut forces could easily be defeated.
The moat at St. Angelo fortress is wide, and deeper than that of Bekal moat. An ancient Portuguese triangular fortress has been recently exposed in excavation; around this triangular fortress a dry moat has also been discovered. The Portuguese for strengthening the landside on security point of view could have provided this landside fort and the dry moat. There are a number of dark cells underneath the rampart walls at St.Angelo fortress. In Bekal fortress such cells are not noticed.

The warehouse noticed as store room in St. Angelo fortress behind the present day Conservation Assistant’s office was the main warehouse for storing all goods for their export to Portugal. Whereas at Bekal the fortress was only for military purpose and for kings and his households. The military barracks were meant to shelter the residence of kings and nobles.

From St. Angelo fortress at Cannanore the horses imported from Persia, Arabia were dispersed to different regions through land routes. When the Portuguese invaded Goa in 1510 naval supplies were sent from this fort. The same was the case in the establishment of Portuguese hegemony over Malacca.

There was a series of ancient covered drainages at St. Angelo fortress of Cannanore and all these drainages are running towards the moat. Whereas at Bekal we find only few drainages inside the fortress and among the excavated structural buildings.

In Bekal the corner bastions were built very broad, with double basement. There are also two and three tired bastions at Bekal fortress. Wherever the security is needed round the clock an outer pathway along the fortress and raised bastions cum watchtowers were provided. The outer fortification watchtower cum bastions in the east and western seasides of Bekal fortress were built on the granite outcrop. Laterite stones are used as building materials of both the fortresses. They were dug out from the moat, wells, and the tanks.

St. Angelo fortress is also used as the residence of the captain who was appointed by the king of Portugal. In side the fortress houses for the priests, Portuguese soldiers, hospital
area, convent and mesericordia were located. Hence selected people alone could live inside the fortress and it was a warehouse of the Portuguese as well as the international port center of Portuguese period. Workers were allowed for various kinds of works inside the fortress.

The fort commanded the coastal sea-routes of the Arabian Sea and it played a prominent role in the Portuguese colonial expansion and from here the Cartazes were issued by the Captain for the ships. Whereas the Bekal fortress was a residential palace of the Nayakas of Ikkeri and Tipu Sultan and finally it went in the hands of British. Here we come across a large number of copper coins of the period of Tipu Sultan, residential areas, durbar hall, large number of excavated well and tanks for water supply. Hence, the fortress must have been occupied by kings and many other high level officers and functioned as military headquarters.

Cannons of the British period are still seen inside the St. Angelo fortress and the Chinese wares with seal indicate the overseas commercial contact with China. The Bekal fortress is an indigenous one and it was having a limited area for its contact and its purpose was only for military activities whereas the St. Angelo fortress was a military headquarters as well as a port center for international trade. Its fame reached all the way to west Asia, China, Europe and it is the only existing Portuguese residential fortress on the Malabar coast. Further archaeological excavations and field studies will definitely bring to light new evidences on the St. Angelo fortress and the Portuguese habitational colony near by St. Angelo fortress.

The horse stables noticed at St. Angelo fortress are not seen at Bekal. During the British period horse stables are well maintained inside the fortress and it can be seen even in fort St. George at madras. On the top of every bastion a kind of platform is noticed which shows that there must have been guard’s rooms for watch and ward soldiers in Cannanore fort. Platforms of this nature are not found in Bekal. Bekal fortress is a typical imitation of Vijayanagara architecture, the raised antechambers on both the sides of entrances. The
tunnels below the ramparts of fortification, the huge bastion, merlons and the vast area covered by fortification walls are indigenous type of architecture. Whereas the Portuguese fortress at Cannanore is a very medium size structure with double wall pattern. Core portion is filled with earth and straw materials besides providing flight of steps leading up on the top of the ramparts and bastion with wide platform looking like a terraced building. They have used enormous brick jelly and concrete with lime. The cells under the fortification walls are very dark and well protected. The drains are always well connected to the moat. Proper conduits and soak pits are provided wherever necessary. Buildings are tall with gigantic look, well planned by Portuguese engineers, which is similar to the castle at Rome where the popes of medieval period used to retire. Hence the St. Angelo fortress is of typical Portuguese architecture built in laterite rocks in combination with Indian style.

Even though the Portuguese adopted local medium as materials for constructing their fortress in India at the same time for the technique they used their own ideas mixed with Indian style. Hence the style of architecture is Indo-European. The builders were not slow to appreciate the local circumstances and they took advantage of the natural barriers and with slight manipulation and modification turned those into best fortifications where rivers and oceans, mountain and rocks, trees and bushes, deserts, and swamps were made to play important part of their own. Both the fortresses are well-preserved forts in Kerala and located on a high land having commanding view of the sea. The structure inside the Bekal fortress such as watchtower and magazine house are military in nature while durbar hall, and mint house have royal affinity. The identification of Mint house as that of Tippu Sultan at Bekal excavation is the most important contribution. The remains of kiln along with charcoal and ashy deposits, copper ingots, coin moulds, defaced and unstruck coins, melted pieces of metals, small iron implements, terracotta seals, corroded coins, and cash coins of Tippu Sultan etc suggest that for minting
‘Copper Cash Coins’ at Bekal fortress, mint was probably established by Tippu Sultan in 18th century. The structural remains of temple, seals recovered from durbar hall, copper cash coins of Nayaka provide ample evidence to prove their presence in the Bekal fortress during 17th century. However it is still believed that it could have been occupied by the Kolathiris before the arrival of the Nayaka of Ikkeri.

It is true that the St. Angelo fortress of Cannanore saw the rise and fall of the Portuguese power in India, the Dutch power and the Ali Raja of Cannanore, finally the rise and fulfillment of the British power, and the establishment of an Empire. The Bekal fortress also witnessed the rise and fall of the Nayaka of Ikkeri, Tipu Sultan and finally it was by the British, until independence of India.